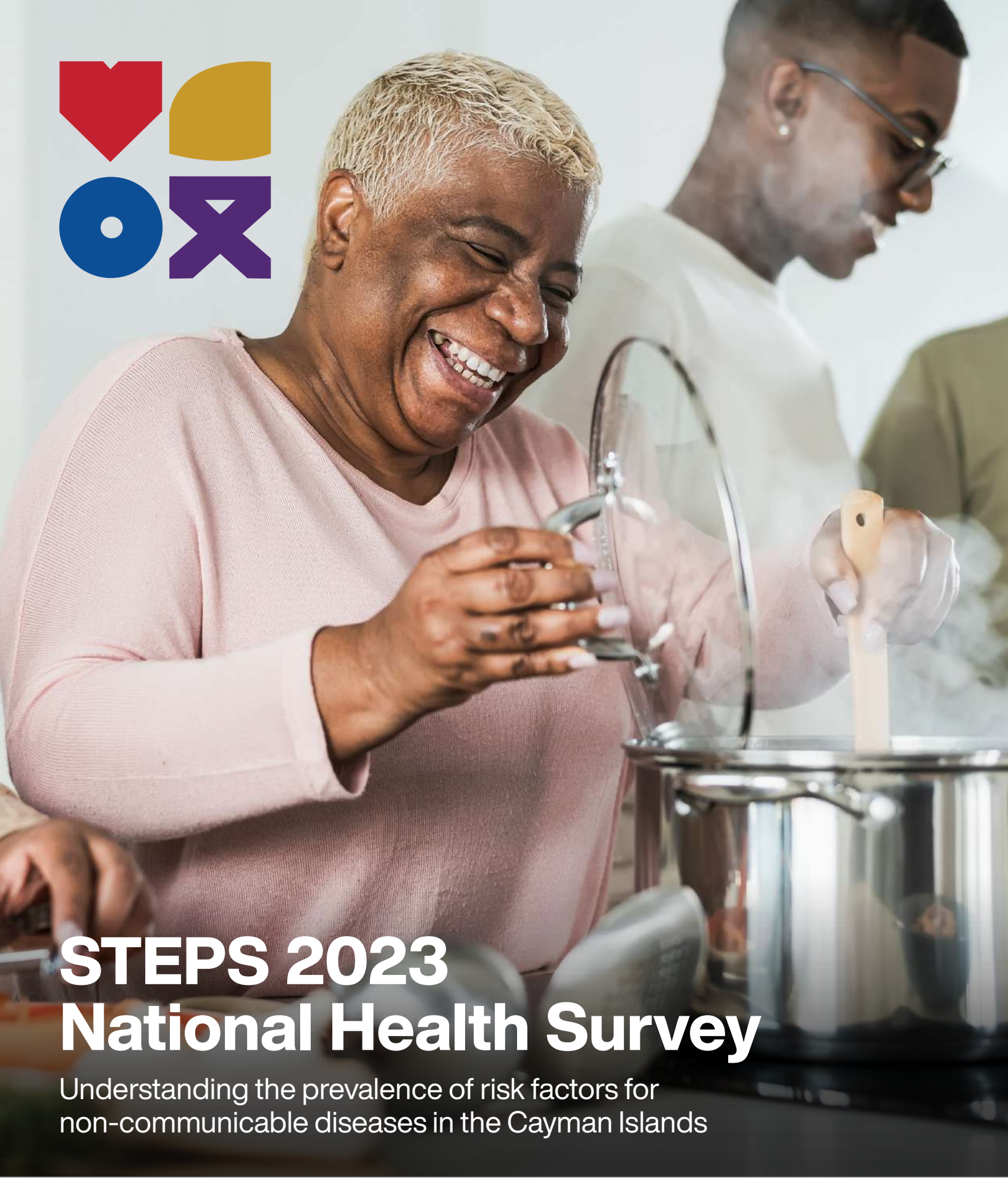

STEPS 2023 National Health Survey

Understanding the prevalence of risk factors for non-communicable diseases in the Cayman Islands

Ministry of Health & Wellness
Cayman Islands Government

PAHO Pan American Health Organization World Health Organization Americas

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Remarks from Honourable Sabrina Turner

Minister for Health & Wellness and Home Affairs

While I am very proud of all the work that has gone into the creation of this report, I know that understanding this data is as important as having it. Our aim is for you to not only understand this report, but to be able to act on the information provided here, at an individual, family and community level.

Non-Communicable Diseases (NCDs) are diseases that are not caused by infectious agents, such as viruses or bacteria. Rather, NCDs are caused by behavioural, environmental, social and genetic factors. NCDs are often chronic diseases and significantly impact the length and quality of life.

NCDs are the leading cause of mortality and disability globally (1). In the Cayman Islands cardiovascular disease (CVD) is the leading cause of death, given as the cause of 27% of all deaths here in 2022 (2). Cancer was the cause of a quarter (25%) of all deaths, unintentional injuries 9.7% and diabetes causing 8.3% of all deaths in the same period (2).

NCDs significantly impact the economy through high treatment costs, loss of productivity and premature mortality. In 2010, the global cost of cardiovascular disease was estimated at $863 billion United States Dollars (USD), 55% being direct healthcare costs and 45% due to productivity loss (3).

In 2012, the STEPS Survey was conducted in the Cayman Islands to determine the prevalence of behavioural and biological NCD risk factors (4). The behavioural risk factors included tobacco use, alcohol use, unhealthy diet and insufficient physical activity, whilst the biological risk factors included being overweight or obese, having raised blood pressure, raised blood glucose or abnormal blood lipids including raised cholesterol (5). All of these risk factors can be modified through effective prevention and have the largest impact on NCD mortality and morbidity.

The STEPS Survey was repeated in 2023 to provide updated prevalence estimates for NCD risk factors, assess trends over the past decade, and gather data on current risks and behaviours relating to the health of our nation.

The 2023 survey used a representative sample of people from households across all three Islands, with 1,979 persons participating:

- 53% were women and 47% men
- 49% were Black, 15% White, 11% Asian and 8.5% Hispanic

The survey also collected important information on health insurance, and although this data is unweighted, separate analysis has validated this to be representative of insurance statistics nationally. This highlighted that 5% of respondents have no health insurance, and 17% are on a Standard Health Insurance Contract (SHIC) plan.

Critically, where wealth is a key indicator of ability to access healthcare 20% of participants reported the annual household income as less than KYD $15,000.

Survey results provided much needed information relating to the risk factors for NCDs within our population, and a third of our population have 3-5 risk factors for NCDs, with only 2.8% having no risk factors.

This report provides more than statistics, it also highlights missed opportunities for care. For example, only 27.2% of those with raised blood pressure have been diagnosed and are on medication which is successfully managing their blood pressure. This means that all others are either undiagnosed, diagnosed but not on treatment, or on treatment that is not effectively controlling their blood pressure. The numbers help to paint a picture, and where they do not provide the full story, they become a prompt to ask more questions, and to identify gaps and barriers to care.

As you can see, there is a wealth of information contained in this report, and while I hope that you will take the time to read it all, I want you to remember this: physical inactivity, poor nutritional diet and being overweight/obese are all quite common across our population, and the best way to tackle these is by continuing to educate and empower individuals on how to make the best-informed choices for themselves.

As a Ministry, we will continue to do our part to collect and utilise data as a way to ensure our policies facilitate interventions, programming and services to meet the needs of our population. We recognise the need for low cost accessible care, as well as the need to ensure that we foster health-promoting environments in our schools, homes, workplaces, and even in places like our churches, volunteer service organisations, and other places for community engagement and fellowship which we don't normally associate with health and wellness.

There is much to be done, and engagement across all government Ministries, the private sector and civil society organisations will be essential in order to change the current trajectory that we are on, and reclaim the health of our nation for generations to come. Health affects us all, at every age and stage of life. Now that we have the data, it is on us all to act. Let's STEP into wellness together Cayman!

Executive Summary from Dr Nick Gent

Chief Medical Officer

The health status of the Cayman Islands is clearly captured in the results of this survey, and it highlights gaps in care that we need to address.

On the whole, there has been very little change in the key metrics that were measured in the 2012 survey.

This is not reassuring. It shows that the poor health status of our people has not improved in the last 10-years. Indeed, it raises the question of how effective our current approaches are to health promotion and protection, and the inability of a healthcare system heavily reliant on medical interventions is to reverse the deeply embedded causes of poor health, and premature death, that are prevalent in the Cayman Islands.

The statistics are appalling. Just to take some headline examples, 70% of our population is overweight or obese, a third of us have raised cholesterol and a third raised blood pressure.

It is critical that we make it our priority to make services accessible that prevent and treat disease that are affordable and effective. Affordable cost does not mean poor quality, or least effective. Most of the chronic diseases that reduce the quality of life, and life expectancy, in the Cayman Islands, can be managed using lifestyle changes and readily available low-cost medicines in agreed care pathways.

Standardised care pathways are a tool to ensure that evidence based clinical guidelines are implemented across healthcare settings. Primary care needs to be strengthened to become the bedrock for these pathways. There is a strong focus on specialist healthcare in the Cayman Islands, however the main health issues impacting the daily lives of our population are best met through primary care systems that can guarantee lifelong continuity of care.

Presently, there is no national routine surveillance of NCDs or risk factors for NCDs in the Cayman Islands. With only 2.8% of the population with no risk factors for NCDs, this indicates the future burden of NCDs is likely to increase compounded by ageing of the population of Caymanian residents as the risk for NCDs increases with age. Understanding the burden and the associated risk factors, is pivotal for effective planning and resourcing of current and future healthcare services.

Many of the health challenges we face now and into the future, evidenced in this report, are associated with unhealthy lifestyle behaviours. Responding and addressing these behaviours, risk factors such as diet, exercise and alcohol consumption, is pivotal. By making gradual and sustained lifestyle changes, for example a 20 minute walk each day, and changing our diets, both the quality and longevity of the lives of those of us lucky enough to live in the Cayman Islands can be greatly improved. We all have an individual responsibility for our lifestyle choices, however enabling and encouraging healthier choices is a collective responsibility across all areas of government, education, private and public sectors. The wellness and therefore the wealth that is the health of our society depends on it. We need to act now, both for our health, but even more so for the health of our children and future generations.

Acknowledgements

The success of the STEPS Survey is attributed to the combined efforts of many individuals.

The Ministry of Health and Wellness worked closely with a number of partner agencies to conduct the STEPS National Health Survey, including the Economics and Statistics Office and the Public Health Department at the Health Services Authority.

Specifically, the Ministry of Health and Wellness would like to thank the following groups and individuals for their incredible support and contributions:

- Honourable Minister Sabrina Turner, for her commitment and support to the survey, especially providing the financial resources.
- Chief Office, Nellie Pouchie, for her support and approval as Project Sponsor.
- The STEPS Survey Steering Committee who guided the design, implementation and oversight of the Survey, including Rachel Corbett, Dr Nick Gent, Janett Flynn, Carolina Ferreira, Halle Miller, Dr Samuel Williams-Rodriguez, Dr Eryka Simmons, Joanna Rose-Wright, Dr Anna Matthews and Adolphus Laidlow.
- Red Cross, Royal Cayman Islands Police Service, Mental Health Outpatient Centre and West Bay Library who all kindly provided accessible locations to enable STEP 3 appointments.
- All the Enumerators, Nurses, Field Supervisors and the Survey Co-ordinator who worked incredibly hard in the field.
- A note of thanks to Rachel Corbett, Halle Miller, Carolina Ferreira and Janett Flynn whose tremendous efforts saw to every detail that made the survey possible, as well as additional members of the Ministry of Health and Wellness who assisted with drafting and editing of the report.
- Special thanks to Dolores Ondarsuhu and Patrice Lawrence-Williams at Pan American Health Organization (PAHO) for your unwavering technical support and guidance throughout.
- To those members of our community who participated in the survey, thank you for your time, your answers and your contribution.

Acronyms

BMI	Body Mass Index
BP	Blood Pressure
CIGTV	Cayman Islands Government TV
CI	Confidence interval
CINICO	Cayman Islands National Insurance Company
CISDUS	Cayman Islands Student Drug Use Survey
COPD	Chronic Obstructive Pulmonary Disease
CPI	Consumer Price Index
CVD	Cardiovascular disease
DBP	Diastolic Blood Pressure
DUI	Driving under the influence
EA	Enumeration Areas
FCTC	Framework Convention on Tobacco Control
FOPL	Front-Of-Package Labelling
HbA1C	Glycated haemoglobin
IQR	Inter-quartile range
MUP	Minimum unit pricing
NICE	National Institute for Health and Care Excellence
NCD	Non-Communicable Disease
PAHO	Pan American Health Organization
RCIPS	Royal Cayman Islands Police Service
SBP	Systolic Blood Pressure
SDH	Social determinants of health
SHIC	Standard Health Insurance Contract
UK	United Kingdom
USD	United States Dollars
WHO	World Health Organization
WHR	Waist to Hip Ratio

Introduction to the STEPS Survey

The STEPS survey is a population-based, cross-sectional assessment of non-communicable disease risk factors. A random sample of the population across all three islands were invited to participate, and all participation was voluntary. The objectives of the STEPS 2023 survey were:

- To ascertain the prevalence of risk factors associated with NCD in the Cayman Islands
- To describe the prevalence of risk factors for NCD according to demographic characteristics including age and sex
- To describe the change in the prevalence of risk factors since the initial 2012 STEPS survey
- To collect data which can inform future planning of healthcare services and interventions
- During analysis, the data was weighted to reflect the national population of the Cayman Islands.

As a sample was used, each indicator provided is an estimate and is interpreted with an accompanying 95% Confidence Interval (95% CI). This means there is a 95% probability that the confidence interval will contain the true population mean. *Full details of the methodology can be found in the Appendices A.*

Results: Established ill-health

Hypertension, Raised Cholesterol, Cardiovascular Disease, and Diabetes

Hypertension

History of Raised Blood Pressure

Hypertension is when the pressure in one's blood vessels is too high, defined as 140/90 mmHg or higher.

Around 1 in 4 people residing in the Cayman Islands have been diagnosed with raised blood pressure (24.9%, 95% CI 22.8%-27%), which is nearly 3 times higher among those aged 45-69 years at 39.3% (95% CI 35.7% - 42.9%) than among 18-44-year olds at 14.2% diagnosed with high blood pressure (95% CI 11.9% - 16.5%) (p<0.001).

The survey results show an alarmingly low level of disease control among the younger age group (18-44-years old), where only 1 in 3 people with raised blood pressure (33.1%, 95% CI 25%-41.3%) report taking medication for it, compared to 2 in 3 people from the older age group with the same diagnosis (70%, 95% CI 64.7%-75.4%).

Another interesting factor relating to medication is that while 8.9% (95% CI 6.2%-11.5%) of those with raised blood pressure report taking herbal or traditional remedies to treat their raised blood pressure, and only 3.2% reported seeking advice from a traditional healer about taking these traditional remedies (95% CI 1.6%-4.8%).

Raised Blood Pressure Survey Measurement

The mean systolic blood pressure for the population is 120.8 mmHg (95% CI 119.8-121.8 mmHg). This is significantly higher among men at 125.7 mmHg (95% CI 124.3-127 mmHg) than women at 115.7 mmHg (95% CI 114.3-117.1 mmHg) (p<0.001). It is also significantly higher among those aged 45-69 years at 127.8 mmHg (95% CI 126.3-129.2 mmHg) than those younger aged 18-44 years at 115.7 mmHg (95% CI 114.5-116.8 mmHg) (p<0.001).

The population mean diastolic blood pressure is 79.9 mmHg (95% CI 79.3-80.6 mmHg) and does not vary by sex. It is significantly higher among the older population at 82.9 mmHg (95% CI 82-83.8 mmHg) than the younger population at 77.7 mmHg (95% CI 76.9-78.5 mmHg) (p<0.001).

Almost 1 in 3 of the adult population have raised blood pressure or are on medication for raised blood pressure (29.9%, 95% CI 27.2%-32.5%). This has increased from 25.7% in the 2012 survey. Currently, this is much higher among those aged 45-69 years where nearly half of the population either have raised blood pressure or are being treated for raised blood pressure (47.5%, 95% CI 43.3% - 51.6%).

Of concern, 3.9% (95% CI 2.9% - 4.9%) of the population have stage 2 high blood pressure (SBP>=160 and /or DBP>=100) and are not on medication. When including those on medication, 18.2% (95% CI 16.1% - 20.3%) of the overall population and 33.1% (95% CI 29.2% - 37.1%) of the 45-69 year olds have stage 2 high blood pressure.

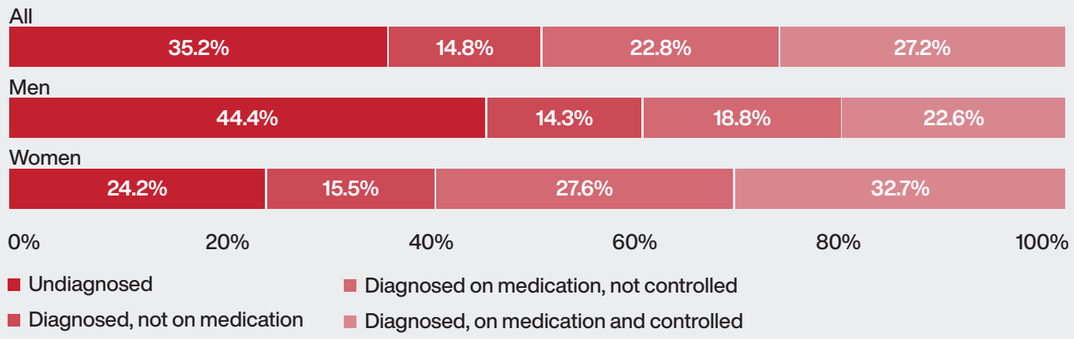


Figure 1: *Proportion of the population with diagnosed, treated and/or controlled raised blood pressure among those with raised blood pressure or currently on medication for it*

Among those with raised blood pressure, currently 35.2% (95% CI 30% - 40.3%) are not diagnosed. Undiagnosed high blood pressure is significantly higher in men at 44.4% (95% CI 37.2%-51.6%) than women at 24.2% (95% CI 18.2%-30.2%, p=0.0004).

It is also significantly higher among younger adults age 18-44 at 55.7% (95% CI 47% - 64.4%) than among those aged 45-69 years at 25.5% (95% CI 19.6% - 31.4%) (p<0.001).

Among those with raised blood pressure, 14.8% (95% CI 11% - 18.7%) have previously been diagnosed but are not on medication. This does not differ significantly by age or sex.

Among those with raised blood pressure 22.8% (95% CI 18.6% - 26.9%) have been diagnosed and are on medication, however their blood pressure was not controlled. This is significantly higher among women at 27.6% (95% CI 21% - 34.2%) than men at 18.8% (95% CI 13.4% - 24.1%) (p=0.042).

Finally, 27.2% (95% CI 22.6% - 31.8%) of those with raised blood pressure have been diagnosed and are on medication which is successfully managing their blood pressure. This is significantly higher among women at 32.7% (95% CI 25.4%-40.1%) than men at 22.6% (95% CI 17% - 28.2%) (p=0.03047).

NICE recommendations for management of those with hypertension (6):

- Offering lifestyle advice, Including advice on diet and exercise, stress management, alcohol consumption and smoking cessation *(if applicable)*
- Considering the need for anti hypertensive drug treatment, which is initiated in a stepwise approach.
- Considering the need for statin treatment, following cardiovascular risk assessment.
- Monitoring response to lifestyle changes and drug treatment.
- Reviewing the person annually to monitor blood pressure, review medication, provide support and discuss lifestyles, symptoms and treatment(s).

Raised Blood Pressure

1 in 4
residing in the Cayman Islands have been diagnosed with raised blood pressure

Of those **58%** are taking medication

18% of the population have stage 2 high blood pressure, including those on medication.

30%
of the population either have raised blood pressure or are on medication for it.

17%
Among those 18-44 years

48%
Among those 45-69 years

Among those with raised blood pressure

15%
have previously been diagnosed but are not on medication

23%
have been diagnosed and are on medication, however their blood pressure was not controlled

27%
diagnosed and are on medication which is successfully managing their blood pressure

35%
are undiagnosed

44% **24%**
The proportion undiagnosed is **higher among men than women**

Raised Cholesterol

History of Raised Total Cholesterol

Even though 1 in 3 people (35.5%, 95% CI 33.1% - 38%) have never had their cholesterol measured, 17.5% (95% CI 15.7% - 19.4%) have been diagnosed with raised cholesterol and almost half of them (7.3%, 95% CI 6% - 8.5%) were diagnosed in the last 12 months.

Overall, 32.4% (95% CI 27%-37.9%) of those diagnosed with raised cholesterol are currently taking prescribed medication. Early diagnosis and treatment of raised cholesterol is crucial. Research shows that the younger a person is when high cholesterol is diagnosed, the more can be done to minimise the damage (7). Therefore, it is concerning that of the young persons (aged 18-44) diagnosed with raised cholesterol, an extremely low percentage of 6.9% (95% CI 1.4% - 12.3%) are taking prescribed medication for their diagnosis.

Raised Blood Cholesterol from Physical Measurements

Total cholesterol is the overall amount of cholesterol in the blood. High density lipids (HDL) is referred to as good cholesterol, which may lower the likelihood of a heart attack or stroke. High triglyceride levels combined with low HDL or high non-HDL cholesterol can increase one's risk of heart disease (8).

The mean total blood cholesterol, including those on medication for raised cholesterol, is 169.1mg/dL (95% CI 165.9-172.4mg/dL) which is higher, but not significantly, among women at 172.2 mg/dL (95% CI 167.9-176.5 mg/dL) than men at 166.1 mg/dL (95% CI 161.2-171.1 mg/dL) (p=0.069). The mean total cholesterol is significantly higher among those aged 45-69 years at 175.9 mg/dL (95% CI 171.2-180.5 mg/dL) than those aged 18-44 years at 164.1 mg/dL (95% CI 159.7-168.6 mg/dL) (p<0.001).

Nearly a third of the population, 29% (95% CI 25.9%-32.1%) have high cholesterol, defined as equal to or over 190 mg/dL. The prevalence of high cholesterol is significantly higher among those aged 45-69 years at 34.3% (95% CI 29.7%-39%) than those 18-44 years at 25.1% (95% CI 21.1%-29%) (p=0.003).

When also including those on medication for raised cholesterol, the prevalence is 31.9% (95% CI 28.8%-35%). Two in five of the population aged 45-69 years either have high cholesterol or are on medication for raised cholesterol (40.8%, 95% CI 36%-45.7%).

The prevalence of very high cholesterol is 6.2% (95% CI 4.6%-7.9%), defined as a total cholesterol >=240 mg/dL. This did not vary by sex or age. When including those on medication for raised cholesterol, 10.4% (95% CI 8.4%-12.4%) have a total cholesterol of >=240 mg/dL or are on medication, which is significantly higher among those aged 45-69 years at 15.7% (95% CI 12.3%-19.2%) than those 18-44 years at 6.4% (95% CI 4%-8.9%) (p<0.001).

The mean HDL measure is 45.7 mg/dL (95% CI 44.6-46.7 mg/dL). The proportion of men with low HDL (<40 mg/dL) is 50.1% (95%CI 45%-55.3%), and is similar among women with low HDL (<50mg/dL) of 52.9% (95% CI 48.2%-57.6%).

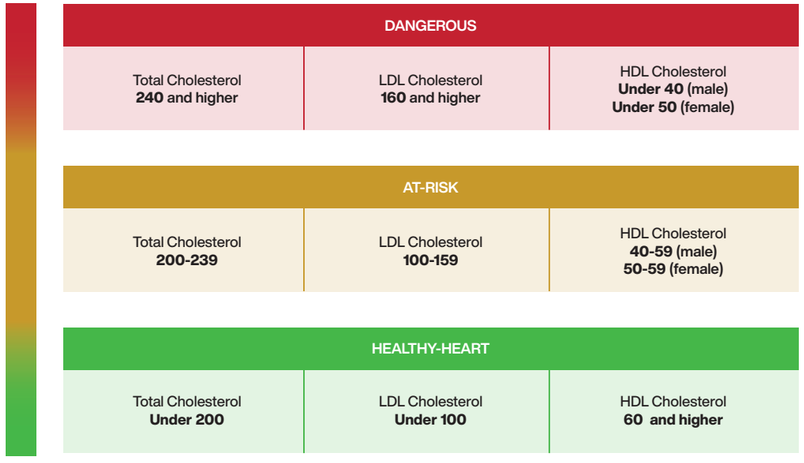


Figure 2: *Interpreting Cholesterol (mg/dL)*

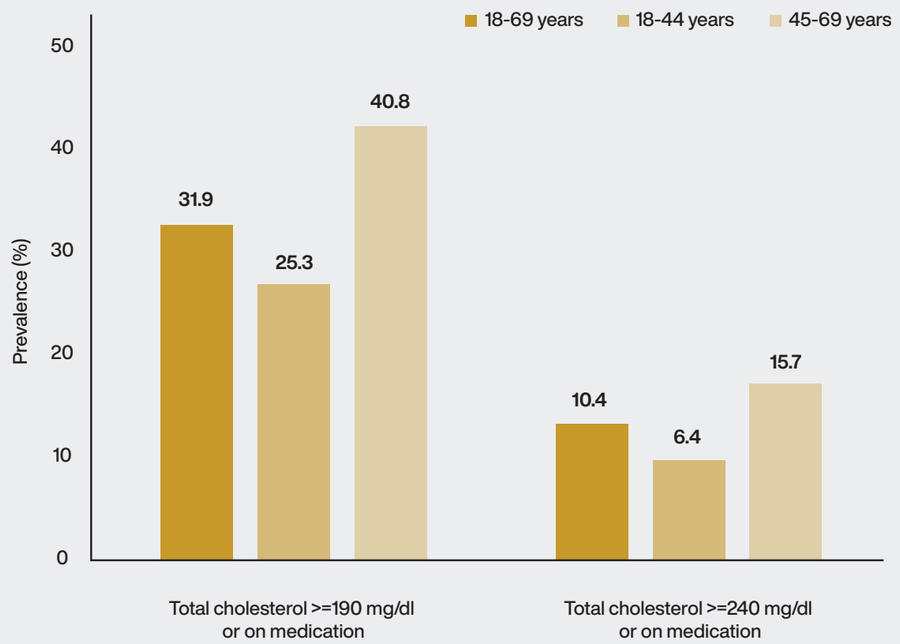


Figure 3: *Prevalence of raised total cholesterol or those on medication for raised cholesterol stratified by age group*

Raised Total Cholesterol

1 in 3
have never had their cholesterol measured

18% have previously been diagnosed with raised cholesterol

32%
of those diagnosed with raised cholesterol are taking medication

32% of the population have high cholesterol *(defined as over 190 mg/dL)* or are on medication for raised cholesterol

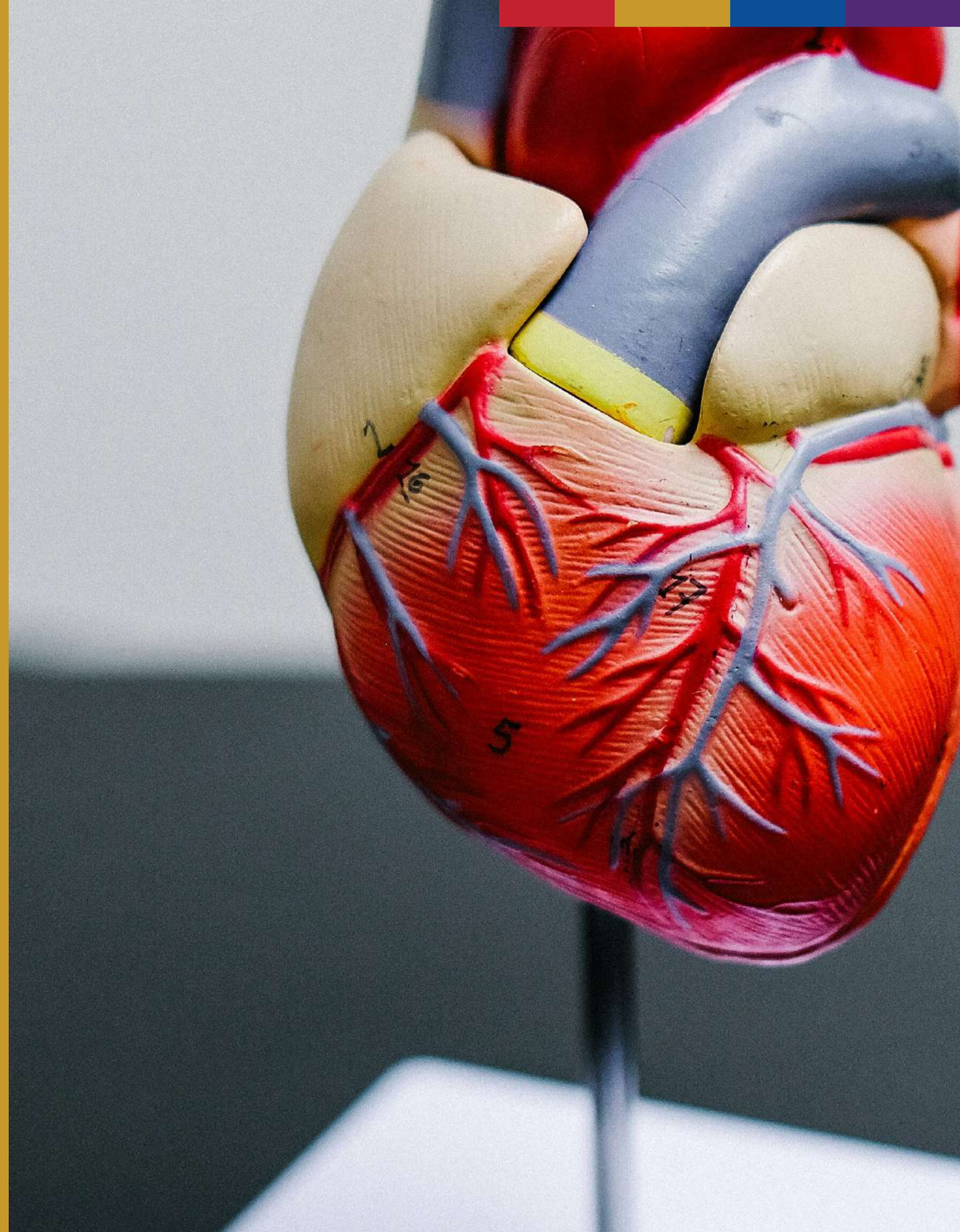
41% of those aged 45-69 years have high cholesterol *(defined as over 190 mg/dL)* or are on medication for raised cholesterol

50%
of men have low HDL *(good cholesterol)*

53%
of women have low HDL *(good cholesterol)*

6.2%
have very high cholesterol defined as a total of >=240 mg/dL

10%
when including those on medication have very high cholesterol



Cardiovascular Disease

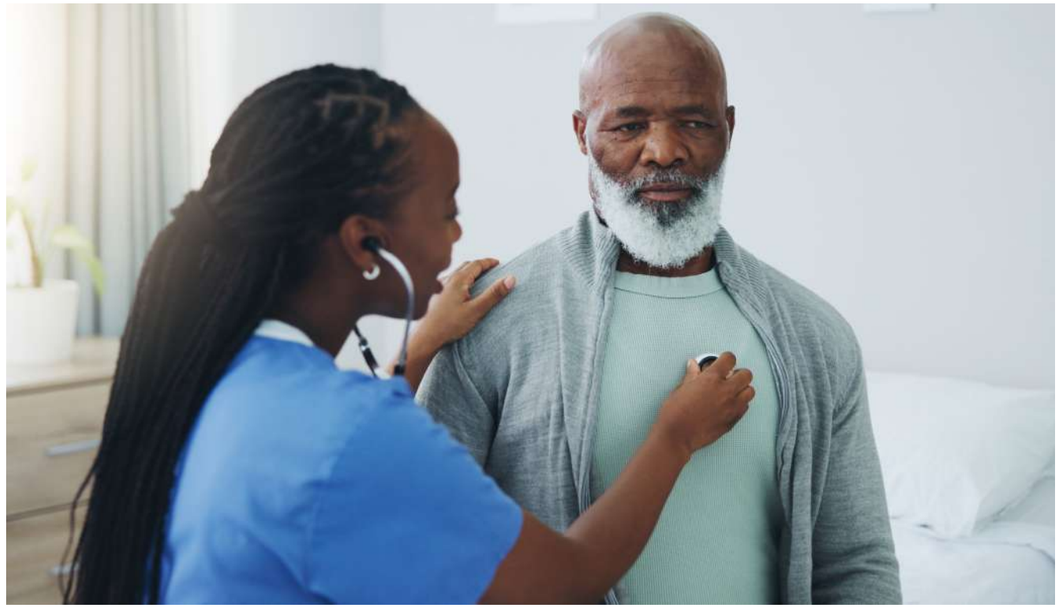
History of Cardiovascular Disease

Across the population, 3.7% (95% CI 2.7% - 4.7%) report having had a heart attack or chest pain from heart disease (angina) or a stroke. Those aged 45-69 years are almost 3 times more likely to experience CVD at 5.8% (95% CI 4%-7.6%) than 18-44 year olds with a prevalence of 2.2% (95% CI 1%-3.3%) (p<0.001).

Older individuals are significantly more likely to be taking medication to prevent or treat heart disease, with the proportion of older persons (45-69 years) taking aspirin being 9.7% (95% CI 7.4%-11.9%) compared to 0.9% (95% CI 0.3%-1.6%) among younger persons (18-44 years) (p<0.001). Statins, another type of medication, is taken by 0.4% (95% CI 0% - 0.8%) of the younger group, compared to 7% (95% CI 5.1% - 8.8%) of the older group (p<0.001).

10 Year Risk of Cardiovascular Disease

Currently, 5.8% (95% CI 4.0%-8.3%) of those aged 40-69 years have a greater than 20% predicted risk of CVD in the next 10 years. This is higher among women at 7.5% (95% CI 4.7%-12.1%) than men at 4.1% (95% CI 2.4%-7.1%). As expected, it is also higher among those aged 55-69 years at 8.8% (95% CI 5.7%-13.2%) than those aged 40-54 years at 4.3% (95% CI 2.3%-7.8%).

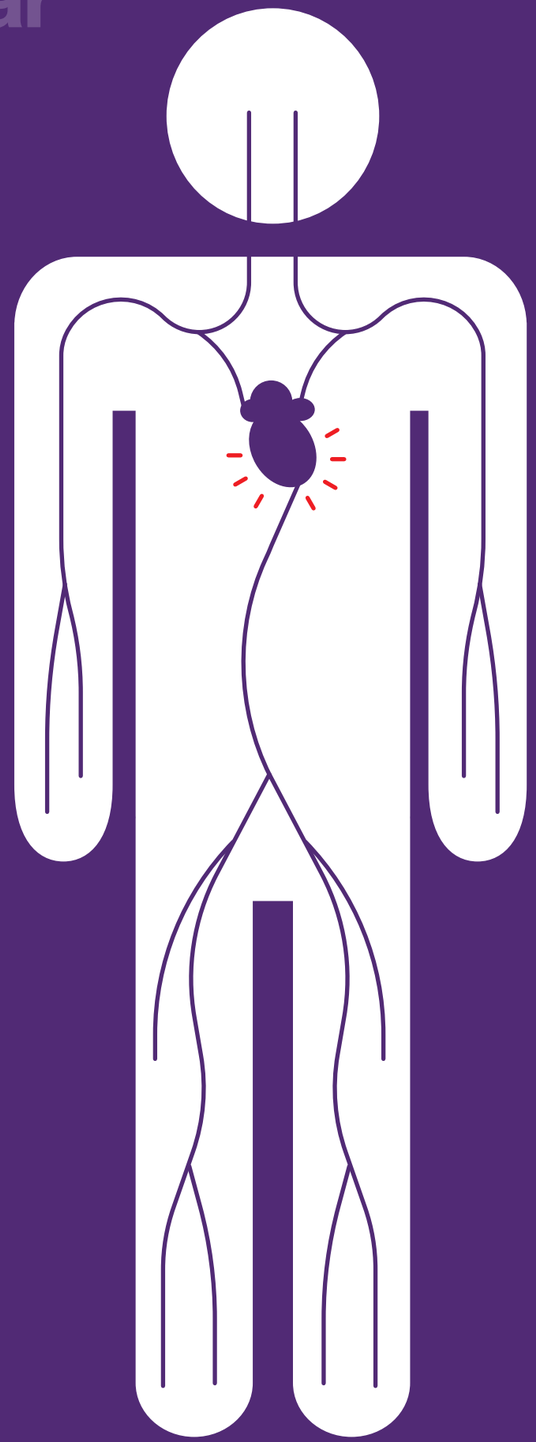


Cardiovascular Disease

3.7%
report having had a heart attack or chest pain from heart disease (angina) or a stroke

5.8%
This is higher among those aged 45-69 years

9.7%
of the population aged 45-69 years report taking aspirin to prevent or treat heart disease



Diabetes

History of Diabetes

Around 1 in 10, 10.8% (95% CI 9.2%-12.3%), of the population report ever being diagnosed with raised blood sugar or diabetes, with less than half, 4.4% (95% CI 3.4%-5.4%), who report having been diagnosed in the last 12 months.

Meanwhile nearly 1 in 4, 23.6% (95% CI 21.5% - 25.8%), of the population report never having their blood sugar level measured. This is significantly higher among men at 29.7% (95% CI 26.3%-33.1%) compared with 17.4% (95% CI 14.8%-20.1%) among women (p<0.001).

In regards to diabetes treatment, 25.7% (95% CI 18.4%-33.0%) of those previously diagnosed with raised blood sugar or diabetes are currently taking insulin and 61.2% (95% CI 53.7% - 68.6%) are taking medication for diabetes generally; 6.5% (95% CI 2.9%-10.1%) of the persons diagnosed are taking traditional medication.

Diabetes control and monitoring can be measured through different factors, the HbA1C (glycated haemoglobin) test being one of them. The proportion of those with diagnosed diabetes who have received at least two HbA1C tests in the past year as part of their diabetes control was 56.7% (95% CI 49%-64.5%).

Two of the complications in diabetes are diabetic retinopathy and diabetic foot ulcers, which is why eye and foot examinations are required for diabetes patients (9, 10). However, many patients are not receiving examinations: a third, 29.9% (95% CI 22.9%-36.9%), of those diagnosed with diabetes have never had an eye exam and half, 50.1% (95% CI 42.2%-57.9%), have never had a foot examination. National Institute for Health and Care Excellence (NICE) recommends that these examinations are either offered annually or biannually (11, 12).

A significant difference is shown between men and women who have never had an eye exam, where the percentage of women living with diabetes never examined at 35.5% (95% CI 26.2%-44.7%), is almost twice as high as the men at 20.6% (95% CI 10.6%-30.5%) (p=0.034).

Based on the NICE recommendations for diabetes monitoring (11) we propose:

- Measuring HbA1C levels in adults with type 2 diabetes every:
  - 3 to 6 months until HbA1C is stable on unchanging therapy
  - 6 months once HbA1C level and blood glucose lowering therapy are stable
- Annual assessment of risk for developing diabetic foot problem
- Eye examination every 2 years if diabetic retinopathy is not found, otherwise more frequently
- For those with type 2 diabetes, measure blood pressure at least annually

Raised Blood Glucose from Survey Measurements

Raised fasting blood glucose is defined as capillary whole blood value >110 mg/dL. The population mean fasting glucose is 83.9 mg/dL (95% CI 81.6- 86.2 mg/dL), which does not vary by sex but is significantly higher among those aged 45-69 years at 89.9 mg/dL (95% CI 85.8-94.1 mg/dL) than those 18-44 years at 79.4 mg/dL (95% CI 77-81.8 mg/dL) (p<0.001).

Currently, 8.3% (95% CI 6.4%-10.2%) of the population are on medication for diabetes, which is similar among men and women. However, this differs markedly by age with 16.2% (95% CI 12.5%-19.9%) of 45-69 year olds on medication for diabetes compared to only 2.5% of 18-44 year olds (95% CI 0.8%-4.1%) (p<0.001).

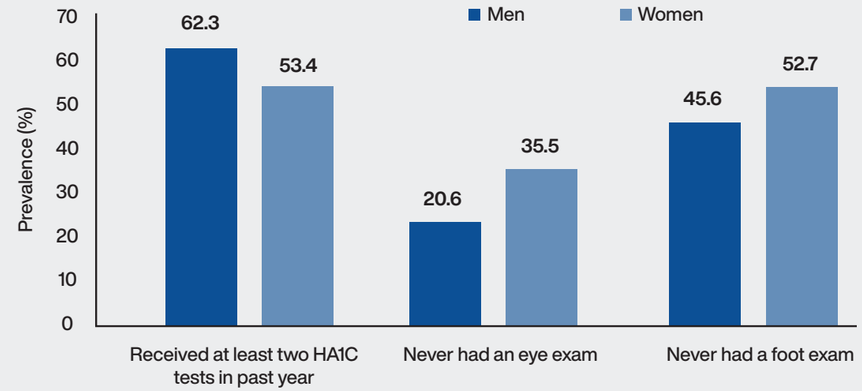


***Figure 4**: Key aspects of diabetes related care and monitoring among those diagnosed with diabetes, stratified by sex*

Considering the measurements of blood glucose, the self-reported awareness of the participants and the self-reported treatment status, 7.8% (95% CI 5.9%-9.7%) of the population are diagnosed with raised blood glucose and receiving medication. This is significantly higher among older adults at 15.6% (95% CI 11.9%-19.3%), than the 1.9% among 18-44 year olds (95% CI 0.4%-3.4%) (p<0.001).

A further 4.8% are diagnosed, however are not on medication. This proportion is higher among men at 6.1%, but not significantly different from 3.5% in women (p=0.069). Additionally, 1.6% of the population have raised blood glucose but are undiagnosed.

Discussion: Universal access to low cost care and standardised care pathways

This data presents the extent of established ill-health currently among the population, and how far individuals are progressing along the care pathway.

Hypertension is highlighted as a key concern for the Cayman Islands. Since 2012, the estimated prevalence of hypertension has increased from 25.7% to 29.9%, and is even higher among those 45-69 years at 47.5%. In this older age group 1 in 3 people have stage 2 hypertension. Hypertension can lead to serious damage to the heart, including heart attack, heart failure, and irregular heartbeats, which can result in sudden death (13). Hypertension can also cause arteries that supply blood and oxygen to the brain to burst or become blocked, leading to a stroke. This survey not only found the prevalence of hypertension to be high, but a third of those with raised blood pressure are undiagnosed, and among those who are aware of their condition, many are not on treatment. This is especially the case in the younger age group where only a third are taking prescribed medication. This demonstrates that there are gaps along the care pathway which need to be addressed. Furthermore, only a third of the population with diagnosed diabetes received a foot examination in the last year, indicating that this issue extends beyond hypertension care.

Standardised care pathways are needed. PAHO recommend throughout the Region of the Americas the HEARTS Initiative, which seeks to integrate global best practise for prevention and control of CVD and more recently diabetes (14). The focus is to improve the control of high blood pressure and operate through primary healthcare. Countries have seen significant improvement in the prevalence of uncontrolled raised blood pressure, and the initiative makes gradual improvements over time to the existing care approach, so to ensure sustainable change. HEARTS operate from 6 evidence-based components (14):

Figure 5: *Prevalence of those with raised blood glucose or who are on medication for raised blood glucose, including diagnosis and treatment status, stratified by sex*

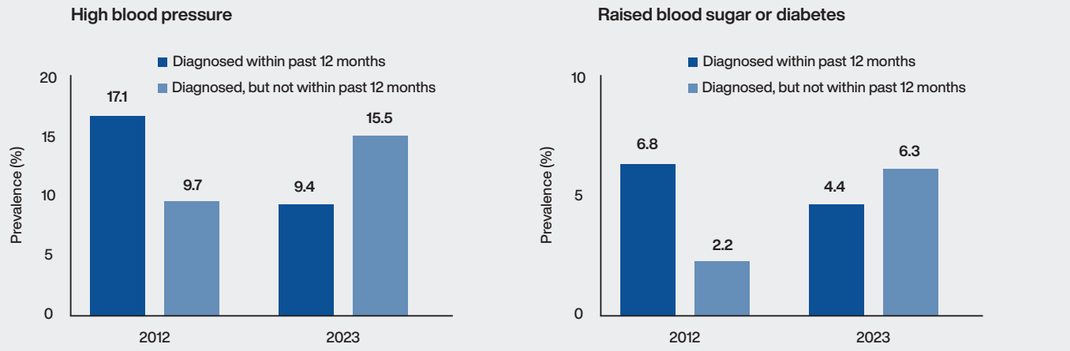


Figure 6*: Prevalence of high blood pressure and diabetes diagnosis in 2012 and 2023, stratified by whether diagnosis was in the past year*

1. Healthy-lifestyle counselling
2. Evidence-based treatment protocols
3. Access to essential medicines and technology
4. Risk-based CVD management
5. Team-based care
6. Systems for monitoring

In addition, PAHO's Better Care for NCDs is an initiative to ensure comprehensive NCD services are integrated into primary healthcare in an equitable manner (15). This aligns with the Sustainable Development Agenda to leave no-one behind. "The interventions are for the detection, diagnosis, treatment, and care of cardiovascular diseases, diabetes, asthma and other chronic respiratory diseases, and cancer, healthy lifestyle counselling, self-care, and palliative care" PAHO 2023 (15).

The STEPS 2023 Survey results highlight gaps in screening uptake. Around a third of the population have never had their cholesterol level measured (35.5%), or their blood sugar level measured (23.6%) and this has not changed since 2012. A potentially concerning trend is that the recency of diagnoses for hypertension and diabetes has altered, whereby among those who have been diagnosed, a lower proportion have been diagnosed in the last year in 2023, compared to 2012. This could indicate less frequent screenings now compared to 2012 (Fig. 6).

In tandem with polices to improve the screening and treatment uptake, systematic data reporting from health facilities is needed to understand where there are gaps in care pathways and monitor outcomes. There is currently no national infrastructure for health reporting from facilities in the Cayman Islands regarding NCDs. PAHO recommend establishing routine facility reporting of key indicators to improve quality of services, identify barriers to care and improve patient outcomes (16).

Financial accessibility is likely an existing barrier when considering that 5% of the Cayman Islands population is uninsured and 17% have only the minimum health insurance cover. Similarly, the 2021 Census reported 5.4% of those employed to be uninsured (17), and the Health Insurance Commission report for 2022 indicates at least 8.5% of the population are uninsured (18). Review of the standard health insurance coverage to include preventative care and screening is needed, as well as affordable medication, ideally provided free of cost to those unable to afford it. Early detection and intervention are cost-effective approaches through reducing the need for more expensive treatments (19).

Educational campaigns, with a specific focus on men, women and children are needed. These campaigns need to cover hypertension, diabetes, and obesity as three of the leading health threats to the population of Cayman. Even more so, national health promotion of healthy lifestyles through diet, exercise, sleep and mindfulness is pivotal for improving the health literacy and empowering individuals to make healthier choices. This can be accompanied by behavioural support and counselling to support individuals in making and maintaining lifestyle changes, for example smoking cessation and stress management workshops.

For those disengaged with healthcare services, alternative approaches to care and uses of technology can be considered, for example telehealth or remote care. Telehealth has become a proven and valuable way to deliver CVD care, which can be utilised In the Cayman Islands in many different ways for diagnosis and remote care monitoring, especially in areas with limited healthcare access(20). Encouraging blood glucose self-monitoring through education, guidelines and providing devices for continuous glucose monitoring could help the 1 in 4 Cayman residents previously diagnosed with high blood sugar level who are taking insulin (21). To ensure that the older population are able to engage as effectively, providing digital literacy programs can help ensure older adults can access and use new technology solutions.

While some social determinants of health (SDH), such as insurance coverage, income and education, are captured by this survey, many others have not and yet they cannot be left out of the discussion. Food security, housing, the environment and social exclusion are all important factors that influence health. In fact, the WHO states that such determinants can be more important than healthcare and lifestyle choices in influencing health, with numerous studies suggesting that SDH "account for between 30-55% of health outcomes"(22). As such, cultivating a collaborative approach across different sectors is key as new national strategies are developed to incorporate the health aspects.

Recommendations

- Provide low-cost accessible care which is available at no cost to those in the lowest income group in society
- Increase access to affordable preventive healthcare by including a wide range of screening and early detection health services in the prescribed health insurance benefits
- Create standards for multidisciplinary and inter- connected patient-centred pathways
- Implement national data collection and monitoring of NCD diagnosis, treatment and outcome through comprehensive healthcare services information systems
- Public information campaigns to improve health literacy and promote healthy habits
- Implement HEARTS initiative with support of PAHO
- Work with alternative practitioners such as traditional healers to ensure that evidence based clinical medicine remains part of the combined care.

Raised Blood Sugar/Diabetes

11% of the population were previously diagnosed with raised blood sugar or diabetes

24% of the population report never having their blood sugar level measured

Among those previously diagnosed with diabetes

57% have received at least two HbA1C tests in the past year as part of their diabetes control

30% have never had an eye exam

50% have never had a foot exam

Among the population as a whole

7.8% have raised blood glucose and are receiving medication

4.8% are diagnosed however are not on medication*

1.6% have raised blood glucose but are undiagnosed

Results: Determinants of ill-health

Socio-economic Factors

The following socio-economic data is unweighted, therefore reflects the sample of participants in the survey as opposed to nationally representative estimates.

Regarding level of education, the mean number of years participants spent in education was 13.6 years, which was similar for males and females. Two-fifths of respondents (39.4%) reported high school to be the highest level of education they completed, with a further two-fifths (38.1%) reporting university or college. An additional 13.2% reported completing a post graduate degree.

Of the respondents 43.6% were married, 35.7% never married, 8.7% divorced and 5.2% cohabiting.

Regarding annual household income in Cayman Islands Dollars (KYD):

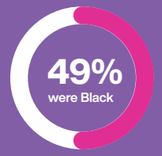
- 19.6% of participants reported the annual household income as less than $15,000
- 21.3% reported $15,000-$30,000 KYD
- 25.4% reported $30,000-70,000 KYD
- 19.1% reported $70,000-$120,000 KYD
- 8.9% reported between $120,000-$200,000 KYD
- 5.7% reported more than $200,000 KYD

Considering work status, 69.8% were non-government employees, 13.3% were government employees, 7.3% were self-employed and 9.6% were unpaid (including students, homemakers, retirees and those unemployed). Among those who were in unpaid work or unemployment: 37.6% were retired, 19.6% were unemployed but able to work, 13.2% were unemployed but unable to work, 13.8% were homemakers or stay at home parents, 13.8% were students and 2.1% were volunteers or interns.

Among participants, when asked about health insurance coverage 55% reported that they were on a comprehensive plan from a local provider, and 5% on a comprehensive plan from a global provider. Additionally, 17% were on the Government Cayman Islands National Insurance Company (CINICO) plan, 17% were on a Standard Health Insurance Contract (SHIC) plan and 5% reported having no health insurance.

Demographics

Respondents



Health Insurance

Annual Household Income

39% reported high school as the highest level of education completed

38% reported university or college as the highest level of education completed

13% reported completing a post graduate degree as the highest level of education completed

Regarding work status

Body Mass Index (BMI) Measurements

Around 7 in every 10 individuals (69.6% ,95% CI 66.9%-72.4%) in the Cayman Islands are overweight or obese. This is higher than the average for the Region of the Americas which is 67% for males and 68% for females (23). The mean BMI among men is 27.3 kg/m2 (95% CI 26.8-27.8 kg/m2) and the mean BMI among women is 29.6 kg/m2 (95% CI 29.1-30.2 kg/m2), indicating the average male in Cayman is overweight and the average female in Cayman is overweight, and very close to being obese.

The prevalence of obesity is 32.7% (95% CI 30%-35.3%) overall, and is significantly higher among women at 41.1% (95% CI 37.2%-45.0%) than men at 24.6% (95% CI 21%-28.2%) (p<0.001), and also significantly higher among those aged 45-69 years than those aged 18-44 years (39.7% vs 27.4%, p<0.001).

The prevalence of being overweight is 37% (95% CI 34.2%-39.8%), and is significantly higher among men at 41% (95% CI 37.0%-45.0%) than women at 32.7% (95% CI 28.7%-36.7%) (p=0.0044).

A very small proportion of the population are underweight (2.2%, 95% CI 1.4%-3%), which does not vary by age or sex.

The mean waist circumference is very similar among men at 94.2cm (95% CI 93.2cm-95.3cm) and among women at 93.5cm (95% CI 92.3cm–94.7cm). These averages have increased slightly since the 2012 survey, which reported 93.8cm (95% CI 90.1cm-97.5cm) among men and 91cm (95% CI 88.2cm-93.9cm) among women. The WHO advises that men with a waist circumference of more than 102cm and women more than 88cm may be at an increased risk of type 2 diabetes, stroke and heart disease (24).

In the 2023 survey, the mean waist to hip ratio (WHR) was the same among both men and women at 0.9. Typically, a higher WHR can indicate having more fat around the waist, which may lead to a higher risk of heart disease or diabetes. The WHO advise for men a health WHP is 0.9 or less, and for women 0.8 or less (24).

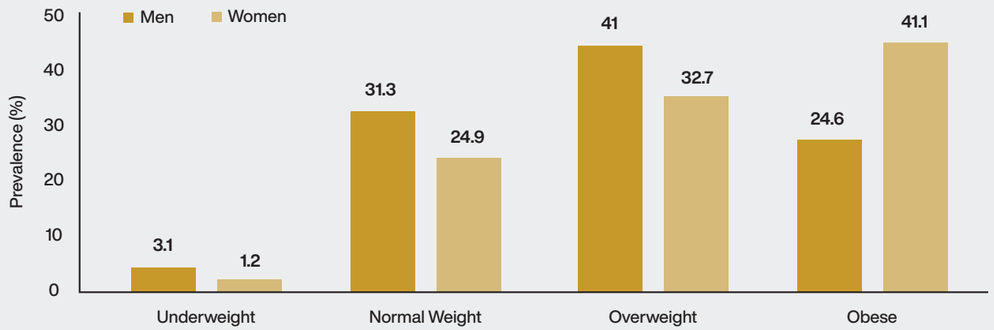
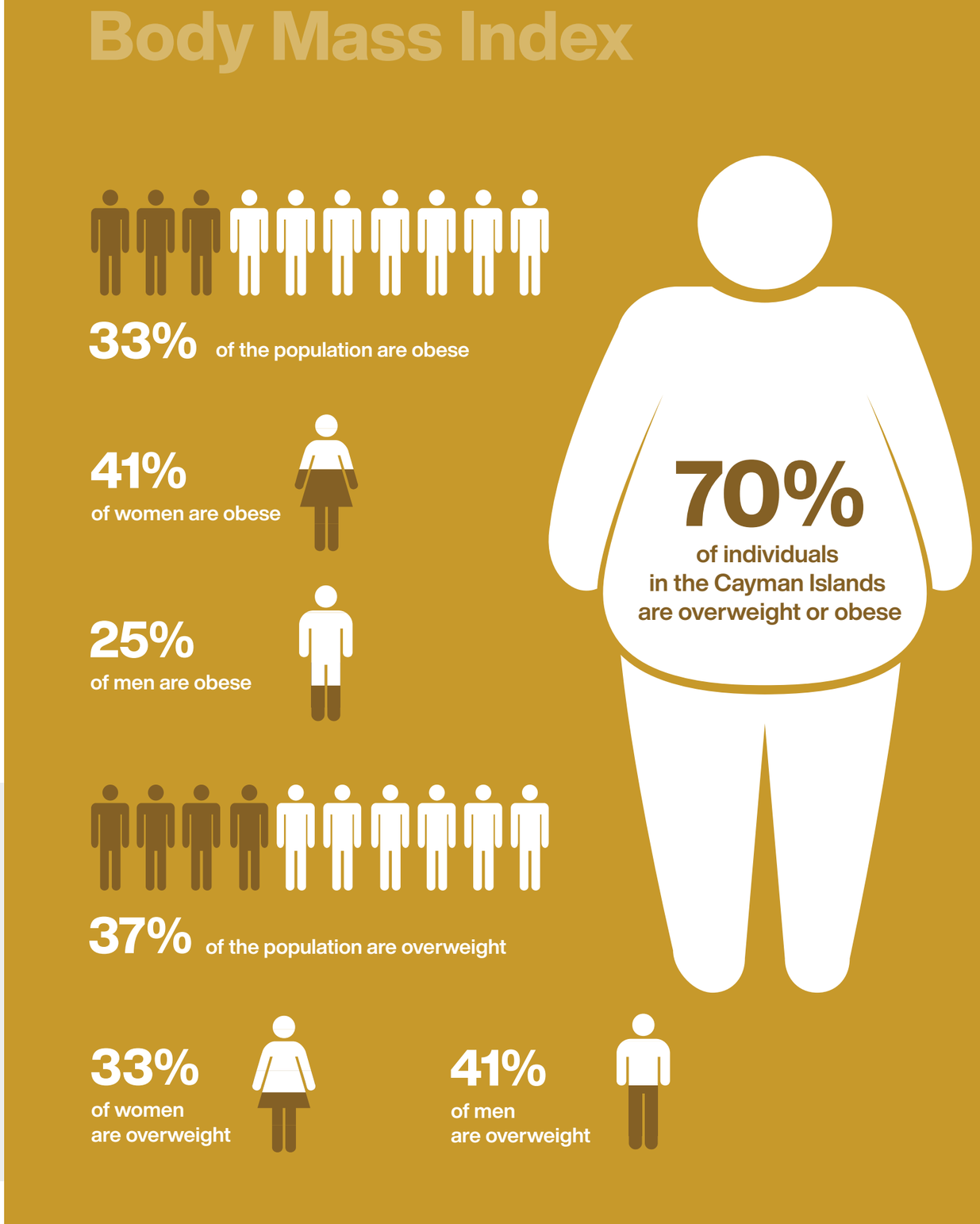


Figure 7: *BMI status stratified by sex*



Diet

Fruit and Vegetable Consumption

Research has shown that a healthy and well-balanced diet should consist of five servings of a variety of fruits and vegetables daily (25), and is recommended by WHO (26), however residents of the Cayman Islands are not meeting this daily recommendation.

In a typical week, fruit is only consumed 4.7 days (95% CI 4.6 – 4.8), with on average 1.3 (95% CI 1.3 – 1.4) fruit servings consumed per day. The mean number of days that vegetables are consumed is 5.0 (95% CI 4.8 – 5.1), with 1.4 (95% CI 1.4 – 1.5) servings consumed on average per day. These data are similar for both men and women, and do not differ from the 2012 findings.

Overall, 14.2% (95% CI 12.4%-16%) of the population do not eat any fruit or vegetables. This is significantly higher at 17.3% (95% CI 14.7%-20%) among younger adults aged 18-44 years than older adults at 10% (95% CI 7.7%-12.3%) ($p<0.001$), however does not differ by sex. The percentage of people who eat less than 5 servings of fruit and/or vegetables on average per day is 85.4% (95% CI 83.7% – 87.2%), which shows a small increase from 83.7% in 2012.

Salt Intake

The percentage of people who always, or often, add salt or salty sauce to their food before or whilst eating is 11.9% (95% CI 10.4% – 13.5%). Adding salt is similar among men and women, however it is significantly more commonly reported among younger adults aged 18-44 years at 14.5% (95% CI 12.1%-16.8%) than older adults at 8.5% (95% CI 6.6% - 10.4%) ($p<0.001$).

The percentage of people who always, or often, eat processed foods high in salt is 19.4% (95% CI 17.3% – 21.5%), an increase from 12.4% (95% CI 10.7%-14.1%) in 2012. Younger adults (25.6%, 95% CI 22.5%-28.7%) are significantly more likely to eat processed foods high in salt than older adults (11.1%, 95% CI 8.8%-13.5%) ($p<0.001$). This is higher, but not significantly, for females 21.3% (95% CI 18.2% – 24.3%) than males 17.6% (95% CI 14.8% – 20.5%).

Discussion: Nutrition knowledge is key to personal empowerment

Diet is key to good health, and to a healthy weight. Research conducted by Wang et al., found that those who ate five servings of fruit or vegetables per day had a 13% lower risk of death from any cause and a 12% lower risk of death from heart disease or stroke, compared to those who ate two servings per day (27).

To improve diet, individuals need access to good quality nutritional produce and to be aware of what they are putting into their bodies and the effect it can have. Easy-to-understand labelling of food and drink packaging with clear health ratings can empower individuals to make healthier food decisions. PAHO recommends front-of-package labelling (FOPL) to help the population identify products that contain excessive amounts of critical nutrients such as sugars, total fats, saturated fats, trans fats, and sodium (28). A number of approaches have been used in other countries, for example in the United Kingdom (UK) “red, amber and green” health ratings which highlight where food items have high sugar, salt or fat content to the consumer (29). PAHO recommends using octagon-shaped warnings on front-of-package labels to help consumers identify quickly and easily products that are “HIGH IN” one or more critical nutrients (28). This labelling approach has been proven to be the most effective in helping consumers recognise products with unhealthy nutritional content. In the Cayman Islands, restaurant menus do not currently provide food content information. Providing the calorie content of a menu option is an initial step in helping consumers make more informed choices, although it does not provide full information on the nutritional value of a meal.

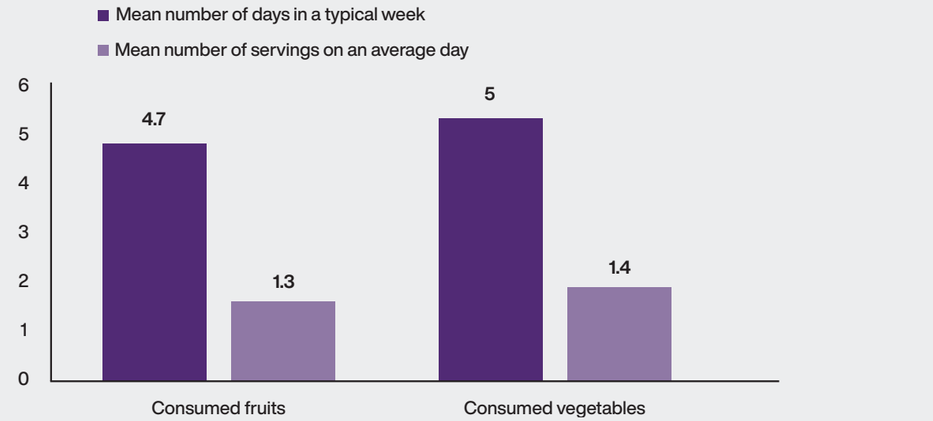


Figure 8: *Mean number of days in a typical week and mean number of servings on an average day that fruits and/or vegetables are consumed*

The main difference in diet from 2012 is that more people are eating processed foods high in salt. This is particularly notable among younger adults. The concern is that more processed foods which are high in salt and sugar are being consumed, and further salt is added prior to eating. Sodium is an essential nutrient involved in normal cellular regulation and helps to regulate fluids and electrolyte balance (30). However, excess sodium intake, whether due to adding salt to foods or eating processed foods high in salt, can harm health. While the main effect of a diet high in sodium is increased blood pressure, research is showing that it is also associated with other impacts on health, such as gastric cancer, obesity and osteoporosis (30). Evidence further suggests that, while these diseases primarily impact older people, they can develop early in life. Therefore, policy responses need to include health promotion and prevention messaging across the lifespan (30).

When considering the population’s diet and consumption patterns, the increasing cost of living must be recognised. The Consumer Price Index (CPI) for food and non-alcoholic beverages was 5.7% more costly in 2023 than 2022. The cost of fruit and vegetables, particularly compared to processed foods high in salt and sugar, is a barrier to consumption. A reduction of import duty for fruits and vegetables could be introduced to facilitate access to fresh produce and healthier options. Currently, fresh fruit are subject to a 17% import tariff, dried fruits 22% and vegetables 22% (31). However, given that simply reducing tariffs on imports does not necessitate sustained lower costs to the customer, consumer protection legislation is required to guard against retailers keeping costs high, despite import duty reductions.

The 2012 survey highlighted a need for greater public education relating to portion sizes for fruit and vegetable intake. As the recommendations have not changed since 2012, educating the public on why the recommendation is for five servings of fruit and vegetables could also influence consumer patterns and behaviours. For example, dietary fibre is a key feature of a diet high in fruits and vegetables, as well as wholegrains and legumes. Dietary fibre has been shown to be associated with lower risk of heart disease, stroke, type 2 diabetes and bowel cancer. Consuming diets high in fibre has also continually demonstrated that it increases microbiome diversity (32). This increase

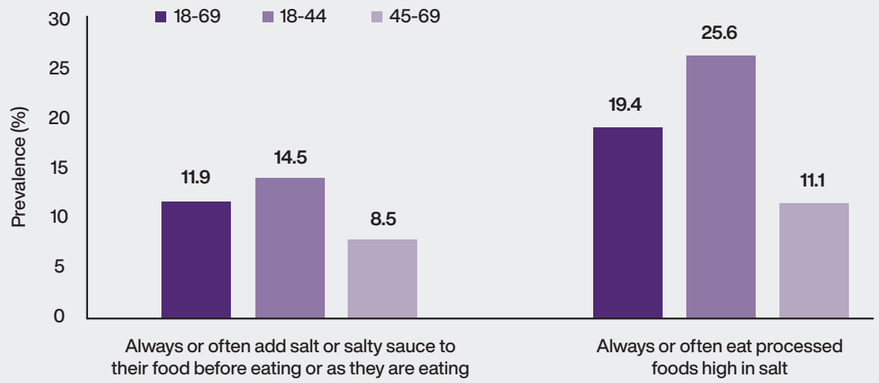


Figure 9: *Proportion of the population who often add salt to their food or often eat processed food high in salt, stratified by age group*

helps with reducing inflammation, which is linked to inflammatory bowel disease (33), arthritis (34), and is potentially associated with depression (35). Research has shown that healthy diets can improve mental health (36).

It is also important that nutritional education programs integrate local fruits and vegetables and local means of preparing produce in a healthier manner. This is key to changing behaviours in a sustainable way, and incorporating local culture.

Health promotion and healthy diet messaging could be communicated across different social media channels, for example the Cayman Islands Government TV (CIGTV) channel, media partners and NGOs. Segments which showcase local chefs cooking nutritious food, giving people the option to cook healthy low-cost foods for themselves and their family and friends could be aired. The cost of producing the meal should also be shown, to demonstrate the cost effectiveness of cooking healthy foods at home compared to spending money on fast food. The younger adult population have been shown to eat less fruit and vegetables and more processed foods high in salt. Targeting healthy diet messaging to the younger population through social media, as well as education settings, is important to reach this demographic.

Recommendations

- Provide an updated National nutrition guide, adapted to locally available produce in Cayman
- Implement front-of-packet food labelling to empower individuals' choices
- Introduce requirement for calorie information on restaurant menus
- Lower the tariffs on fresh fruits and vegetables, ensuring customer protection is considered in the process
- Target the younger population by ensuring nutritious food is provided in educational settings, with regular reviews of school menus and banning of sugary snacks

Diet

4.7 days per week on average people eat fruit, with 1.3 servings consumed on average per day

5.0 days per week on average people eat vegetables , with 1.4 servings consumed on average per day

85% of the population eat less than 5 servings of fruit and/or vegetables per day

14% of the population do not eat any fruit or vegetables

17% of those aged 18-44 years do not eat any fruits or vegetables

10% of those aged 45-69 years do not eat any fruits or vegetables

19% of people always, or often, eat processed foods high in salt

26% this is significantly higher among those 18-44 years

11% compared to those 45-69 years

12% of the population always, or often, add salt or salty sauce to their food before or whilst eating

15% this is significantly higher among those 18-44 years

8.5% compared to those 45-69 years

Physical Activity

Most people identify exercise as a key contributor to health and wellness, which is absolutely true. However, the benefits of physical activity extend far beyond lunges and push-ups and incorporate the whole spectrum of movement.

Staying active is known to benefit both physical and mental health, and is a key contributor to longevity of life. At each life stage, the type of activity that is most beneficial can vary. Children and adolescents ages 6-17 should engage in 60 minutes of moderate to vigorous activity daily, such as running, climbing and jumping rope. Whereas, seniors aged 65 and over should aim for at least 150 minutes a week of moderate intensity activity, such as brisk walking, along with strength training and balance activities at least 2 days a week. These activities can help prevent falls, reduce the risk of injury and delay age-related health problems (37).

Current WHO recommendations aimed at adults aged 18-64 on physical activity for health is a minimum of:

- 150 minutes (2.5 hours) per week of moderate-intensity exercise/physical activity
- or at least 75–150 minutes of vigorous-intensity aerobic physical activity
- or an equivalent combination of moderate- and vigorous-intensity activity

Yet, 19.7% (95% CI 17.7%-21.7%) of Cayman's population are classified as not meeting this. This is significantly higher among women with 27.1% (95%CI 23.9%-30.3%) not meeting the recommendation in comparison with 12.5% (95% CI 10.1%-15.0%) of men (p<0.001). The most notable difference can be seen between women and men in the 18-44 age range, where 27.9% (95% CI 23.5%-32.4%) of women are unable to meet this recommendation in contrast with only 8.4% (95% CI 5.7%-11.1%) of men in this same age range.

A key finding from the survey is that men exercise more than women. Whilst only a third, 33.4% (95% CI 30.0%-36.9%) of men are not engaging in vigorous physical activity, this is much higher among women at 72.0% (95% CI 68.9%-75.1%, p<0.001). Among women, 40.4% (95% CI 36.9%-43.9%) are engaged in low levels of physical activity and 38.7% (95% CI 35.3%-42.1%) are partaking in high levels of physical activity. Whereas among men, the trend is reversed with 65.5% (95% CI 61.9%-69.0%) engaged in high levels of activity, and 22.4% (95% CI 19.3%-25.5%) in low levels of activity.

Physical activity as it relates to work, transportation and recreation is also captured in the survey. This indicates what aspects of our lives enable movement and 75.1% (95% CI 72.8%-77.3%) of the population do not do any transport related physical activity, e.g. they do not walk or cycle as part of their work commute.

Around half of the population, 47.2% (95% CI 44.7%-49.8%) do no work-related activity. The proportion of women who do no work-related physical activity at 54.8% (95% CI 51.3%-58.3%) is significantly higher than the proportion of men at 39.9% (95% CI 36.3%-43.5%, p<0.001). Over a third of the population (36.7%, 95% CI 34.2%-39.1%) reported no engagement in recreation-related physical activity, which does not differ significantly by age or sex.

In comparison to the 2012 STEPS Survey report, the overall proportion of the population not participating in vigorous exercise remains the same, and the trend of far

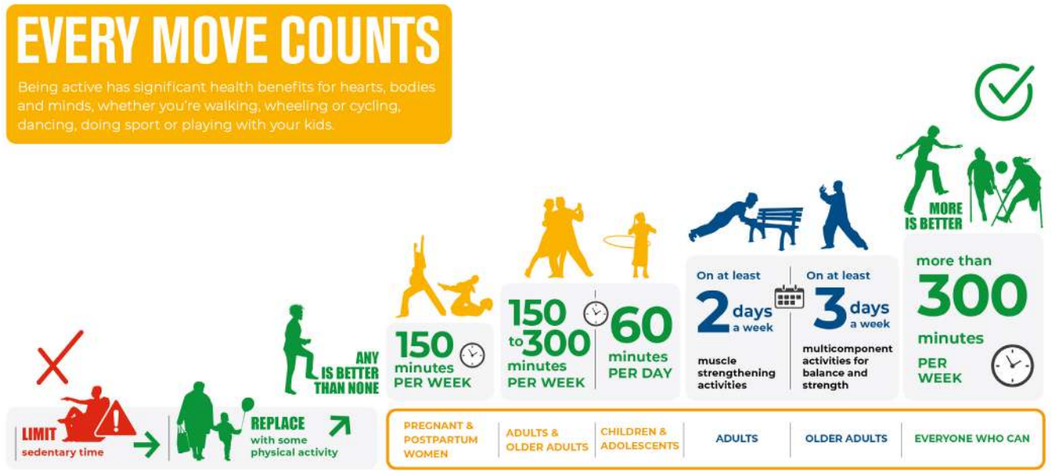


Figure 10: *WHO guidelines on physical activity and sedentary behaviour (2020)*

fewer women than men engaging in vigorous exercise has not changed. It does appear, however, that there has been a slight decrease in the number of women classified as having low levels of physical activity, going from 44.2% (95% CI, 38.1%-50.4%) in 2012 to 40.4% (95%CI, 36.9%-43.9%) in 2023.

One encouraging result from the 2023 survey in comparison to the 2012 survey is the increase in the median minutes of total physical activity on average per day, which in 2012 was 68.6 minutes (IQR 15-342.9) compared to 104 minutes (IQR 26-354) in 2023. However, on the down side, the overall time spent on sedentary activity has increased by 50%, with the 2012 survey results showing a median of 180 minutes per day (IQR 120-360) compared to the 2023 results of 270 minutes per day (IQR 150-481).

Discussion: The true cost of inactivity

The WHO has estimated that, globally, "physical inactivity costs health systems $27 billion USD a year and by 2030, $300 billion USD" as approximately 500 million new cases of NCDs will occur between 2020-2030 (38). The STEPS data shows that there is a missed opportunity for activity through transportation in the Cayman Islands. This is likely a consequence of the physical environment, including a lack of pavements and cycle paths, as well as the heat. The Cayman Islands, with its flat topography, is well suited to cycling as a primary mode of transport, particularly for shorter trips. However, there are concerns relating to the safety of cycling due to a lack of attention and respect from motorists. Additionally, limited public transport options make it difficult for individuals to incorporate walking into their daily commute, which further contributes to the lack of physical activity related to transportation.

Physical activity is less prevalent among women. A qualitative study in Barbados identified a number of social, structural and individual barriers to physical activity among overweight and obese women (39). These included gender norms, physical activity competing with expectations and family obligations, limited active transport options for commuting to work and low perceived access to affordable exercise classes and spaces (39).

Movement is beneficial to all persons of all ages, but it has some additional benefits for persons impacted by NCDs or those with risk factors for developing NCDs. Physical activity is beneficial for those with:

- Diabetes, as physical activity helps the body become more sensitive to insulin, which helps in the management of diabetes, and also helps to control blood sugar levels and lowers the risk for heart disease and nerve damage caused by the disease (40),

- Hypertension, as it improves health-related quality of life, ability to perform everyday activities, CVD mortality and disease progression (37),
- Coronary heart disease, as it helps the heart work better and may also reduce the risk of subsequent heart attacks for those who have already had heart attacks (41).
- For Cancer survivors, physical activity improves mortality rates, both all-cause and cancer-specific mortality, as well as reducing the risk of cancer recurrence or second primary cancer (37).
- Lastly, as is well known, physical activity can help people stay at a healthy weight, or lose weight, which directly impacts obesity (42).

As a subgroup of the population in the Cayman Islands is aging, it is important that there are also programmes that promote physical, social and cultural activities that aim to keep older adults engaged and active in their communities.

Changing behaviour requires motivation and consistency. For effective long-term change, it ultimately is about making small sustained changes in one's daily lives. Here are some ideas to consider that are available to everyone at any fitness level and completely free:

- Walk short distances instead of driving
- Taking the stairs instead of the elevator
- Schedule a walking meeting
- Set hourly reminders to move
- Go for a family daily walk or with neighbours/friends
- Cycle to work
- Attend a free weekly community run or exercise group – there are at least 3 running groups and 2 exercise classes happening every week
- Swim in the ocean
- Use smart technologies on phones or watches to track movement and set daily goals for motivation
- Use YouTube for equipment free home workouts, yoga or pilates session

Recommendations

- **Increased provisions of sidewalks to safely encourage walking and jogging**
- **Provision of cycle lanes**
- **Effective public travel system**
- **Identify what sports and activities residents enjoy and focus on providing access across population groups, particularly women**
- **Increasing cover in public spaces, for example by children's play areas, from trees or shelters to encourage activity whilst providing shade**
- **Mass communication campaigns on physical activity and it's benefits**

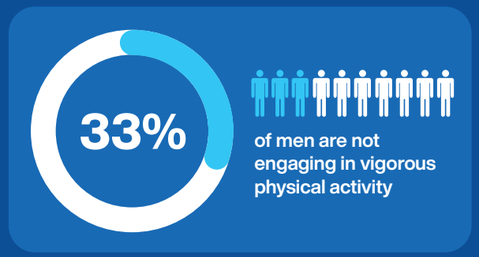
Physical Activity

20% of Cayman's population are classified as not meeting WHOs recommendation for activity for 18-69 year olds

27% of women are not meeting the recommendation

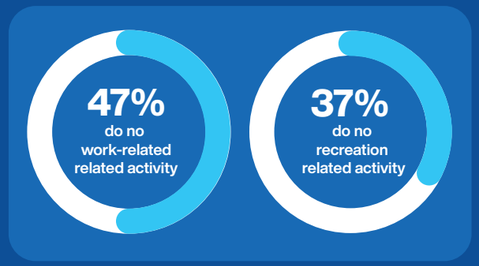
13% of men are not meeting the recommendation

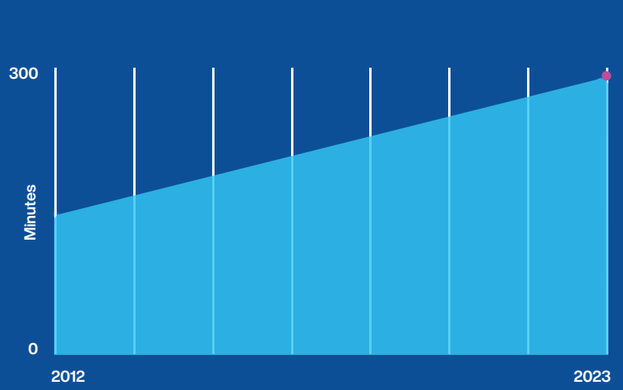
72% of women are not engaging in vigorous physical activity



of men are not engaging in vigorous physical activity

75% of the population do not engage in any transport related activity e.g. walk or cycle as part of commute





50%

time spent in sedentary activity has increased from a median of 180 minutes per day to 270 minutes per day since the 2012 survey

Tobacco Use

12.5% (95% CI 10.9%-14.2%) of the population are current smokers. A significantly higher proportion of men smoke than women, at 18.2% (95% CI 15.4%-21.0%) compared to 6.7% (95% CI 4.9%-8.4%) (p<0.001). Smoking is also significantly higher among the younger adult age group, 18-45 years, in comparison to the older group, 45-69 years (14%, 95% CI 11.6%-16.3%, vs. 10.6%, 95% CI 8.3%-12.9%, p = 0.04).

Among those who currently smoke, 55% (95% CI 47.9%-62.1%) are daily smokers. The average age of initiation among daily smokers is 19.6 years (95% CI 18.3-20.8), which did not differ by age or sex. Among daily smokers, on average 9.2 cigarettes (95% CI 7.7-10.7) are smoked per day. However, 15.2% (95% CI 8.8%-21.6%) of daily smokers report smoking 15-24 cigarettes a day, and an additional 5.7% (95% CI 0.1%-11.4%) report smoking more than 25 cigarettes a day.

Among Current Smokers:

- 80.4% (95% CI 74.6%-86.3%) smoke manufactured cigarettes
- 17.4% (95% CI 11.9%-22.8%) use hand-rolled cigarettes
- 7.2% (95% CI 4.0%-10.4%) smoke tobacco pipes
- 16% (95% CI 11.1%-21.0%) smoke cigars, cheroots or cigarillos
- 11% (95% CI 6.0%-16.0%) smoke shisha

Among current smokers, 55.1% (95% CI 48.0%-62.2%) have tried to stop in the past year. This proportion was significantly higher among younger adults, aged 18-44 years, at 60.9% (95% CI 52.0%-69.8%) than those aged 45-69 years at 44.9% (95% CI 33.3%-56.5%) (p=0.03). This demonstrates that there is motivation and interest in changing smoking behaviours.

Furthermore, among those who visited a doctor or healthcare worker in the past 12 months and who currently smoke, 28.3% (95% CI 21.9%-34.8%) report that they were given advice to stop smoking. This is significantly higher among those aged 45-69 years at 37.4% (95% CI 25.9%-49.0%), than among those aged 18-44 years at 22.9% (95% CI 15.5%-30.2%, p=0.041).

It is interesting to note that whilst regulations in the Cayman Islands do not allow smoking in public places, 9.4% (95% CI 7.9%-11.0%) of the population report being exposed to second-hand smoke in the workplace in the past 30 days. This is significantly higher and more than double among men at 13.2% (95% CI 10.7%-15.7%) than among women at 5.6% (95% CI 3.8%-7.4%, p<0.001). Additionally, 7.3% (95% CI 5.9%-8.7%) of the population report second-hand exposure to smoking at home during the past 30 days, and those individuals on average report being exposed 3.4 days (95% CI 2.8-4.0) during the past week.

The use of electronic cigarettes (e-cigarettes) or vapes has become increasingly popular. In the Cayman Islands, 8.4% (95% CI 6.9%-9.9%) of the population report currently using e-cigarettes. The prevalence is five times greater among younger adults, those aged 18-44 years, at 12.8% (95% CI 10.4%-15.2%) than those aged 45-69 years at 2.5% (95% CI 1.3%-3.7%) (p<0.001). Overall significantly more men currently vape at 10.8% (95% CI 8.4%-13.2%), than women at 5.9% (95% CI 4.1%-7.7%) (p=0.001). Among younger adults, aged 18-44 years, 16.4% (95% CI 12.5%-20.2%) of men and 9.1% (95% CI 6.2%-12.1%) of women currently vape.

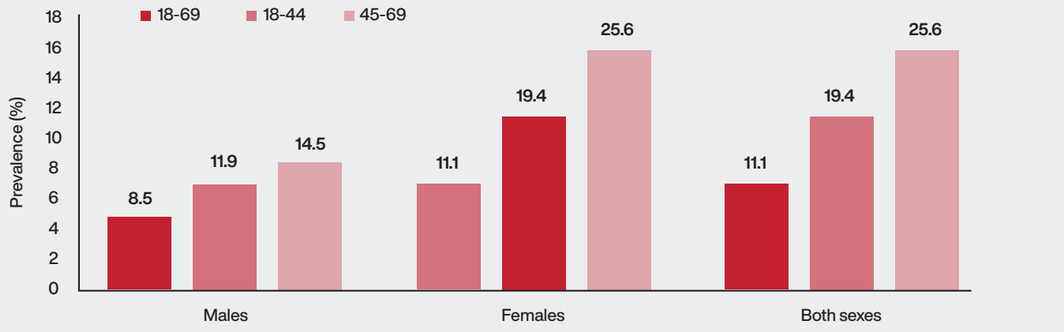


Figure 11: *Prevalence of current vaping stratified by sex and age group*

Among current e-cigarette users, 58.7% (95% CI 49.3%-68.1%) are daily users. Among the population overall, 4.9% (95% CI 3.7%-6.1%) vape daily, and among 18-44-year-old men 10.1% (95% CI 7.0%-13.2%) vape daily.

Discussion: Trends in use and opportunities for interventions

Considering how these behaviours have changed in the last 10 years, the prevalence of tobacco smoking has slightly decreased from 15% (95% CI 10.9% - 19%) in 2012 to 12.5% (95% CI 10.9%-14.2%) in 2023. However, this is a small shift, and when considering the introduction of e-cigarettes and that 8.4% of the population are now vaping, the risk to the population's health from tobacco or nicotine products has in fact increased over the last decade. Vaping is increasingly popular among adolescents, and the Cayman Islands Student Drug Use Survey (CISDUS) 2022 found similar results, whereby 17.3% of students aged 11-18 years reported e-cigarette smoking in the past year, with 17.6% of students aged 13 years or younger reporting using an e-cigarette (43).

The average age that individuals started smoking has not shifted since the 2012 survey (20 years), and the average number of cigarettes smoked per day is also very similar (10.8 in 2012 vs 9.2 in 2023). Interestingly, the proportion of the population exposed to smoke at the workplace has also not notably changed (10.8% in 2012 vs. 9.4% 2023).

Globally, an estimated 1.3 billion people use tobacco products, and 8 million deaths each year are attributed to tobacco (44). Smoking causes lung cancer, as well as cancer of the throat, bladder, kidney, liver, stomach and pancreas. Additionally, it increases the risk of coronary heart disease, heart attack, stroke, cerebrovascular disease and chronic obstructive pulmonary disease (COPD) (45). A study by Shaw et al found that smoking on average shortens a man's life expectancy by 6.5 years (46).

The prevalence of tobacco smoking has declined, and is below the estimated prevalence for the Region of the Americas, reported at 17.1% (47). The further good news is that more than half of current tobacco users have tried to stop in the last year. Concerted efforts need to be made to ensure all users are encouraged to stop and those motivated to stop have adequate support available. Anecdotal reports indicate that, locally, cigarettes can also be purchased individually instead of in packets, making it more accessible and facilitating addiction. There is a clear opportunity for healthcare service providers to have a more active role in this space, as only a third of current users who saw a health professional reported being given advice to stop.

Whist initially marketed as a safer alternative to tobacco smoking, vapes or e-cigarettes pose risks both to the population's health as well as the environment. There is concern that the long-term health effects of vaping are not yet fully known. Whilst vapes do not contain tobacco, they can generate toxic substances, albeit in lower concentrations than cigarettes, and exposure to these can increase the risk of cancer, or heart and lung disease (48). As indicated in the survey results, vaping is popular among the younger age groups. Research shows that targeted marketing of colourful designs and sweet flavours, for example "cotton candy", has led to increased product appeal, decreased product harm perceptions and increased the initiation of e-cigarettes use (49).

The majority of vapes contain nicotine, a highly addictive substance that can impact brain development, particularly among adolescents, as well as lung development (48). Additional concerns surrounding vapes include:

1. Young people to initiate vaping and then transition onto combustible cigarettes (50)

2. Some vapes contain other harmful drugs such as cannabis, and other substances such as heavy metals

3. World Health Organization (WHO) view that vapes are not effective for quitting tobacco use at the population level (48)

4. Second-hand emission exposure to vapes may present harms to non-users and vaping is currently not prohibited by law in public spaces in the Cayman Islands (51).

Increasingly, countries around the world are acting to prevent the harm from vapes, especially the initiation of vape use among adolescents. A number of countries, including Norway, Turkey, Nicaragua, Mexico and Brazil, have banned the sale of vape devices. The UK is considering banning vapes being branded or advertised to appeal to children. Similar enforcement should be considered in the Cayman Islands, alongside restrictions to vaping in public spaces to reduce second-hand exposure, supported by an effective public health campaign to inform the public on the health risks associated with vaping.

The WHO Framework Convention on Tobacco Control (WHO FCTC), which aimed to address the tobacco epidemic in 2003, was extended to the Cayman Islands in March 2023. One requirement it includes is that legislation to ban smoking in public places, including workplaces and public transport, be enacted. Despite this development, no improvement in second hand smoke exposure in work places or in smoking prevalence has been shown since the 2012 Survey. Further work, therefore, is required to ensure that this legislation is enforced.

Recommendations

- Healthcare professionals to lead in promoting smoking cessation and signposting to services
- Reform the law to regulate disposable vapes and vaping in public spaces
- Enforce current and future regulations banning smoking in workplaces and smoke-free areas
- Enforce regulations on partial pack sales of cigarettes
- National vaping campaign to inform public of risks, particularly to young people and parents

Tobacco Use

13% of the population are current smokers

Among current smokers

55%
have tried to stop during the past 12 months

28%
report that they were given advice to stop smoking by a health care professional

8.4% of the population report currently using electronic cigarettes

13%
of those aged 18-44 years vape

2.5%
of those aged 45-69 years vape

16%
highest prevalence of vaping is among males aged 18-44 years

59%
of current users vape daily

Alcohol Consumption

Alcohol is a psychoactive substance with dependence producing properties (52). Harmful alcohol consumption can be the cause of more than 200 health conditions and injuries (52).

Presently, 55% (95% CI 52.4%-57.5%) of the population are current drinkers, defined as those who have consumed alcohol within the last 30 days. A significantly higher proportion of men are current drinkers at 66.4% (95% CI 63.0%-69.8%), when compared to women at 43.2% (95% CI 39.7%-46.6%) (p<0.001). Drinking is also found to be significantly higher among younger adults, with 60.7% (95% CI 57.3%-64.1%) as current drinkers compared to 47.3% (95% CI 43.6%-51.0%) of the older adult population (p<0.001).

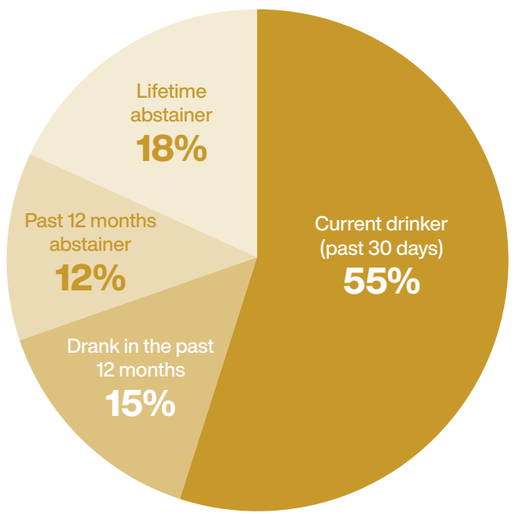


Figure 12: *Alcohol consumption status*

Overall, 18% (95% CI 16.1%-19.9%) of the population are lifetime abstainers. This proportion is significantly higher among women at 23.8% (95% CI 20.8%-26.7%) than among men at 12.5% (95% CI 10.1%-14.9%) (p<0.001).

Among current drinkers who consumed alcohol within the past 7 days, around 1 in 10 (9.9%, 95% CI 8%-11.7%) consume alcohol on a daily basis. Daily drinking is higher among men at 10.9% (95% CI 8.4%-13.5%), in comparison to women at 8.2% (95% CI 5.6%-10.8%). The prevalence of drinking alcohol daily differs by age, with 12.8% (95% CI 9.4%-16.2%) of the older adult population consuming alcohol on a daily basis, and 8.2% (95% CI 6.0%-10.3%) of the younger adult population consuming alcohol on a daily basis. A third, 31.5% (95% CI 28.6-34.4), of those who drank alcohol in the past year consume alcohol less than once a month.

The data shows that among those persons who currently drink, the mean number of standard drinks consumed on one drinking occasion is 2.6 (95% CI 2.5-2.7). This is similar among men and women.

Figure 13: *Standard drink measurement examples*

Heavy episodic drinking is observed among 17.9% (95% CI 16%-19.8%) of the population within the past 30 days, defined as consuming six or more drinks in a single occasion. Drinking behaviour of this kind is more prevalent in the younger adult population at 21.1% (95% CI 18.3%-23.9%), when compared to 13.6% (95% CI 11.2%-16.0%) in the older adult population (p<0.001). Heavy episodic drinking is also significantly higher among men at 25% (95% CI 22.1%-28.5%) than women at 10% (95% CI 8.4%-12.2%) (p<0.001), and higher still among younger men at 30.3% (95% CI 25.7%-34.9%).

Among former drinkers, defined as those who did not drink during the past 12 months, 13.9% (95% CI 9.0%-18.8%) of those stopped drinking due to health reasons such as a negative impact on their health, or on the advice of a doctor or other healthcare worker.

When comparing how drinking behaviours have changed within the last 10 years, the prevalence of lifetime abstainers has slightly decreased from 22.0% (95% CI 19.8%-24.1%) in 2012 to 18.0% (95% CI 16.1%-19.9%) in 2023.

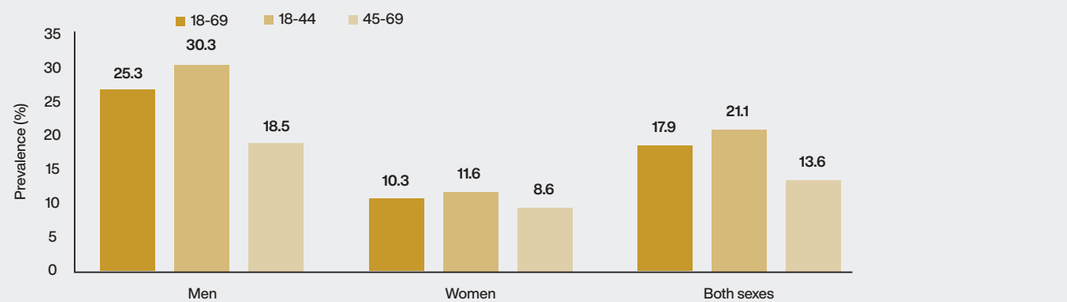


Figure 14: *Prevalence of heavy episodic drinking, defined as consuming six or more drinks on a single occasion in the past 30 days, stratified by sex and age group*

Alcohol Consumption

55% of the population are current drinkers

of whom

9.9% drink daily

18% of the population are lifetime abstainers

66% of men

43% of women

61% of 18-44 years

47% of 45-69 years

Mean number of standard drinks on one occasion is 2.6

18% consumed 6 or more drinks on one occasion in the past 30 days

25% of men consumed 6 or more drinks on one occasion

10% of women consumed 6 or more drinks

30% the highest prevalence of heavy episodic drinking is among men aged 18-44 years

Discussion: The Public Health Impact of Alcohol Consumption

Globally, the harmful use of alcohol contributes to 3 million deaths each year, representing 5.3% of all deaths (53). Harmful alcohol use is associated with mental and behavioural disorders, as well as chronic diseases such as liver cirrhosis, cancers, and CVD (53) (54). Additionally, alcohol consumption is linked to road traffic accidents, violence, and suicidal behaviour (53).

Road traffic accidents are of particular concern in the Cayman Islands, as drinking and speeding result in a significant number of fatalities and collisions, despite the lowering of the legal limit for blood-alcohol level in 2022 (55). In 2023, the Royal Cayman Islands Police Service (RCIPS) reported a substantial rise in driving under the influence (DUI) offences to a total of 270 DUI offences. Of those, almost half (43%) of the individuals prosecuted were at double the legal alcohol limit, and more than a quarter (27%) were found to be at triple the legal alcohol limit (56). There is a clear need to create additional deterrents for those who drink and drive. For example, implementing a penalty point system similar to the United Kingdom could provide the opportunity for harsher penalties.

International evidence indicates that self-reported data gathered on alcohol and drug use will under-estimate the frequency and quantity used, therefore this data indicates the likely minimum consumption (57). When compared to supply-based estimates from the sale of alcohol, self-reported survey findings are typically 40%-60% lower (57).

Heavy episodic drinking in men, particularly the young adult male population, identifies a high-risk group of the population, providing evidence that targeted public health interventions are needed to support this group of individuals. A third (30.3%) of the young adult male population report consuming 6 or more drinks on one occasion within the past 30 days. This is concerning given that the impact of alcohol consumption on health outcomes is largely determined by the volume of alcohol consumed and the pattern of drinking (52). Binge drinking may occur around public holidays or seasonal occasions. Therefore, carefully timed, mass media campaigns can target specific times of the year such as holiday seasons and aim to engage at risk groups. Around 1 in 10 current drinkers, report consuming alcohol daily. These drinkers are at higher risk of developing associated disease, such as cancer, and are a key sub-group for public health interventions to target (58).

Public health policy must take into account that the impact of alcohol consumption is influenced by individual and societal factors (53). Individual factors include age, gender, family circumstances and socio-economic status. Societal factors include culture, social norms, availability of alcoholic beverages and the enforcement of alcohol policies. The WHO best buys consider the most cost-effective actions to reduce the harmful use of alcohol (59), and these recommendations include an increase in excise taxes of alcoholic beverages, restrictions or bans on alcohol advertising across all media platforms and restrictions on the availability of alcohol. It is also critical to enforce drink-driving laws and blood alcohol concentration limits, as well as provide psychosocial interventions for persons with harmful alcohol use.

Recommendations

- **Provide comprehensive health promotion campaigns to give increased recognition of alcohol abuse, reduce harmful patterns of alcohol consumption and target at-risk groups of the population**
- **Ensure that programmes to improve road safety adequately address the impact of alcohol, for example harsher penalties for DUI offences to create a safer driving environment**
- **Introduce controls on the availability of alcohol through:**
  - **Reduce store hours of sale**
  - **Establish minimum pricing for alcoholic beverage through minimum unit pricing (MUP)**
  - **Regulation of the number, density and location of retail alcohol outlets**

Drug Use

21% (95% CI 19.0%-23.0%) of the population reports having ever used cannabis, with a significantly higher proportion of men reporting use at 27.8% (95% CI 24.6%-31.1%) than 14.0% (95% CI 11.6%-16.3%) of women reporting use (p<0.001). 8.2% (95% CI 6.7%-9.6%) of the population report using cannabis within the last 12 months. Use of cannabis within the last 12 months is significantly higher among younger adults at 10.8% (95% CI 8.7%-13.0%) than older adults at 4.6% (95% CI 2.8%-6.3%) (p<0.001), and higher still among younger men at 14.4% (95% CI 10.8%-18.0%). Of those persons who used cannabis in the past 12 months, 27.3% (95% CI 18.8%-35.8%) report using cannabis daily, and a further 18.9% (95% CI 11.4%-26.3%) report weekly use.

All other reported drug use is very low.

- Heroin/other opioid: 0.1% (95% CI 0.0%-0.2%) report having ever used
- Cocaine use: 1.3% (95% CI 0.8%-1.8%) of the population report ever use of cocaine, with higher use among men at 1.8% (95% CI 1.0%-2.6%) than women at 0.8% (95% CI 0.3%-1.2%) (p=0.033).
- Amphetamines/other stimulants: 1.4% (95% CI 0.8%-2.0%) of the population report having ever used amphetamines or other stimulants.
- Prescription medication use: 0.4% (95% CI 0.1%-0.8%) of the population report the use of prescription medicines to get high or feel good in the last 12 months.
- Synthetic cannabinoids/cathinones: 0.9% (95% CI 0.5%-1.4%) report the use in the past 12 months; 1.6% (95% CI 0.8%-2.4%) of men and 0.3% (95% CI 0.0%-0.6%) of women.

The survey was unable to collect data on dependency on prescribed medicine, which is an aspect that warrants further work.

Drug Use

21% of the population reports having ever used cannabis

28% this is higher among men at 28%

14% lower among women at 14%

8.2% of the population reports using cannabis in the last 12 months

14% this is higher among men aged 18-44

Among those who used cannabis in the past year

27% reported using cannabis daily

19% reported using cannabis weekly

Multiple Risk Factors

The following risk factors were considered when analysing the proportion of the population with multiple risk factors for NCDs:

- Current daily smoking
- Eating less than five servings of fruit and/or vegetables per day
- Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)
- Being overweight or obese (BMI ≥ 25 kg/m2)
- Having raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)

Only 2.8% (95% CI 1.9%-3.6%) of the population have 0 risk factors. Nearly two-thirds of the population (63.4%, 95% CI 60.5%-66.3%) have 1-2 risk factors. A third of the population (33.8%, 95% CI 31% - 36.7%) have 3-5 risk factors.

The prevalence of multiple risk factors is higher among the older population. Nearly half (46.7%, 95% CI 42.5%-50.9%) of 45-69 year olds have 3-5 risk factors, which is significantly higher than the 24.1% (95% CI 20.6%-27.6%) among those aged 18-44 years (p<0.001).

The presence of 3-5 risk factors is more common among women at 34% (95% CI 30.3%-37.8%) than among men at 31.7% (95% CI 27.7%-35.7%) however this is not statistically significantly different (p=0.1312).

This data further highlights that care pathways and health promotion efforts need to have a broad approach, as focussing on one risk factor or disease is likely to miss other opportunities for care and advice.

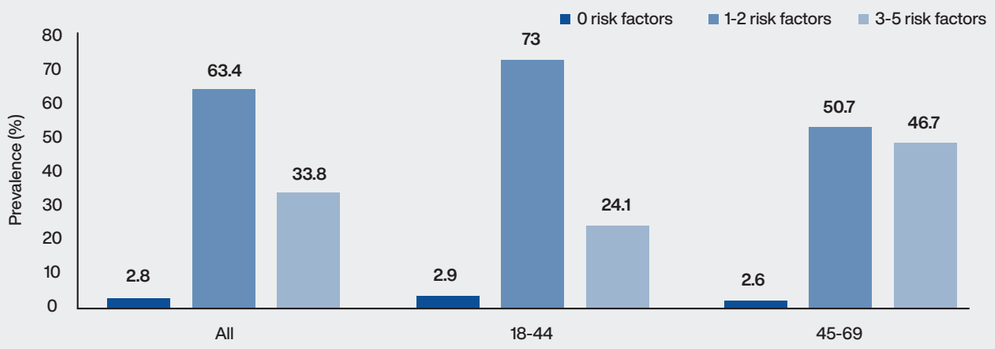


Figure 15: *Prevalence of multiple risk factors stratified by age group*

Multiple Risk Factors

34% a third of our population have 3-5 risk factors

63% nearly two-thirds of the population have 1-2 risk factors

2.8% of the population have 0 risk factors

3 - 5 Risk Factors

47% of 45 - 69 year olds have 3 - 5 risk factors

24% of 18 - 44 year olds have 3 - 5 risk factors

Lifestyle Advice

The frequency of lifestyle advice provided in the last year by a healthcare worker varies according to the topic. 8.3% (95% CI 6.7% - 9.8%) of the population report being advised to quit smoking or not start during the past 12 months, which is significantly higher among men at 11.6% (95% CI 8.8% - 14.5%) than women at 5.3% (95% CI 3.7% - 6.8%) (p<0.001).

Just under a third (28.7%, 95% CI 26.2% - 31.2%) of the population have been advised to eat five portions of fruit and vegetables a day, and a quarter (26%, 95% CI 23.5% - 28.4%) have been advised to reduce fat in their diet and reduce sugary drinks (24.6%, 95% CI 22.3% - 27.0%). However, only 15.4% (95% CI 13.4% - 17.4%) have received advice on lowering the salt content in their food.

The population received more advice regarding fitness, with 36% (95% CI 33.1% - 38.4%) advised to do more physical activity and 37.4% (95% CI 34.7% - 40.1%) advised to maintain a healthy body weight or lose weight.

The older population, aged 45-69 years, report a higher occurrence of lifestyle advice, aside from receiving advice to stop smoking which was similar across age groups. This may reflect the fact that as aging increases the risk of developing NCDs, healthcare workers target messages more to the older population.

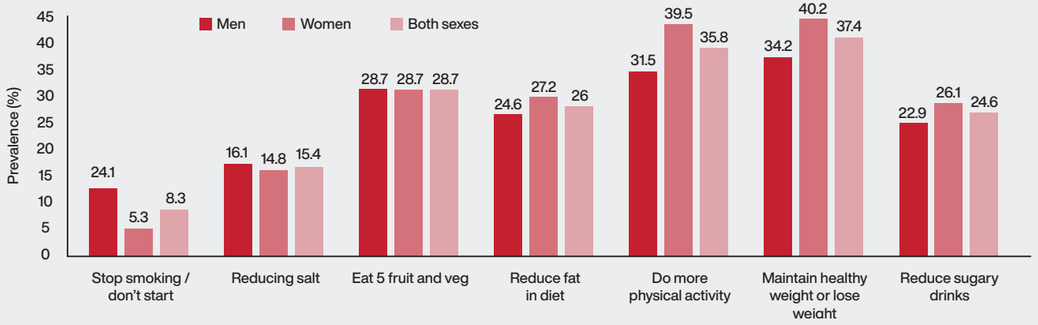


Figure 16: Proportion of the population receiving lifestyle advice from a healthcare worker in the last 12 months, stratified by sex

Lifestyle Advice

8.3%
of the population report being advised to quit smoking or not start during the past 12 months

1/3 (29%) have been advised to eat five portions of fruit and vegetables a day

26%
advised to reduce fat in their diet

25% A quarter have been advised to reduce sugary drinks

36%
advised to do more physical activity

15% have received advice on lowering the salt content in their food

37%
advised to maintain healthy weight/lose weight

Healthcare Access and Screening Uptake

Overall, 67.1% of all women have ever been screened for cervical cancer (95% CI 63.7%-70.4%). Among the target population for cervical screening, women aged 25-49 years, 67.8% have ever been screened for cervical cancer (95% CI 63.6%-72%).

Among the target population, 54.0% (95% CI 49.6%-58.4%) have been screened for cervical cancer within the last two years, and 9.9% (95% CI 7.3%-12.5%) have been screened 3-5 years ago. A further 3.6% (95% CI 1.9%-5.3%) have had a screening test more than five years ago. A third of women in the target population (32.5%, 95% CI 28.3%-36.7%) have never been screened for cervical cancer (Fig. 17).

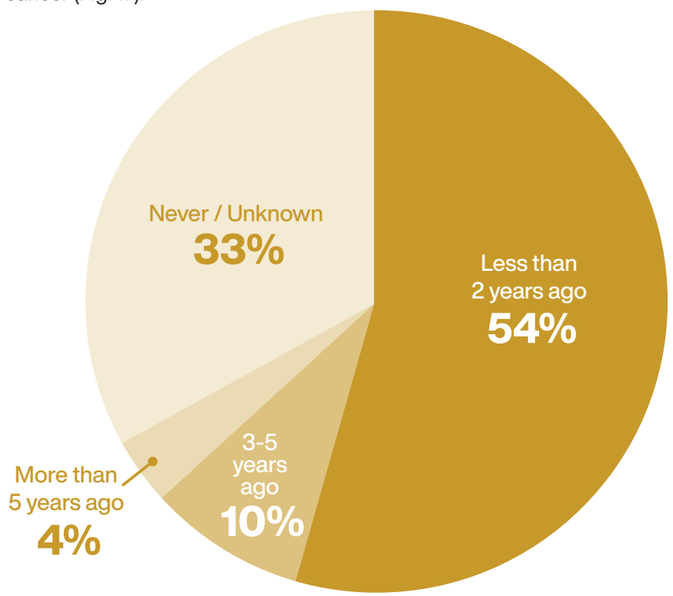


Figure 17: *Proportion of women aged 25-49 years who have had a cervical screening test and how recently*

A screening tool used for bowel cancer is the faecal-immunochemical test (FIT) which assess whether there are any traces of blood in the stools. This is recommended from the age of 50 in the UK and from 45 in the United States (US) (60, 61). Around one in five (19%, 95% CI 17.0%-21.0%) people report ever having a faecal examination to look for hidden blood. There is no difference by sex, but is significantly higher among those aged 45-69 years at 28.6% (95% CI 25.2%-32.0%) than those aged 18-44 years at 11.9% (95% CI 9.6%-14.1%) (p<0.001).

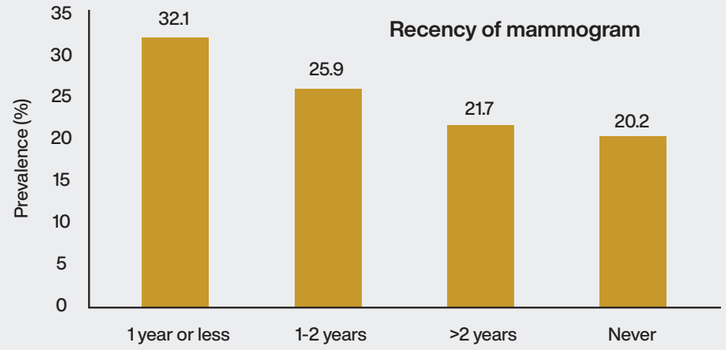


Figure 18: *Proportion of women aged 45-69 years who have had a mammogram and how recently*

Overall, 16.5% (95% CI 14.6%-18.3%) of the population report having had a colonoscopy. There is no difference by sex, however this is significantly higher among the older population with a third (30.5%, 95% CI 27.0% - 33.9%) reporting a colonoscopy compared to 6% among those 18-44 years (95% CI 4.5% - 7.6%) (p<0.001).

A third of men (30.4%, 95% CI 27.1%-33.7%) report having had a prostate exam, which increased significantly to over half among men aged 45-69 years (53.6%, 95% CI 48.3%-58.9%) (p<0.001).

Among women, 22.1% (95% CI 19.1%-25.1%) have been shown how to exam their breasts, which is significantly higher among the younger women at 29.5% (95% CI 24.9% - 34.0%) than those 45-69 years at 12.3% (95% CI 9.0%-15.7%) (p<0.001). One in five women (20.6%, 95% CI 17.6%-23.6%) report never having had their breast examined, which is significantly higher among younger women, those aged 18-44 years, at 30.3% (95% CI 25.6%-34.9%) than older women at 8.1% (p<0.001). Two in five women, 38.2% (95% CI 34.9%-41.5%), report having had a breast examination in the last year, and a further 21.2% (95% CI 18.2%-23.9%) had an examination 1-2 years ago.

One in five women, 20.2% (95% CI 16.1%-24.4%), aged 45-69 years have never had a mammogram. Among women aged 45-69 years 32.1% (95% CI 27.4%-36.8%) report having had one in the past year, and 25.9% (95% CI 21.4%-30.5%) report having had a mammogram 1-2 years ago. Among all women, uptake of mammograms has not changed since 2012, when almost half (46.4%) had never had a mammogram, similar to 50.8% in 2023.

Recent appointment with a dentist or dental hygienist is high. Overall, 35.3% (95% CI 32.9%-37.6%) of the population saw a dentist or dental hygienist within the last 6 months and 26% (95% CI 23.7%-28.2%) visited between 6-12 months ago. A further 17.6% (95% CI 15.6%-19.6%) attended 1-2 years ago, 12.1% (95% CI 10.4%-13.7%) between 2-5 years ago and 7.1% (95% CI 5.7%-8.4%) over five years ago. A small proportion, 2.0% (95% CI 1.3%-2.7%) of the population, reported never seeing a dentist or a dental hygienist. There is no notable difference by sex or age group.

Discussion: High contact with healthcare services can be optimised

Overall, the data shows that on average there is generally good uptake of screening services and relatively high contact with healthcare services among the population. Therefore, as individuals are in contact with healthcare services, there is a clear opportunity for healthcare professionals to provide broader healthcare messaging and advice. Less than half of the respondent's report receiving lifestyle advice, and for many aspects it was much lower. Reinforcing health messaging at every opportunity, across the health and care landscape, and not only focusing on those thought to be at higher risk, can be an effective approach to encouraging behaviour change (62).

The uptake of cervical screening and mammograms among the target population is good. However, there is a pocket of women aged 45-69, 1 in 5, who have never had a mammogram for whom more can be done to encourage uptake. Furthermore, a third of women in the target age group for cervical screening report never having had a screening test. As there is no National Cancer Screening Policy, there is no clear standardised approach being used across the islands, and currently providers or clinicians are following different international recommendations.

The uptake of faecal testing or colonoscopy is lower, at just under a third among those 45-69 years. Acceptability of these screening methods for colon cancer may be a barrier. Colorectal cancer is the second largest cause of cancer-related death globally, following lung cancer (63). Ensuring effective uptake of screening tests is pivotal for early detection and early treatment which in turn can reduce mortality. Alternative approaches, for example home sampling, could be consider for faecal testing, which offers the patient the privacy of their own home and removes any transport or logistical related barriers of attending a clinic. A study based in San Francisco found sampling kits mailed to an individual's home, followed up with a phone call, to significantly increase the uptake compared to usual care at the discretion of providers (64).

Uptake of screening services is a key indicator which can be analysed when a National Cancer Registry is in place. Currently, the Cancer Registry in the Cayman Islands is voluntary, therefore cannot provide robust national data on the prevalence or incidence of cancer, or inform on the uptake of screening services and whether diagnoses are occurring at a later stage of disease progression. To inform policy and ensure the best quality of care for cancer, a comprehensive National Cancer Registry is needed.

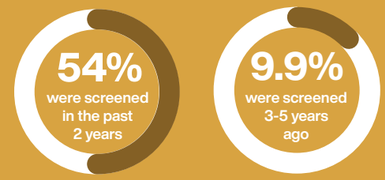
Recommendations

- Introduce a National Cancer Screening Policy to align practices across healthcare providers and inform the public of best practice, with the consideration of alternative approaches for example home sampling to optimise uptake
- Health insurance plans to provide cancer screening according to the National Screening Policy
- Implement a comprehensive National Cancer Registry
- Public health campaign and messaging across the health and care sector to utilise every day encounters for healthy lifestyle information and support the population to make positive changes to health and wellbeing

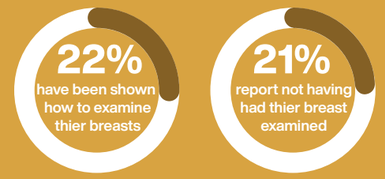
Health Screenings

32% of the population eligible for cervical screening (women aged 25-49 years) have never been screened

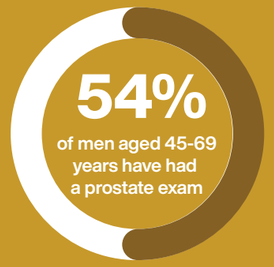
20% of women aged 45-69 have never had a mammogram



Among Women



30% of men report having had a prostate exam



19% of the population report ever having a faecal examination to look for hidden blood, which is a screening test used for bowel cancer. *Among 45-69 year olds,* **29%** *have been screened.*

Conclusion

The 2023 Survey is a great achievement and has given a wealth of national health information that we can act on. Key health measures are similar to the results of the survey completed 10 years ago. The results highlight two overarching issues of i) undiagnosed ill-health and ii) access to care. We need to focus on affordable, effective treatment and care that is provided through primary care services.

The results also indicate lifestyle choices that will lead to further ill-health in the future, and the need for prevention as well as health education to support individuals to make healthier choices. As the data has not shown significant changes since the 2012 Survey, we need to review our public health prevention and promotion approaches to ensure we are effectively informing and supporting behavioural change.

Health impacts everyone, and we have a collective responsibility, across government, education, public and private sectors and in the community to enable a healthier Cayman Islands for future generations to come.

Appendices

A. Methodology

This survey is a population-based, cross-sectional assessment of non-communicable disease risk factors.

The objectives of the STEPS 2023 survey were:

- To ascertain the prevalence of risk factors associated with NCD in the Cayman Islands
- To describe the prevalence of risk factors for NCD according to demographic characteristics including age and sex
- To describe the change in the prevalence of risk factors since the initial 2012 STEPS survey
- To collect data which can inform future planning of healthcare services and interventions

Study population, sampling plan and sample size

The target population for the survey was resident adults aged 18-69 years. A resident was defined according to the census definition of 'anyone residing or intending to reside in the Cayman Islands for 6 months or more'. The geographical coverage of the survey was national, including all three islands; Grand Cayman, Cayman Brac and Little Cayman.

Proposed approach:

Proposed approach for the sample design was a cluster stratified random sample. The 2021 Census was used for the sampling frame, providing a list of all enumeration areas with information on the number and location of households. A selection of 100 enumerations areas (EA) were to be randomly drawn, with households randomly selected from those EAs.

Four age-sex strata will be applied to the data:

- Females aged 18-44
- Females aged 45-69
- Males aged 18-44
- Males aged 45-69

Sample Size Calculation

The sample size calculation was based on the below parameters. The total sample size was 3,300 households.

Variable	Value
Level of confidence	1.96
Margin of error	0.05
Design effect	1.50
Estimated baseline levels	0.50
Anticipated response rate	70%

Table 1: Sample size parameters

Adapted approach:

The sample was drawn from all EAs, meaning that the sample design was a simple stratified random sample of households. As such, the design effect in the sample size calculation would be 1, and the overall sample size 2,220 households.

The altered approach came to light as enumerators were heading into the field with their assignments, therefore the sample was not redrawn. Whilst 3,300 households were approached to prevent sampling bias, the overall sample size including non-responses target became 2,200 for nationally representative data to be generated.

Probability proportional to size was used to determine how many households were selected from each district. Non-replacement sampling was used, therefore if a household declined participation or was not eligible (for example due to tourism), or an individual within the household refused then another household/household member was not selected in their place. This was to prevent convenience sampling which would introduce selection bias.

The final sample selection stage occurred during the data collection phase. The enumerator visited the selected households and randomly selected one participant from the list of eligible household members within each household using the random selection procedure integrated in the STEPS app.

Data Collection

Questionnaire

The PAHO 3.2 version of the STEPS instrument was used and adapted to be country specific. All core, and most expanded questions were included, as well as the optional Drug Use module.

For STEP 2, height, weight, waist and hip circumference and blood pressure were taken. For STEP 3 blood glucose and blood cholesterol, including total cholesterol and HDL, were measured. All respondents who participated in STEP 1 were invited to take part in STEP 2 and STEP 3. All participation in the survey was voluntary, with written consent required from all respondents.

Field work

The STEPS Survey was conducted from 3 June 2023 – 3 September 2023. A team of 35 enumerators, 20 nurses, 5 supervisors and 1 survey co-ordinator conducted the field work. Nurses either conducted home visits or clinic sessions for STEP 3 where a finger-prick blood measure was taken. As a fasting measure was required, appointments were between 7am-9am with clinics in all five districts available in Grand Cayman. An online scheduling platform was used for booking STEP 3 appointments.

Data Processing

All data was collected and managed in accordance with the Data Protection Act (2021 Revision). Data was electronically entered onto tablets and uploaded to a secure server once the tablet connected to a secure internet connection. Data was downloaded from the service to the Ministry of Health and Wellness, who are the data owner. Data collection included participant identifiable information, which once the data was downloaded, and the different section of the survey were linked together (STEP 1 and 2 data, linked to STEP 3), then the identifiable information was removed and a pseudo-anonymous dataset produced, which was used for analysis.

Response Rate

The overall response rate for the adapted sample size of 2,200 for Step 1 was 90%, Step 2 was 81% and Step 3 was 50%. As the response rate for STEP 3 was lower, the results for biochemical measurements will only be stratified by either age or sex, but not both together.

Analysis

Weighted, descriptive analysis is provided for the data with the indicators stratified by age and sex. As the data is from a sample of the population, the prevalence data are estimates, and are accompanied by a 95% Confidence Interval (CI). Where comparisons are made between strata, chi-squared test for categorical variables and t-test for continuous variables are used, with the significant level of 0.05.

Appendices

B. Limitations

There are several limitations should be acknowledged when interpreting this data.

- All of the aspects covered in the questionnaire rely on the participants to report on their own health behaviours and conditions. Respondents may have been hesitant to report aspects which may be viewed to be unfavourable (social desirability bias), or where they may feel ashamed. As such, it is anticipated that these aspects will have been underreported in the survey.
- The possibility of recall bias is present when respondents are asked to self-report, particularly when recalling longer time frames. It is likely that when questions were asking about a long time ago, for example in the last year, the participants responses were less accurate, than when they were asked about a recent time period, for example in the past week.
- The lower response rate for STEP 3, the finger prick blood measure, means that whilst nationally representative estimates are provided, these cannot be stratified to the same level as the STEP 1 and STEP 2 results.
- Concerns around confidentiality of data was a deterrent for some individuals randomly selected to participate.
- The introduction of a laser-based height device, which was more easily transportable, raised concern over the accuracy of the results, however, on conducting an audit and following up with a random selection of respondents the recordings were accurate.
- Mental health is one NCD which was not included in the survey. However, this is a key area where national statistics is necessary to understand how best to ensure appropriate services and care are available for the population. Alternative options of data collection will be explored, which can enable qualitative information to also be gathered.
- As participation in the survey is voluntary, there is the potential for non-respondent bias. It is possible that those who declined to participate are individuals who have less contact with healthcare services or have a lower level of health education, and this should be considered when interpreting the findings.

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Cayman Islands
STEPS Fact Sheet 2023

Cayman Islands STEPS Survey 2023

Fact sheet

The STEPS survey of noncommunicable disease (NCD) risk factors in Cayman Islands was carried out from June 2023 to September 2023. Cayman Islands carried out Step 1, Step 2 and Step 3. Sociodemographic and behavioural information was collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Biochemical measurements were collected to assess blood glucose and cholesterol levels in Step 3. The survey was a population-based survey of resident adults aged 18-69. A multistage sample design was used to produce representative data for that age range in the Cayman Islands. A total of 1979 adults participated in the survey. The overall response rate for Step 1 was 90%, Step 2 was 81% and Step 3 was 50%. A repeat survey is planned for 2032 if funds permit.

Results for adults aged 18-69 years (incl. 95% CI)	**Both Sexes**	**Males**	**Females**
Step 1 Tobacco Use			
Percentage who currently smoke tobacco	**12.5%** (10.9 – 14.2)	**18.2%** (15.4 – 21.0)	**6.7%** (4.9 – 8.4)
Percentage who currently smoke tobacco daily	**6.9%** (5.6 – 8.1)	**10.3%** (8.2 – 12.4)	**3.4%** (2.2 – 4.5)
Percentage of current smokers who use manufactured cigarettes	**80.6%** (74.7 – 86.5)	**83.1%** (77.0 – 89.2)	**73.4%** (59.6 – 87.2)
Percentage who currently use electronic cigarettes	**8.4%** (6.9 – 9.9)	**10.8%** (8.4 – 13.2)	**5.9%** (4.1 – 7.7)
Percentage exposed to second-hand smoke in the workplace in the past 30 days	**9.4%** (7.9 – 11.0)	**13.2%** (10.7 – 15.7)	**5.6%** (3.8 – 7.4)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	**18.0%** (16.1 – 19.9)	**12.5%** (10.1 – 14.9)	**23.8%** (20.8 – 26.7)
Percentage who are past 12-month abstainers	**12.1%** (10.4 – 13.7)	**9.6%** (7.5 – 11.7)	**14.6%** (12.1 – 17.1)
Percentage who currently drink (drank alcohol in the past 30 days)	**55.0%** (52.4 – 57.5)	**66.4%** (63.0 – 69.8)	**43.2%** (39.7 – 46.6)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	**17.9%** (16.0 – 19.8)	**25.3%** (22.1 – 28.5)	**10.3%** (8.4 – 12.2)
Step 1 Diet			
Mean number of days fruit consumed in a typical week	**4.7** (4.6 – 4.8)	**4.6** (4.4 – 4.7)	**4.9** (4.7 – 5.0)
Mean number of servings of fruit consumed on average per day	**1.3** (1.3 – 1.4)	**1.2** (1.2 – 1.3)	**1.4** (1.3 – 1.5)
Mean number of days vegetables consumed in a typical week	**5.0** (4.8 – 5.1)	**5.0** (4.8 – 5.2)	**4.9** (4.8 – 5.1)
Mean number of servings of vegetables consumed on average per day	**1.4** (1.4 – 1.5)	**1.4** (1.3 – 1.5)	**1.4** (1.3 – 1.5)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	**85.4%** (83.7 – 87.2)	**86.8%** (84.3 – 89.2)	**84.0%** (81.6 – 86.5)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	**11.9%** (10.4 – 13.5)	**11.3%** (9.1 – 13.5)	**12.6%** (10.4 – 14.8)
Percentage who always or often eat processed foods high in salt	**19.4%** (17.3 – 21.5)	**17.6%** (14.8 – 20.5)	**21.3%** (18.2 – 24.3)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent) *	**19.7%** (17.7 – 21.7)	**12.5%** (10.1 – 15.0)	**27.1%** (23.9 – 30.3)
Percentage not engaging in vigorous activity	**52.4%** (49.9 – 55.0)	**33.4%** (30.0 – 36.9)	**72.0%** (68.9 – 75.1)
Step 1 Cervical Cancer Screening			
Percentage of women aged 25-49 years who have ever had a screening test for cervical cancer			**67.8%** (63.6 – 72.0)
Percentage of women aged 25-49 years who have had a screening test for cervical cancer within the past two years			**50.8%** (47.3-54.2)

* For complete definitions of insufficient physical activity, refer to the WHO Guidelines on Physical Activity and Sedentary Behaviour

PAHO/WHO STEPS noncommunicable disease risk factor surveillance

Cayman Islands STEPS Survey 2023

Fact Sheet

Results for adults aged 18-69 years (incl. 95% CI)	**Both Sexes**	**Males**	**Females**
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m^2)	**28.4** (28.1 – 28.8)	**27.3** (26.8 – 27.8)	**29.6** (29.1 – 30.2)
Percentage who are overweight (BMI ≥ 25 kg/m^2)	**69.6%** (66.9 – 72.4)	**65.6%** (61.5 – 69.8)	**73.9%** (70.5 – 77.2)
Percentage who are obese (BMI ≥ 30 kg/m^2)	**32.7%** (30.0 – 35.3)	**24.6%** (21.0 – 28.2)	**41.1%** (37.2 – 45.0)
Average waist circumference (cm)		**94.2** (93.2 – 95.3)	**93.5** (92.3 – 94.7)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	**120.8** (119.8 – 121.8)	**125.7** (124.3 – 127.0)	**115.7** (114.3 – 117.1)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	**79.9** (79.3 – 80.6)	**80.6** (79.7 – 81.6)	**79.2** (78.4 – 80.1)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	**29.9%** (27.2 – 32.5)	**31.6%** (27.7 – 35.4)	**28.0%** (24.5 – 31.6)
For those with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)			
Percentage with raised BP, not previously diagnosed	**35.2%** (30.0 – 40.3)	**44.4%** (37.2 – 51.6)	**24.2%** (18.2 – 30.2)
Percentage with raised BP, previously diagnosed, not currently on medication	**14.8%** (11.0 – 18.7)	**14.3%** (9.7 – 18.9)	**15.5%** (9.1 – 21.9)
Percentage with raised BP, previously diagnosed, currently on medication, not controlled	**22.8%** (18.6 – 26.9)	**18.8%** (13.4 – 24.1)	**27.6%** (21.0 – 34.2)
Percentage previously diagnosed, currently on medication, controlled (SBP < 140 and DBP < 90 mmHg)	**27.2%** (22.6 – 31.8)	**22.6%** (17.0 – 28.2)	**32.7%** (25.4 – 40.1)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose (mg/dl)	**83.9** (81.6 – 86.2)	**83.9** (80.4 – 87.4)	**83.9** (81.0 – 86.8)
Percentage with impaired fasting glycaemia (plasma venous value ≥110 mg/dl and <126 mg/dl)	**2.4%** (1.5 – 3.3)	**2.1%** (0.9 – 3.3)	**2.7%** (1.4 – 4.0)
Percentage with raised fasting blood glucose (plasma venous value ≥ 126 mg/dl) or currently on medication for raised blood glucose	**7.7%** (5.8 – 9.5)	**8.0%** (5.2 – 10.8)	**7.3%** (4.9 – 9.7)
Mean total blood cholesterol, including those currently on medication for raised cholesterol (mg/dl)	**169.1** (165.9 – 172.4)	**166.1** (161.2 – 171.1)	**172.2** (167.9 – 176.5)
Percentage with raised total cholesterol (≥ 190 mg/dl or currently on medication for raised cholesterol)	**31.9%** (28.8 – 35.0)	**30.4%** (25.8 – 35.0)	**33.4%** (29.2 – 37.7)
Cardiovascular disease (CVD) risk			
Percentage aged 40-69 years with a 10-year CVD risk ≥ 20%, or with existing CVD**	**5.8%** (4.0-8.3)	**4.1%** (2.4-7.1)	**7.6%** (4.7-12.1)
Summary of combined risk factors • current daily smokers • less than 5 servings of fruits & vegetables per day • insufficient physical activity • overweight (BMI ≥ 25 kg/m^2) • raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	**2.8%** (1.9 – 3.6)	**2.3%** (1.1 – 3.6)	**3.3%** (2.2 – 4.5)
Percentage with three or more of the above risk factors, aged 18 to 44 years	**24.1%** (20.6 – 27.6)	**21.9%** (17.4 – 26.4)	**24.9%** (20.0 – 29.8)
Percentage with three or more of the above risk factors, aged 45 to 69 years	**46.7%** (42.5 – 50.9)	**45.3%** (39.1 – 51.6)	**45.9%** (40.4 – 51.5)
Percentage with three or more of the above risk factors, aged 18 to 69 years	**33.8%** (31.0 – 36.7)	**31.7%** (27.7 – 35.7)	**34.0%** (30.3 – 37.8)

** A 10-year CVD risk of ≥20% is defined according to age, sex, blood pressure, smoking status (current smokers), total cholesterol, and previously diagnosed diabetes.

For additional information, please contact:
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PAHO/WHO STEPS noncommunicable disease risk factor surveillance

Cayman Islands
STEPS Questionnaire 2023

Cayman Islands 2023 STEPS Questionnaire

The PAHO/WHO STEPwise approach to noncommunicable disease risk factor surveillance (STEPS)

Pan American Health Organization
World Health Organization
Americas
PAHO

Ministry of Health & Wellness
Cayman Islands Government

Adapted from the PAN AMERICAN STEPS Instrument v3.2 for Noncommunicable Disease Risk Factor Surveillance

Cayman Islands

Survey Information

Location and Date	Response	Code
Cluster ID	⌊_⌊_⌊_⌊_⌊_⌊_⌋	I1
Cluster		I2
Interviewer ID	⌊_⌊_⌊_⌋	I3
Date of completion of the instrument	⌊_⌊_⌋ ⌊_⌊_⌋ ⌊_⌊_⌊_⌊_⌋ dd mm year	I4

Consent, Interview Language and Name	Response	Code
Consent has been read and obtained	Yes 1 No 2 **If NO, END**	I5
Interview Language	English 1	I6
Time of interview (24 hour clock)	⌊_⌊_⌋ : ⌊_⌊_⌋ hrs mins	I7
Family Surname		I8
First Name		I9
Additional Information that may be helpful		
Contact phone number where possible		I10

Step 1 Demographic Information

CORE: Demographic Information		
Question	**Response**	**Code**
Sex (*Record Male / Female as observed)*	Male 1 Female 2	C1
What is your date of birth? *Don't Know 77 77 7777*	⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋ *If known, Go to C4* dd mm year	C2
How old are you?	Years ⌊_⌋⌊_⌋	C3
In total, how many years have you spent at school and in full-time study (excluding pre-school)?	Years ⌊_⌋⌊_⌋	C4

EXPANDED: Demographic Information		
What is the **highest level of education** you have completed?	No formal schooling 1 Less than primary school 2 Primary school completed 3 Middle school completed 4 High school completed 5 College/University completed 6 Post graduate degree 7 Refused 88	C5
What is your relevant ethnic group / racial group **background**?	Black 1 Asian 2 White 3 East Indian 4 Hispanic 5 Mixed 6 Other 7 Don't know/Not Stated 8 Refused 88	C6
What is your **marital status**?	Never married 1 Currently married 2 Separated 3 Divorced 4 Widowed 5 Cohabitating 6 Refused 88	C7
Which of the following best describes your **main work** status over the past 12 months?	Government employee 1 Non-government employee 2 Self-employed 3 Non-paid (e.g. Volunteer/Intern) 4 Student 5 Homemaker / stay at home parent 6 Retired 7 Unemployed (able to work) 8 Unemployed (unable to work) 9 Refused 88	C8

EXPANDED: Demographic Information, Continued		
Question	**Response**	**Code**
How many people older than 18 years, including yourself, live in your household?	Number of people ⌊_⌋⌊_⌋	C9
Can you give an **estimate** of the annual household income if I read some options to you? Is it (In KYD) *(READ OPTIONS)*	Less than $15,000 1 From $15,000 to $30,000 2 From $30,001 to $70,000 3 From $70,001 to $120,000 4 From $120,001 to $200,000 5 More than $200,000 6 Don't Know 7 Refused 8	C11
Which of the following best describes your health insurance coverage? *(READ OPTIONS)* (OFFER DEFINITIONS FROM SHOWCARDS)	Government CINICO full plan 1 SHIC plan 2 Local provider comprehensive plan 3 Global provider comprehensive plan 4 No health insurance 5 Don't Know 77 Refused 88	X1

Step 1 Behavioural Measurements

CORE: Tobacco Use

Now I am going to ask you some questions about tobacco use.

Question	Response	Code
Do you **currently** smoke any **tobacco** products, such as cigarettes, cigars or pipes? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to T8*	T1
Do you currently smoke tobacco products **daily**?	Yes 1 No 2	T2
How old were you when you **first started** smoking?	Age (years) Don't know 77 ⌊_⌋ *If Known, go to T5a/T5aw*	T3
Do you remember how long ago it was? *(RECORD ONLY 1, NOT ALL 3)* *Don't know 77*	In Years ⌊_⌋ *If Known, go to T5a/T5aw*	T4a
	OR in Months ⌊_⌋ *If Known, go to T5a/T5aw*	T4b
	OR in Weeks ⌊_⌋	T4c
On average, **how many** of the following products do you smoke **each day/week?** *(IF LESS THAN DAILY, RECORD WEEKLY)* *(RECORD FOR EACH TYPE, USE SHOWCARD)* *Don't Know 7777*	DAILY↓ WEEKLY↓	
	Manufactured cigarettes ⌊_⌋ ⌊_⌋	T5a/T5aw
	Hand-rolled cigarettes ⌊_⌋ ⌊_⌋	T5b/T5bw
	Pipes full of tobacco ⌊_⌋ ⌊_⌋	T5c/T5cw
	Cigars, cheroots, cigarillos ⌊_⌋ ⌊_⌋	T5d/T5dw
	Number of Shisha sessions ⌊_⌋ ⌊_⌋	T5e/T5ew
	Other ⌊_⌋ ⌊_⌋ *If Other, go to T5other, else go to T6*	T5f/T5fw
	Other (please specify): ⌊_⌋	T5other/ T5otherw
During the past 12 months, have you tried to **stop smoking**?	Yes 1 No 2	T6
During any visit to a doctor or other health worker in the past 12 months, were you advised to quit smoking tobacco?	Yes 1 *If T2=Yes, go to T12; if T2=No, go to T9* No 2 *If T2=Yes, go to T12; if T2=No, go to T9* No visit during the past 12 months 3 *If T2=Yes, go to T12; if T2=No, go to T9*	T7
In the past, did you **ever smoke** any tobacco products? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to T12*	T8
In the past, did you **ever** smoke **daily**?	Yes 1 *If T1=Yes, go to T12, else go to T10* No 2 *If T1=Yes, go to T12, else go to T10*	T9

EXPANDED: Tobacco Use

Question	Response	Code
How old were you when you **stopped** smoking?	Age (years) Don't Know 77 ⌊_⌋ *If Known, go to T12*	T10
How **long ago** did you stop smoking? *(RECORD ONLY 1, NOT ALL 3)* *Don't Know 77*	Years ago ⌊_⌋ *If Known, go to T12*	T11a
	OR Months ago ⌊_⌋ *If Known, go to T12*	T11b
	OR Weeks ago ⌊_⌋	T11c
Do you **currently use** any **smokeless tobacco** products such as snuff, chewing tobacco? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to T15*	T12
Do you **currently use smokeless tobacco** products **daily?**	Yes 1 No 2 *If No, go to T14aw*	T13
On average, how many **times a day/week** do you use …. *(IF LESS THAN DAILY, RECORD WEEKLY)* *(RECORD FOR EACH TYPE, USE SHOWCARD)* *Don't Know 7777*	DAILY↓ WEEKLY↓	
	Snuff, by mouth ⌊_⌋ ⌊_⌋	T14a/ T14aw
	Snuff, by nose ⌊_⌋ ⌊_⌋	T14b/ T14bw
	Chewing tobacco ⌊_⌋ ⌊_⌋	T14c/ T14cw
	Other ⌊_⌋ ⌊_⌋ *If Other, go to T14other, if T13=No, go to T16, else go to T17*	T14e/ T14ew
	Other (please specify): ⌊_⌋ *If T13=No, go to T16, else go to T17*	T14other/ T14otherw
In the **past**, did you **ever use** smokeless tobacco products such as snuff, chewing tobacco?	Yes 1 No 2 *If No, go to T17*	T15
In the **past**, did you **ever use** smokeless tobacco products such as snuff, chewing tobacco **daily**?	Yes 1 No 2	T16
During the past **30 days**, did someone smoke **in your home**?	Yes 1 No 2 *If No, go to T18*	T17
During the past **7 days**, on how many days did **someone in your home** smoke when you were present?	Number of days Don't know 77 ⌊_⌋	X2
During the past 30 days, did someone smoke in closed areas **in your workplace** (in the building, in a work area or a specific office)?	Yes 1 No 2 Don't work in a closed area 3	T18
Now I will ask you about electronic cigarettes, which are also called e-cigarettes or vaping devices. These devices are battery powered and heat a liquid to produce vapor or aerosol instead of smoke. *(USE SHOWCARD)*		
Do you currently use electronic cigarettes or any other vaping device?	Yes 1 No 2 *If No, go to A1*	X3
Do you currently use electronic cigarettes or any other vaping device **daily**?	Yes 1 No 2	X4

CORE: Alcohol Consumption

The next questions ask about the consumption of alcohol.

Question	Response	Code
Have you **ever** consumed any alcohol such as beer, wine or spirits? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to A16*	A1
Have you consumed any alcohol within the **past 12 months**?	Yes 1 *If Yes, go to A4* No 2	A2
Have you stopped drinking due to health reasons, such as a negative impact on your health or on the advice of your doctor or other health worker?	Yes 1 *If Yes, go to A16* No 2 *If No, go to A16*	A3
During the past 12 months, **how frequently** have you had at least one standard alcoholic drink? *(READ RESPONSES, USE SHOWCARD)*	Daily 1 5-6 days per week 2 3-4 days per week 3 1-2 days per week 4 1-3 days per month 5 Less than once a month 6 Never 7	A4
Have you consumed any alcohol within the **past 30 days**?	Yes 1 No 2 *If No, go to A13*	A5
During the past 30 days, on how many **occasions** did you have at least one standard alcoholic drink?	Number Don't know 77 ⌊_⌋⌊_⌋ *If Zero, go to A13*	A6
During the past 30 days, when you drank alcohol, how many **standard drinks on average** did you have during one drinking occasion? *(USE SHOWCARD)*	Number Don't know 77 ⌊_⌋⌊_⌋	A7
During the past 30 days, what was the **largest number** of standard drinks you had on a single occasion, counting all types of alcoholic drinks together?	Largest number Don't Know 77 ⌊_⌋⌊_⌋	A8
During the past 30 days, how many times did you have **six or more** standard drinks in a single drinking occasion?	Number of times Don't Know 77 ⌊_⌋⌊_⌋	A9
During each of the **past 7 days**, how many standard drinks did you have each day? *(USE SHOWCARD)* *Don't Know 77*	Monday ⌊_⌋⌊_⌋	A10a
	Tuesday ⌊_⌋⌊_⌋	A10b
	Wednesday ⌊_⌋⌊_⌋	A10c
	Thursday ⌊_⌋⌊_⌋	A10d
	Friday ⌊_⌋⌊_⌋	A10e
	Saturday ⌊_⌋⌊_⌋	A10f
	Sunday ⌊_⌋⌊_⌋	A10g

CORE: Alcohol Consumption, continued

I have just asked you about your consumption of alcohol during the past 7 days. The questions were about alcohol in general, while the next questions refer to your consumption of homebrewed alcohol, alcohol brought over the border/from another country, any alcohol not intended for drinking or other untaxed alcohol. Please only think about these types of alcohol when answering the next questions.

Question	Response	Code
During the **past 7 days**, did you consume any **homebrewed** alcohol, any alcohol **brought over the border/from another country**, any alcohol **not intended for drinking** or other **untaxed** alcohol? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to A14*	A11
On average, **how many standard drinks** of the following did you consume **during the past 7 days**? *(USE SHOWCARD)* *Don't Know 77*	Homebrewed spirits, e.g. moonshine ⌊_⌋⌊_⌋	A12a
	Homebrewed beer or wine, e.g. beer, palm or fruit wine ⌊_⌋⌊_⌋	A12b
	Alcohol brought over the border/from another country ⌊_⌋⌊_⌋	A12c
	Alcohol not intended for drinking, e.g. alcohol-based medicines, perfumes, after shaves ⌊_⌋⌊_⌋	A12d
	Other untaxed alcohol in the country ⌊_⌋⌊_⌋	A12e

EXPANDED: Alcohol Consumption

During the **past 12 months,** how often have you failed to do what was normally expected from you because of drinking?	Daily or almost daily 1 Weekly 2 Monthly 3 Less than monthly 4 Never 5	A14
During the **past 12 months**, have you had family problems or problems with your partner due to **someone else's** drinking?	Yes, more than monthly 1 Yes, monthly 2 Yes, several times but less than monthly 3 Yes, once or twice 4 No 5	A16

CORE: Diet

The next questions ask about the fruits and vegetables that you usually eat. I have a nutrition card here that shows you some examples of local fruits and vegetables. Each picture represents the size of a serving. As you answer these questions please think of a typical week in the last year.

Question	Response	Code
In a typical week, on how many days do you **eat fruit**? *(USE SHOWCARD)*	Number of days Don't Know 77 ⌊_⌋⌊_⌋ *If Zero days, go to D3*	D1
How many **servings** of fruit do you eat on **one** of those days? *(USE SHOWCARD)*	Number of servings Don't Know 77 ⌊_⌋⌊_⌋	D2
In a typical week, on how many days do you **eat vegetables**? *(USE SHOWCARD)*	Number of days Don't Know 77 ⌊_⌋⌊_⌋ *If Zero days, go to D5*	D3
How many **servings** of vegetables do you eat on one of those days? *(USE SHOWCARD)*	Number of servings Don't know 77 ⌊_⌋⌊_⌋	D4

Dietary salt

With the next questions, we would like to learn more about salt in your diet. Dietary salt includes ordinary table salt, unrefined salt such as sea salt, iodized salt, salty stock cubes and powders, and salty sauces such as soya sauce or fish sauce (see showcard). The following questions are on adding salt to the food right before you eat it, on how food is prepared in your home, on eating processed foods that are high in salt such as processed meat, corned beef, fast food or instant noodles, and questions on controlling your salt intake. Please answer the questions even if you consider yourself to eat a diet low in salt.

How often do you **add salt or a salty sauce such as soya sauce** to your food right before you eat it or as you are eating it? *(SELECT ONLY ONE)* *(USE SHOWCARD)*	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D5
How often is **salt, salty seasoning or a salty sauce added** in cooking or preparing foods in your household?	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D6
How often do you eat **processed food high in salt**? By processed food high in salt, I mean foods that have been altered from their natural state, such as packaged salty snacks, canned salty food including pickles and preserves, salty food prepared at a fast food restaurant, cheese, bacon and processed meat. *(USE SHOWCARD)*	Always 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't know 77	D7
How much salt or salty sauce do you think you consume?	Far too much 1 Too much 2 Just the right amount 3 Too little 4 Far too little 5 Don't know 77	D8

EXPANDED: Diet

Question	Response	Code
How important to you is **lowering the salt** in your diet?	Very important 1 Somewhat important 2 Not at all important 3 Don't know 77	D9
Do you think that too much salt or salty sauce in your diet could cause a **health problem**?	Yes 1 No 2 Don't know 77	D10
Do you do any of the following on a regular basis to **control your salt intake**? *(RECORD FOR EACH)*		
Limit consumption of processed foods	Yes 1 No 2	D11a
Look at the salt or sodium content on food labels	Yes 1 No 2	D11b
Buy low salt/sodium alternatives	Yes 1 No 2	D11c
Use spices other than salt when cooking	Yes 1 No 2	D11d
Avoid eating foods prepared outside of a home	Yes 1 No 2	D11e
Do other things specifically to control your salt intake	Yes 1 *If Yes, go to D11other* No 2	D11f
Other (please specify)	⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋	D11other

CORE: Physical Activity

Next I am going to ask you about the time you spend doing different types of physical activity in a typical week. Please answer these questions even if you do not consider yourself to be a physically active person.
Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing, construction work, heavy lifting, seeking employment. In answering the following questions 'vigorous-intensity activities' are activities that require hard physical effort and cause large increases in breathing or heart rate, 'moderate-intensity activities' are activities that require moderate physical effort and cause small increases in breathing or heart rate.

Question	Response	Code
Work		
Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like carrying or lifting heavy loads, digging or construction work? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to P4*	P1
In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days ⌊_⌋	P2
How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	P3 (a-b)
Does your work involve moderate-intensity activity, that causes small increases in breathing or heart rate such as brisk walking or carrying light loads? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to P7*	P4
In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days ⌊_⌋	P5
How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	P6 (a-b)
Travel to and from places		
The next questions exclude the physical activities at work that you have already mentioned. Now I would like to ask you about the usual way you travel to and from places. For example to work, for shopping, to market, to place of worship.		
Do you walk or use a bicycle *(pedal cycle)* to get to and from places?	Yes 1 No 2 *If No, go to P10*	P7
In a typical week, on how many days do you walk or bicycle to get to and from places?	Number of days ⌊_⌋	P8
How much time do you spend walking or bicycling for travel on a typical day?	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	P9 (a-b)

CORE: Physical Activity, Continued

Question	Response	Code
Recreational activities		
The next questions exclude the work and transport activities that you have already mentioned. Now I would like to ask you about sports, fitness and recreational activities (leisure).		
Do you do any vigorous-intensity sports, fitness or recreational *(leisure)* activities that cause large increases in breathing or heart rate like running or football? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to P13*	P10
In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational *(leisure)* activities?	Number of days ⌊_⌋	P11
How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	P12 (a-b)
Do you do any moderate-intensity sports, fitness or recreational *(leisure)* activities that cause a small increase in breathing or heart rate such as brisk walking, cycling, yoga, pickleball? *(USE SHOWCARD)*	Yes 1 No 2 *If No, go to P16*	P13
In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational *(leisure)* activities?	Number of days ⌊_⌋	P14
How much time do you spend doing moderate-intensity sports, fitness or recreational *(leisure)* activities on a typical day?	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	P15 (a-b)

EXPANDED: Physical Activity

Sedentary behaviour		
The following question is about sitting or reclining at work, at home, getting to and from places, or with friends including time spent sitting at a desk, sitting with friends, traveling in car, bus, reading, playing dominoes or watching television, but do not include time spent sleeping. *(USE SHOWCARD)*		
How much time do you usually spend sitting or reclining on a typical day?	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	P16 (a-b)

CORE: History of Raised Blood Pressure		
Question	**Response**	**Code**
Have you ever had your blood pressure measured by a doctor or other health worker?	Yes 1 No 2 *If No, go to H6*	H1
Have you ever been told by a doctor that you have raised blood pressure or hypertension?	Yes 1 No 2 *If No, go to H6*	H2a
Were you first told in the past 12 months?	Yes 1 No 2	H2b
In the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor?	Yes 1 No 2	H3
Have you ever seen a traditional healer or herbalist for raised blood pressure or hypertension?	Yes 1 No 2 *If No, go to H5*	H4
Did you see a traditional health or herbalist **outside of a healthcare facility** for raised blood pressure or hypertension?	Yes 1 No 2	X5
Are you currently taking any herbal or traditional remedy for your raised blood pressure?	Yes 1 No 2	H5

CORE: History of Diabetes		
Have you ever had your blood sugar measured by a doctor or other health worker?	Yes 1 No 2 *If No, go to H12*	H6
Have you ever been told by a doctor that you have raised blood sugar or diabetes?	Yes 1 No 2 *If No, go to H12*	H7a
Were you first told in the past 12 months?	Yes 1 No 2	H7b
In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor?	Yes 1 No 2	H8
Are you currently taking insulin for diabetes prescribed by a doctor?	Yes 1 No 2	H9
Have you ever seen a traditional healer or herbalist for diabetes or raised blood sugar?	Yes 1 No 2 *If No, go to H11*	H10
Did you see a traditional health or herbalist **outside of a healthcare facility** for diabetes or raised blood sugar?	Yes 1 No 2	X6
Are you currently taking any herbal or traditional remedy for your diabetes?	Yes 1 No 2	H11

PANAM CORE: History of Diabetes		
Have you received at least two HbA1C (glycated hemoglobin) tests in the past year as part of diabetes control?	Yes 1 No 2 Don't know 77	H11a
When was the last time your eyes were examined as part of your diabetes control?	Within the past 2 years 1 More than 2 years ago 2 Never 3 Don't know 77	H11b
When was the last time your feet were examined as part of your diabetes control?	Within the past year 1 More than 1 year ago 2 Never 3 Don't know 77	H11c

CORE: History of Raised Total Cholesterol		
Question	**Response**	**Code**
Have you ever had your cholesterol (fat levels in your blood) measured by a doctor or other health worker?	Yes 1 No 2 *If No, go to H17*	H12
Have you ever been told by a doctor that you have raised cholesterol?	Yes 1 No 2 *If No, go to H17*	H13a
Were you first told in the past 12 months?	Yes 1 No 2	H13b
In the past two weeks, have you taken any oral treatment (medication) for raised total cholesterol prescribed by a doctor?	Yes 1 No 2	H14
Have you ever a traditional healer or herbalist for raised cholesterol?	Yes 1 No 2 *If No, go to H16*	H15
Did you see a traditional health or herbalist **outside of a healthcare facility** for raised cholesterol?	Yes 1 No 2	X7
Are you currently taking any herbal or traditional remedy for your raised cholesterol?	Yes 1 No 2	H16

CORE: History of Cardiovascular Diseases		
Have you ever had a heart attack or chest pain from heart disease (angina)?	Yes 1 No 2	H17a
Have you ever had a stroke (cerebrovascular accident or incident)?	Yes 1 No 2	H17b
Are you currently taking aspirin regularly to prevent or treat heart disease?	Yes 1 No 2	H18
Are you currently taking statins (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?	Yes 1 No 2	H19

CORE: Lifestyle Advice		
During the past 12 months, have you visited a doctor or other health worker?	Yes 1 No 2 *If No and C1=1 go to S1* *If No and C1=2 go to CX1*	H20
During any of your visits to a doctor or other health worker in the past 12 months, were you advised to do any of the following? (RECORD FOR EACH)		
Quit using tobacco or don't start	Yes 1 No 2	H20a
Reduce salt in your diet	Yes 1 No 2	H20b
Eat at least five servings of fruit and/or vegetables each day	Yes 1 No 2	H20c
Reduce fat in your diet	Yes 1 No 2	H20d
Start or do more physical activity	Yes 1 No 2	H20e
Maintain a healthy body weight or lose weight	Yes 1 No 2	H20f
Reduce sugary beverages in your diet	Yes 1 *If C1=1 go to S1* No 2 *If C1=1 go to S1*	H20g

CORE (for women only): Cervical Cancer Screening		
The next question asks about cervical cancer prevention. Screening tests for cervical cancer prevention can be done in different ways, including pap smear, Human Papillomavirus (HPV) test and Visual Inspection with Acetic Acid/vinegar (VIA). For both pap smear and HPV test, a doctor or nurse uses a swab to wipe from inside your vagina, take a sample and send it to a laboratory. The laboratory checks for abnormal cell changes if a pap smear is done, and for the HP virus if an HPV test is done. VIA is an inspection of the surface of the uterine cervix after acetic acid (or vinegar) has been applied to it.		
Question	**Response**	**Code**
Have you ever had a screening test for cervical cancer, using any of these methods described above?	Yes 1 No 2 *If No go to O8* Don't know 77	CX1
When was your last test for cervical cancer?	Less than 1 year ago 1 1-2 years ago 2 3-5 years ago 3 More than 5 years ago 4 Don't know 77 Refused 88	CX2

Step 1 Pan-Am Optional module

Section: Health Screening	Response	Code
How long has it been since you last **saw a dentist** or **dental hygienist**?	Less than 6 months 1 6-12 months 2 More than 1 year but less than 2 years 3 2 or more years but less than 5 years 4 5 or more years 5 Never received dental care 6 Don't know 77	O8
Have you ever had your feces examined to look for hidden blood?	Yes 1 No 2 Don't know 77	S1
Have you ever had a colonoscopy?	Yes 1 No 2	S2
This question is for men only: Have you ever had an examination of your prostate?	Yes 1 No 2	S3
The following questions are for women only: Have you been shown how to examine your breasts?	Yes 1 No 2	S4
When was the last time you had an examination of your breasts?	1 year or less 1 Between 1 and 2 years 2 More than 2 years 3 Never 4 Don't know 77	S5
When was the last time you had a mammogram?	1 year or less 1 Between 1 and 2 years 2 More than 2 years 3 Never 4 Don't know 77	S6

Drug Use

The next questions ask about your use of drugs.

Question	Response	Code
Have you ever used cannabis? *(USE SHOWCARD)*	Yes 1 No 2 *If no, go to DU2a* Refused 88	DU1a
Have you used cannabis **in the past 12 months**?	Yes 1 No 2 Refused 88	DU1b
How frequently have you used cannabis in the **past 12 months**?	Daily or almost daily 1 1-4 times per week 2 1-3 times per month 3 Less than once a month 4 Refused 88	DU1c
Have you ever used heroin or other opioids? *(USE SHOWCARD)*	Yes 1 No 2 *If no, go to DU3a* Refused 88	DU2a
Have you used heroin or other opioids **in the past 12 months**?	Yes 1 No 2 Refused 88	DU2b
How frequently have you used heroin or other opioids in the **past 12 months**?	Daily or almost daily 1 1-4 times per week 2 1-3 times per month 3 Less than once a month 4 Refused 88	DU2c
Have you ever used cocaine? *(USE SHOWCARD)*	Yes 1 No 2 *If no, go to DU4a* Refused 88	DU3a
Have you used cocaine **in the past 12 months**?	Yes 1 No 2 Refused 88	DU3b
How frequently have you used cocaine in the **past 12 months**?	Daily or almost daily 1 1-4 times per week 2 1-3 times per month 3 Less than once a month 4 Refused 88	DU3c
Have you ever used amphetamines or other stimulants? *(USE SHOWCARD)*	Yes 1 No 2 *If no, go to DU6* Refused 88	DU4a
Have you used amphetamines or other stimulants **in the past 12 months**?	Yes 1 No 2 Refused 88	DU4b
How frequently have you used amphetamines or other stimulants in the **past 12 months**?	Daily or almost daily 1 1-4 times per week 2 1-3 times per month 3 Less than once a month 4 Refused 88	DU4c
Have you used prescription medicines **in the past 12 months** to get high or feel good?	Yes 1 No 2 Refused 88	DU5
Have you used synthetic cannabinoids or synthetic cathinones **in the past 12 months**? *(USE SHOWCARD)*	Yes 1 No 2 *If no & DUxa =2 & DU5=2 go to next section* Refused 88	DU6

Drug Use, Continued		
Question	**Response**	**Code**
Has a friend or relative or anyone else **ever** expressed concern about your use of the drug(s) you just mentioned?	Yes 1 No 2 Refused 88	DU7

Step 2 Physical Measurements

CORE: Blood Pressure		
Question	**Response**	**Code**
Interviewer ID	⌊_⌊_⌊_⌋	M1
Device ID for blood pressure	⌊_⌊_⌋	M2
Cuff size used	Universal 5 X-Large 4	M3
Reading 1	Systolic (mmHg) ⌊_⌊_⌊_⌋	M4a
	Diastolic (mmHg) ⌊_⌊_⌊_⌋	M4b
	Beats per minute ⌊_⌊_⌊_⌋	M16a
Reading 2	Systolic (mmHg) ⌊_⌊_⌊_⌋	M5a
	Diastolic (mmHg) ⌊_⌊_⌊_⌋	M5b
	Beats per minute ⌊_⌊_⌊_⌋	M16b
Reading 3	Systolic (mmHg) ⌊_⌊_⌊_⌋	M6a
	Diastolic (mmHg) ⌊_⌊_⌊_⌋	M6b
	Beats per minute ⌊_⌊_⌊_⌋	M16c
During the past two weeks, have you been treated for raised blood pressure with drugs (medication) prescribed by a doctor?	Yes 1 No 2	M7
CORE: Height and Weight		
For women: Are you pregnant?	Yes 1 *If Yes, go to B0* No 2	M8
Interviewer ID	⌊_⌊_⌊_⌋	M9
Device IDs for height and weight	Height ⌊_⌊_⌋ Weight ⌊_⌊_⌋	M10a M10b
Height	in Centimetres (cm) ⌊_⌊_⌊_⌋.⌊_⌋	M11
Weight *If too large for scale 666.6*	in Kilograms (kg) ⌊_⌊_⌊_⌋.⌊_⌋	M12
CORE: Waist		
Device ID for waist	⌊_⌊_⌋	M13
Waist circumference	in Centimetres (cm) ⌊_⌊_⌊_⌋.⌊_⌋	M14
EXPANDED: Hip Circumference		
Hip circumference	in Centimeters (cm) ⌊_⌊_⌊_⌋.⌊_⌋	M15

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Step 3 Biochemical Measurements

CORE: Blood Glucose		
Question	**Response**	**Code**
Location where biochemical measurements are taken	Household 1 Clinic 2	B0
During the past 12 hours have you had anything to eat or drink, other than water?	Yes 1 No 2	B1
Technician ID	⌊_⌋⌊_⌋⌊_⌋	B2
Device ID	⌊_⌋⌊_⌋	B3
Time of day blood specimen taken (24 hour clock)	Hours : minutes ⌊_⌋⌊_⌋ : ⌊_⌋⌊_⌋ (hrs : mins)	B4
Fasting blood glucose	mg/dl ⌊_⌋⌊_⌋⌊_⌋ . ⌊_⌋	B5
Today, have you taken insulin or other drugs (medication) that have been prescribed by a doctor for raised blood glucose?	Yes 1 No 2	B6
CORE: Blood Lipids		
Device ID	⌊_⌋⌊_⌋⌊_⌋	B7
Total cholesterol	mg/dl ⌊_⌋⌊_⌋⌊_⌋ . ⌊_⌋	B8
During the past two weeks, have you been treated for raised cholesterol with drugs (medication) prescribed by a doctor?	Yes 1 No 2	B9
EXPANDED: HDL Cholesterol		
Question	**Response**	**Code**
HDL Cholesterol	mg/dl ⌊_⌋⌊_⌋⌊_⌋ . ⌊_⌋	B17

Cayman Islands
STEPS Databook 2023

Cayman Islands STEPS databook 2023

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Data source

The STEPS National Health Survey is an internationally comparable, standardised and integrated surveillance tool through which countries can collect, analyse and disseminate core information on risk factors for noncommunicable diseases (NCDs).

The survey collects data from a randomly selected sample across all three islands, among residents aged 18-69 years. Therefore, the results provide prevalence estimates with a corresponding 95% Confidence Interval. This interval tells you there is a 95% likelihood that the true prevalence for the Cayman Islands population is within that window. The demographic section provides unweighted analysis of the survey respondents, whereas all other results have been weighted to provide national estimates that reflect the whole population. The survey included a questionnaire, physical and biochemical measurements, so the data reported in this data book is a combination of self reported behaviours and awareness of health status, along with objective health measurements.

Data suppression has been applied to the following data tables, where if a statistic is comprised of responses from 50 or less individuals then the statistic has been suppressed.

Response rate

Table 1a: Summary results for overall response rate for original sample size

Age range	Eligible	Responded	Responded
	n	n	%
18-69	3,300	1,979	60

Table 1b: Summary results for overall response rate for adjusted sample size

Age range	Eligible	Responded	Responded
	n	n	%
18-69	2,200	1,979	90

Demographic Information

Table 2: Age group and sex of the respondents

Age range	Men		Women		Both sexes	
	n	%	n	%	n	%
18-44	498	47.4	552	52.6	1,050	53.1
45-69	430	46.3	499	53.7	929	46.9
18-69	928	46.9	1,051	53.1	1,979	100.0

Table 3: Mean number of years of education among respondents

Age range	Men		Women		Both Sexes	
	n	Mean	n	Mean	n	Mean
18-44	497	13.4	550	14.6	1,047	14.0
45-69	427	13.0	499	13.3	926	13.2
18-69	924	13.2	1,049	13.9	1,973	13.6

Table 4: Highest level of education achieved by the survey respondents

Men

Age Range	n	% No Formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed
18-44	496	0.2	0.0	1.0	5.2	45.2	35.5	12.9
45-69	430	0.0	0.5	4.0	12.3	41.2	31.4	10.7
18-69	926	0.1	0.2	2.4	8.5	43.3	33.6	11.9

Women

Age Range	n	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed
18-44	552	0.0	0.7	2.2	32.6	48.2	16.3
45-69	499	0.4	4.2	8.0	39.7	35.5	12.2
18-69	1,051	0.2	2.4	4.9	36.0	42.2	14.4

Both sexes

Age Range	n	% No Formal schooling	% Less than primary school	% Primary school completed	% Secondary school completed	% High school completed	% College/ University completed	% Post graduate degree completed
18-44	1,048	0.1	0.0	0.9	3.6	38.5	42.2	14.7
45-69	929	0.0	0.4	4.1	10.0	40.4	33.6	11.5
18-69	1,977	0.1	0.2	2.4	6.6	39.4	38.1	13.2

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Table 5: Ethnicity of the survey respondents

Both sexes

Age range	n	% Black	% Asian	% White	% East Indian	% Hispanic	% Mixed	% Other/ Unknown
18-44	1,050	47.5	13.7	13.9	3.2	9.4	10.8	1.4
45-69	928	51.1	8.1	16.2	1.7	7.4	13.5	2.0
18-69	1,978	49.2	11.1	15.0	2.5	8.5	12.0	1.7

Table 6: Marital status of the survey respondents

Men

Age Range	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabitating
18-44	495	48.7	39.2	2.2	2.6	0.4	6.9
45-69	429	16.3	60.4	6.8	11.4	1.9	3.3
18-69	924	33.7	49.0	4.3	6.7	1.1	5.2

Women

Age Range	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabitating
18-44	546	51.3	33.7	3.5	3.7	0.4	7.5
45-69	496	22.2	44.6	7.3	18.1	5.2	2.6
18-69	1,042	37.4	38.9	5.3	10.6	2.7	5.2

Both sexes

Age Range	n	% Never married	% Currently married	% Separated	% Divorced	% Widowed	% Cohabitating
18-44	1,041	50.0	36.3	2.9	3.2	0.4	7.2
45-69	925	19.5	51.9	7.0	15.0	3.7	2.9
18-69	1,966	35.7	43.6	4.8	8.7	1.9	5.2

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Table 7: Proportion of respondents in paid employment and those who are unpaid

Unpaid includes persons who are non-paid, students, homemakers, retired, and unemployed.

Men

Age Range	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
18-44	496	9.1	82.9	4.6	3.4
45-69	429	13.8	61.8	16.3	8.2
18-69	925	11.2	73.1	10.1	5.6

Women

Age Range	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
18-44	550	16.0	73.5	2.9	7.6
45-69	499	14.0	59.7	7.2	19.0
18-69	1,049	15.1	66.9	5.0	13.1

Both sexes

Age Range	n	% Government employee	% Non-government employee	% Self-employed	% Unpaid
18-44	1,046	12.7	77.9	3.7	5.6
45-69	928	13.9	60.7	11.4	14.0
18-69	1,974	13.3	69.8	7.3	9.6

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Table 8: Among respondents who are in unpaid roles, the proportion who are unemployed and the type of unpaid work

Men

Age Range	n	% Non-paid (Volunteer /intern)	% Student	% Homemaker / stay at home parent	% Retired	% Unemployed (able to work)	% Unemployed (unable to work)
18-44	17	11.8	41.2	0.0	0.0	41.2	5.9
45-69	35	2.9	0.0	2.9	51.4	14.3	28.6
18-69	52	5.8	13.5	1.9	34.6	23.1	21.2

Women

Age Range	n	% Non-paid (Volunteer /intern)	% Student	% Homemaker / stay at home parent	% Retired	% Unemployed (able to work)	% Unemployed (unable to work)
18-44	42	2.4	42.9	19.0	0.0	31.0	4.8
45-69	95	0.0	1.1	17.9	55.8	12.6	12.6
18-69	137	0.7	13.9	18.2	38.7	18.2	10.2

Both sexes

Age Range	n	% Non-paid (Volunteer /intern)	% Student	% Homemaker / stay at home parent	% Retired	% Unemployed (able to work)	% Unemployed (unable to work)
18-44	59	5.1	42.4	13.6	0.0	33.9	5.1
45-69	130	0.8	0.8	13.8	54.6	13.1	16.9
18-69	189	2.1	13.8	13.8	37.6	19.6	13.2

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Table 9: Income of the survey respondents

Both sexes

n	% Less than $15,000	% From $15,000 to $30,000	% From $30,001 to $70,000	% From $70,001 to $120,000	% From $120,001 to $200,000	% More than $200,001
1,708	19.6	21.3	25.4	19.1	8.9	5.7

Table 10: Health insurance coverage of the survey respondents

Men

Age Range	n	% Government CINICO full plan	% SHIC plan	% Local provider comprehensive plan	% Global provider comprehensive plan	% No health insurance	% Don't know/ Refused
18-44	498	8.0	19.9	61.0	4.6	4.8	1.6
45-69	430	22.6	14.7	50.9	4.9	6.3	0.7
18-69	928	14.8	17.5	56.4	4.7	5.5	1.2

Women

Age Range	n	% Government CINICO full plan	% SHIC plan	% Local provider comprehensive plan	% Global provider comprehensive plan	% No health insurance	% Don't know/ Refused
18-44	552	16.7	17.2	55.3	5.8	3.8	1.3
45-69	499	21.8	15.8	51.5	4.6	5.6	0.6
18-69	928	19.1	16.6	53.5	5.2	4.7	1.0

Both sexes

Age Range	n	% Government CINICO full plan	% SHIC plan	% Local provider comprehensive plan	% Global provider comprehensive plan	% No health insurance	% Don't know/ Refused
18-44	1,050	12.6	18.5	58.0	5.2	4.3	1.4
45-69	929	22.2	15.3	51.2	4.7	5.9	0.6
18-69	1,979	17.1	17.0	54.8	5.0	5.1	1.1

Tobacco Use

Table 11: Proportion of the population who are current smokers

Age range	Men			Women			Both Sexes		
	n	% Current smoker	95% CI	n	% Current smoker	95% CI	n	% Current smoker	95% CI
18-44	498	20.3	16.4 - 24.1	552	7.4	4.8 - 10	1,050	14.0	11.6 - 16.3
45-69	430	15.4	11.5 - 19.3	499	5.7	3.5 - 7.9	929	10.6	8.3 - 12.9
18-69	928	18.2	15.4 - 21	1,051	6.7	4.9 - 8.4	1,979	12.5	10.9 - 14.2

Table 12: Smoking status of the population

Men

Age range	n	% Daily	95% CI	% Current non-daily	95% CI	% Former smoker	95% CI	% Never smoked	95% CI
18-44	498	10.7	7.7 - 13.6	9.6	6.8 - 12.3	19.2	15.4 - 23	60.6	55.8 - 65.4
45-69	430	9.8	6.7 - 13	5.6	3 - 8.2	23.5	19.1 - 28	61.1	55.9 - 66.2
18-69	928	10.3	8.2 - 12.4	7.9	6 - 9.8	21.0	18.1 - 24	60.8	57.2 - 64.3

Women

Age range	n	% Daily	95% CI	% Current non-daily	95% CI	% Former smoker	95% CI	% Never smoked	95% CI
18-44	552	2.6	1.3 - 3.8	4.8	2.6 - 7.1	12.7	9.7 - 15.8	79.9	76.1 - 83.6
45-69	499	4.4	2.4 - 6.4	1.2	0.3 - 2.2	14.0	10.3 - 17.7	80.3	76.3 - 84.4
18-69	1,051	3.4	2.2 - 4.5	3.3	1.9 - 4.7	13.3	10.9 - 15.6	80.1	77.3 - 82.8

Both sexes

Age range	n	% Daily	95% CI	% Current non-daily	95% CI	% Former smoker	95% CI	% Never smoked	95% CI
18-44	1,050	6.7	5.1 - 8.3	7.3	5.5 - 9.1	16.0	13.6 - 18.5	70.0	66.9 - 73.1
45-69	929	7.1	5.3 - 9	3.4	2 - 4.9	18.8	15.9 - 21.7	70.6	67.3 - 74
18-69	1,979	6.9	5.6 - 8.1	5.6	4.4 - 6.8	17.2	15.3 - 19.1	70.3	68 - 72.6

Table 13: Proportion of smokers who are current daily smokers

Age range	Men			Women			Both Sexes		
	n	% Daily smoker	95% CI	n	% Daily smoker	95% CI	n	% Daily smoker	95% CI
18-44	112	52.6	42.3 - 63	44	-	-	156	47.9	38.9 - 56.9
45-69	62	63.7	49.9 - 77.4	29	-	-	91	67.5	56.4 - 78.6
18-69	174	56.6	48.3 - 64.9	73	50.5	36.8 - 64.2	247	55.0	47.9 - 62.1

Table 14: Mean age of initiation, in years, among daily smokers

	Men			Women			Both Sexes		
Age range	n	Mean age	95% CI	n	Mean age	95% CI	n	Mean age	95% CI
18-44	60	19.1	17.6 - 20.6	18	-	-	78	19.3	17.9 - 20.6
45-69	41	-	-	22	-	-	63	19.9	17.8 - 22.1
18-69	101	19.7	18.2 - 21.2	40	-	-	141	19.6	18.3 - 20.8

Table 15: Mean duration of smoking, in years, among daily smokers

	Men			Women			Both Sexes		
Age range	n	Mean duration	95% CI	n	Mean duration	95% CI	n	Mean duration	95% CI
18-44	60	15.4	13.8 - 17	18	-	-	78	15.1	13.5 - 16.7
45-69	41	-	-	22	-	-	63	35.2	32.8 - 37.5

Table 16: Proportion of daily smokers who use manufactured cigarettes

	Men			Women			Both Sexes		
Age range	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI
18-44	60	93.5	86.8 - 100	18	-	-	78	93.1	87.2 - 98.9
45-69	41	-	-	21	-	-	62	95.1	89.9 - 100
18-69	101	93.7	88.9 - 98.6	39	-	-	140	94.0	90 - 97.9

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Table 17: Proportion of current smokers who use manufactured cigarettes

	Men			Women			Both Sexes		
Age range	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI	n	% Manufactured cigarette smoker	95% CI
18-44	112	83.8	76.4 - 91.1	44	-	-	156	78.4	70.6 - 86.3
45-69	62	82.0	71.3 - 92.6	28	-	-	90	84.4	76.1 - 92.8
18-69	174	83.1	77 - 89.2	72	73.4	59.6 - 87.2	246	80.6	74.7 - 86.5

Table 18: Mean amount of tobacco used by daily smokers per day, by type

Men

Age range	n	Mean no. manufactured cigs.	95% CI	Mean no. hand-rolled cigs.	95% CI	Mean no. pipes of tobacco	95% CI
18-44	60	8.7	6.4 - 11	1.8	0 - 3.8	0.1	0 - 0.1
45-69	41	-	-	-	-	-	-
18-69	101	9	7.3 - 10.8	1.3	0 - 2.6	0.1	0 - 0.1

Men

Age range	n	Mean no. Cigars, cheroots, cigarillos	95% CI	Mean no. Shisha	95% CI	Mean no. Other	95% CI
18-44	60	0.1	0 - 0.1	0.2	0 - 0.3	0.1	0 - 0.4
45-69	41	-	-	-	-	-	-
18-69	101	0.1	0 - 0.2	0.1	0 - 0.2	0.1	0 - 0.2

Women

Age range	n	Mean no. manufactured cigs.	95% CI	Mean no. hand-rolled cigs.	95% CI	Mean no. pipes of tobacco	95% CI
18-44	18	-	-	-	-	-	-
45-69	21	-	-	-	-	-	-
18-69	39	-	-	-	-	-	-

Women

Age range	n	Mean no. Cigars, cheroots, cigarillos	95% CI	Mean no. Shisha	95% CI	Mean no. Other	95% CI
18-44	18	-	-	-	-	-	-
45-69	21	-	-	-	-	-	-
18-69	39	-	-	-	-	-	-

Both sexes

Age range	n	Mean no. manufactured cigs.	95% CI	Mean no. hand-rolled cigs.	95% CI	Mean no. pipes of tobacco	95% CI
18-44	78	8.4	6.4 - 10.3	1.6	0 - 3.2	0.2	0 - 0.5
45-69	62	10.3	8 - 12.6	0.4	0.1 - 0.7	0.1	0 - 0.1
18-69	140	9.2	7.7 - 10.7	1.0	0.1 - 2	0.1	0 - 0.3

Both sexes

Age Range	n	Mean no. Cigars, cheroots, cigarillos	95% CI	Mean no. Shisha	95% CI	Mean no. Other	95% CI
18-44	78	0.1	0 - 0.1	0.2	0 - 0.3	0.1	0 - 0.3
45-69	62	0.2	0 - 0.4	0.1	0 - 0.1	0.0	0 - 0
18-69	140	0.1	0 - 0.2	0.1	0 - 0.2	0.1	0 - 0.2

Table 19: Percentage of current smokers who smoke each of the following products

Men

Age range	n	% Manuf. cigs.	95% CI	% Hand-rolled cigs.	95% CI	% Pipes of tobacco	95% CI
18-44	112	83.8	76.4 - 91.1	21.0	12.3 - 29.8	8.1	3.1 - 13
45-69	62	82.0	71.3 - 92.7	14.4	5.5 - 23.3	7.2	0.7 - 13.6
18-69	174	83.1	77 - 89.2	18.6	12.1 - 25.1	7.7	3.8 - 11.7

Men

Age range	n	% Cigars, cheroots, cigarillos	95% CI	% Shisha	95% CI	% Other	95% CI
18-44	112	11.6	5.7 - 17.4	8.7	3.6 - 13.8	3.4	0 - 7.3
45-69	62	25.2	13.4 - 37	11.6	1.4 - 21.8	0.0	0 - 0
18-69	174	16.5	10.7 - 22.3	9.7	4.8 - 14.7	2.2	0 - 4.7

Women

Age range	n	% Manuf. cigs.	95% CI	% Hand-rolled cigs.	95% CI	% Pipes of tobacco	95% CI
18-44	44	-	-	-	-	-	-
45-69	29	-	-	-	-	-	-
18-69	73	72.8	58.9 - 86.7	13.8	3.6 - 24	5.6	0.4 - 10.7

Women

Age range	n	% Cigars, cheroots, cigarillos	95% CI	% Shisha	95% CI	% Other	95% CI
18-44	44	-	-	-	-	-	-
45-69	29	-	-	-	-	-	-
18-69	73	14.8	5 - 24.6	14.7	1.7 - 27.7	0	0 - 0

Both sexes

Age range	n	% Manuf. cigs.	95% CI	% Hand-rolled cigs.	95% CI	% Pipes of tobacco	95% CI
18-44	156	78.4	70.6 - 86.3	20.3	12.8 - 27.8	8.3	4 - 12.5
45-69	91	83.9	75.6 - 92.3	12.2	5.3 - 19.2	5.3	0.5 - 10
18-69	247	80.4	74.6 - 86.3	17.4	11.9 - 22.8	7.2	4 - 10.4

Both sexes

Age range	n	% Cigars, cheroots, cigarillos	95% CI	% Shisha	95% CI	% Other	95% CI
18-44	156	13.6	7.9 - 19.4	12.5	5.9 - 19	2.5	0 - 5.4
45-69	91	20.2	11.1 - 29.4	8.5	0.9 - 16.1	0.0	0 - 0
18-69	247	16.0	11.1 - 21	11.0	6 - 16	1.6	0 - 3.5

Table 20: Proportion of daily cigarette smokers smoking given quantities of manufactured or hand-rolled cigarettes per day

Men

Age range	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥25 Cigs.	95% CI
18-44	60	29.9	16.3 - 43.5	26.9	15.1 - 38.7	22.2	10.4 - 34	12.2	3.1 - 21.3	8.8	0 - 19.5
45-69	38	-	-	-	-	-	-	-	-	-	-
18-69	98	24.3	14.5 - 34	29.6	19.6 - 39.6	26.5	16.5 - 36.4	14.3	7.1 - 21.5	5.4	0 - 12.2

Women

Age range	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥25 Cigs.	95% CI
18-44	16	-	-	-	-	-	-	-	-	-	-
45-69	21	-	-	-	-	-	-	-	-	-	-
18-69	37	-	-	-	-	-	-	-	-	-	-

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Both sexes

Age range	n	% <5 Cigs.	95% CI	% 5-9 Cigs.	95% CI	% 10-14 Cigs.	95% CI	% 15-24 Cigs.	95% CI	% ≥25 Cigs.	95% CI
18-44	76	30.6	18.5 - 42.8	25.5	15.3 - 35.8	24.0	13.3 - 34.7	12.6	4.4 - 20.8	7.3	0 - 16.2
45-69	59	17.5	7.2 - 27.8	30.2	16.8 - 43.7	30.0	16.7 - 43.3	18.6	8.5 - 28.6	3.7	0 - 9.3
18-69	135	25.0	16.6 - 33.3	27.6	19.2 - 35.9	26.6	18.2 - 35	15.2	8.8 - 21.6	5.7	0.1 - 11.4

Table 21: Proportion of the population who are former daily smokers (who don't smoke currently)

	Men			Women			Both Sexes		
Age range	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
18-44	498	14.1	10.7 - 17.6	552	7.9	5.5 - 10.4	1,050	11.1	8.9 - 13.2
45-69	430	15.1	11.4 - 18.7	499	8.0	5.5 - 10.6	929	11.6	9.3 - 13.8
18-69	928	14.5	12 - 17	1,051	8.0	6.2 - 9.8	1,979	11.3	9.7 - 12.9

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Table 22: Proportion of ever daily smokers who are former daily smokers (who don't smoke currently)

	Men			Women			Both Sexes		
Age range	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI	n	% Former daily smokers	95% CI
18-44	131	57.0	47.4 - 66.5	64	75.7	64.6 - 86.7	195	62.4	54.7 - 70
45-69	108	60.6	50.3 - 70.8	65	64.5	51.4 - 77.5	173	61.9	53.8 - 70
18-69	239	58.5	51.5 - 65.5	129	70.4	61.7 - 79	368	62.1	56.6 - 67.7

Table 23: Mean duration, in years, since former smokers quit smoking

	Men			Women			Both Sexes		
Age range	n	Mean years	95% CI	n	Mean years	95% CI	n	Mean years	95% CI
18-44	97	8.2	6.7 - 9.7	70	8.5	7 - 10.1	167	8.3	7.2 - 9.5
45-69	102	21.2	18.5 - 24	65	21.2	17.7 - 24.8	167	21.2	19.1 - 23.4
18-69	199	14.5	12.6 - 16.3	135	14.2	11.9 - 16.6	334	14.4	12.9 - 15.8

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Table 24: Proportion of current smokers who have tried to stop smoking during the past 12 months

	Men			Women			Both Sexes		
Age range	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI	n	% Tried to stop smoking	95% CI
18-44	112	65.3	55.5 - 75	44	-	-	156	60.9	52 - 69.8
45-69	62	45.4	31.3 - 59.5	29	-	-	91	44.9	33.3 - 56.5
18-69	174	58.1	50 - 66.3	73	46.6	33.1 - 60	247	55.1	48 - 62.2

Table 25: Proportion of current smokers who have been advised by a doctor or other health worker to stop smoking, among smokers who visited a doctor or other health worker in the past 12 months

	Men			Women			Both Sexes		
Age range	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI	n	% Advised to stop smoking	95% CI
18-44	101	24.8	15.8 - 33.9	44	-	-	145	22.9	15.5 - 30.2
45-69	61	31.8	18.4 - 45.1	26	-	-	87	37.4	25.9 - 49
18-69	162	27.5	19.9 - 35.2	70	30.4	18.2 - 42.6	232	28.3	21.9 - 34.8

Table 26: Proportion of the population who currently use smokeless tobacco

	Men			Women			Both Sexes		
Age range	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
18-44	498	0.1	0 - 0.3	552	0.1	0 - 0.3	1,050	0.1	0 - 0.3
45-69	430	0.4	0 - 1	499	0.0	0 - 0	929	0.2	0 - 0.5
18-69	928	0.2	0 - 0.5	1,051	0.1	0 - 0.2	1,979	0.2	0 - 0.3

Table 27: Status of using smokeless tobacco among all population

Men

Age range	n	% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
18-44	498	0.1	0 - 0.3	0	0 - 0	0.4	0 - 0.8	99.5	99.1 - 100
45-69	430	0.4	0 - 1	0	0 - 0	2.4	0.8 - 4	97.2	95.5 - 98.9
18-69	928	0.2	0 - 0.5	0	0 - 0	1.2	0.5 - 2	98.5	97.8 - 99.3

Women

Age range	n	% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
18-44	552	0	0 - 0	0.1	0 - 0.3	1.2	0 - 2.7	98.7	97.2 - 100
45-69	499	0	0 - 0	0.0	0 - 0	0.0	0 - 0	100.0	100 - 100
18-69	1,051	0	0 - 0	0.1	0 - 0.2	0.7	0 - 1.5	99.3	98.4 - 100

Both sexes

Age range	n	% Daily	95% CI	% Non-daily	95% CI	% Past user	95% CI	% Never used	95% CI
18-44	1,050	0.1	0 - 0.2	0.1	0 - 0.2	0.8	0 - 1.5	99.1	98.3 - 99.9
45-69	929	0.2	0 - 0.5	0.0	0 - 0	1.2	0.4 - 2	98.6	97.7 - 99.4
18-69	1,979	0.1	0 - 0.3	0.0	0 - 0.1	1.0	0.4 - 1.5	98.9	98.3 - 99.5

Table 28: Proportion of the population who are former daily users of smokeless tobacco

	Men			Women			Both Sexes		
Age range	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
18-44	498	0.4	0 - 0.8	552	0.2	0 - 0.5	1,050	0.3	0 - 0.5
45-69	430	1.3	0.1 - 2.5	499	0.0	0 - 0	929	0.6	0 - 1.3
18-69	928	0.8	0.2 - 1.3	1,051	0.1	0 - 0.3	1,979	0.4	0.1 - 0.7

Table 29: Proportion of ever daily users who are former daily users of smokeless tobacco

	Men			Women			Both Sexes		
Age range	n	% Former daily users	95% CI	n	% Former daily users	95% CI	n	% Former daily users	95% CI
18-44	4	-	-	2	-	-	6	-	-
45-69	7	-	-	0	-	-	7	-	-
18-69	11	-	-	2	-	-	13	-	-

Mean times per day smokeless tobacco used by daily smokeless tobacco users per day, by type, and percentage of current users of smokeless tobacco who use each type of product tables are not presented as less than 5 individuals answered these questions.

Table 30: Proportion of current (daily plus non-daily) tobacco users, includes smoking and smokeless, among all population

	Men			Women			Both Sexes		
Age range	n	% Current users	95% CI	n	% Current users	95% CI	n	% Current users	95% CI
18-44	498	20.4	16.5 - 24.2	552	7.4	4.8 - 10	1,050	14.0	11.7 - 16.4
45-69	430	15.4	11.5 - 19.3	499	5.7	3.5 - 7.9	929	10.6	8.3 - 12.9
18-69	928	18.3	15.5 - 21	1,051	6.7	4.9 - 8.4	1,979	12.5	10.9 - 14.2

Table 31: Proportion of daily tobacco users, includes smoking and smokeless, among all population

	Men			Women			Both Sexes		
Age range	n	% Daily users	95% CI	n	% Daily users	95% CI	n	% Daily users	95% CI
18-44	498	10.8	7.9 - 13.7	552	2.6	1.3 - 3.8	1,050	6.7	5.1 - 8.4
45-69	430	10.1	6.9 - 13.3	499	4.4	2.4 - 6.4	929	7.3	5.4 - 9.2
18-69	928	10.5	8.3 - 12.6	1,051	3.4	2.2 - 4.5	1,979	7.0	5.7 - 8.2

Table 32: Proportion of the population exposed second-hand smoke in the home in the past 30 days

	Men			Women			Both Sexes		
Age range	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-44	498	8.3	5.5 - 11.1	552	7.1	4.4 - 9.9	1,050	7.7	5.8 - 9.7
45-69	430	8.2	5 - 11.5	499	5.1	2.8 - 7.3	929	6.7	4.7 - 8.7
18-69	928	8.3	6.2 - 10.4	1,051	6.2	4.4 - 8.1	1,979	7.3	5.9 - 8.7

Table 33: Among those exposed to smoking in the home during the past 30 days, the mean number of days over the last 7 days that someone smoked in the home when the respondent was present

	Men			Women			Both Sexes		
Age range	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-44	40	-	-	32	-	-	72	3.7	2.8 - 4.5
45-69	30	-	-	25	-	-	55	3.0	2.1 - 4
18-69	70	3.4	2.6 - 4.2	57	3.4	2.5 - 4.4	127	3.4	2.8 - 4

Table 34: Proportion of the population exposed to second-hand smoke in the workplace in the past 30 days

	Men			Women			Both Sexes		
Age range	n	% Exposed	95% CI	n	% Exposed	95% CI	n	% Exposed	95% CI
18-44	480	14.0	10.5 - 17.6	539	6.5	3.9 - 9.1	1,019	10.3	8.1 - 12.6
45-69	407	12.0	8.6 - 15.4	489	4.4	2.2 - 6.6	896	8.2	6.1 - 10.2
18-69	887	13.2	10.7 - 15.7	1,028	5.6	3.8 - 7.4	1,915	9.4	7.9 - 11

Table 35: Proportion of the population that are current electronic cigarette users

Age range	Men n	Men % Current users	Men 95% CI	Women n	Women % Current users	Women 95% CI	Both Sexes n	Both Sexes % Current users	Both Sexes 95% CI
18-44	498	16.4	12.5 - 20.2	552	9.1	6.2 - 12.1	1,050	12.8	10.4 - 15.2
45-69	430	3.2	1.2 - 5.3	499	1.7	0.5 - 2.9	929	2.5	1.3 - 3.7
18-69	928	10.8	8.4 - 13.2	1,051	5.9	4.1 - 7.7	1,979	8.4	6.9 - 9.9

Table 36: Proportion of current electronic cigarette users that use electronic cigarettes daily

Age range	Men n	Men % Daily users	Men 95% CI	Women n	Women % Daily users	Women 95% CI	Both Sexes n	Both Sexes % Daily users	Both Sexes 95% CI
18-44	81	61.8	49.3 - 74.3	47	-	-	128	57.1	46.8 - 67.3
45-69	13	-	-	8	-	-	21	-	-
18-69	94	62.8	51.3 - 74.3	55	51.1	35.4 - 66.7	149	58.7	49.3 - 68.1

Table 37: Proportion of the population that use electronic cigarettes daily

Age range	Men n	Men % Daily users	Men 95% CI	Women n	Women % Daily users	Women 95% CI	Both Sexes n	Both Sexes % Daily users	Both Sexes 95% CI
18-44	498	10.1	7 - 13.2	552	4.4	2.4 - 6.4	1,050	7.3	5.4 - 9.2
45-69	430	2.2	0.4 - 4.1	499	1.2	0.2 - 2.3	929	1.7	0.7 - 2.8
18-69	928	6.8	4.8 - 8.7	1,051	3.0	1.8 - 4.2	1,979	4.9	3.7 - 6.1

Alcohol Use

Table 38: Alcohol consumption status of the population

Men

Age range	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-44	498	71.8	67.2 - 76.3	11.6	8.5 - 14.8	5.4	3.1 - 7.6	11.3	8 - 14.5
45-69	430	59.2	54 - 64.4	11.4	8 - 14.8	15.3	11.5 - 19.2	14.1	10.6 - 17.6
18-69	928	66.4	63 - 69.8	11.5	9.2 - 13.8	9.6	7.5 - 11.7	12.5	10.1 - 14.9

Women

Age range	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-44	552	49.2	44.4 - 54	20.4	16.3 - 24.5	12.7	9.4 - 16	17.7	14 - 21.4
45-69	499	35.2	30.4 - 40.1	15.8	12 - 19.7	17.1	13.4 - 20.8	31.8	27.2 - 36.5
18-69	1,051	43.2	39.7 - 46.6	18.5	15.6 - 21.3	14.6	12.1 - 17.1	23.8	20.8 - 26.7

Both sexes

Age range	n	% Current drinker (past 30 days)	95% CI	% Drank in past 12 months	95% CI	% Past 12 months abstainer	95% CI	% Lifetime abstainer	95% CI
18-44	1,050	60.7	57.3 - 64.1	15.9	13.3 - 18.5	9.0	6.9 - 11	14.4	11.9 - 16.9
45-69	929	47.3	43.6 - 51	13.6	11.1 - 16.2	16.2	13.5 - 18.9	22.9	19.9 - 25.9
18-69	1,979	55.0	52.4 - 57.5	14.9	13.1 - 16.8	12.1	10.4 - 13.7	18.0	16.1 - 19.9

Table 39: Proportion of former drinkers (those that did not drink during the past 12 months) who stopped drinking due to health reasons among population who drank in their lifetime, but not in the last 12 months

Age range	Men			Women			Both Sexes		
	n	% stop due to health reasons	95% CI	n	% stop due to health reasons	95% CI	n	% stop due to health reasons	95% CI
18-44	25	-	-	64	19.8	8.4 - 31.2	89	17.2	8.2 - 26.1
45-69	62	12.1	4 - 20.2	86	10.9	3.8 - 17.9	148	11.4	6.1 - 16.8
18-69	87	11.8	5 - 18.6	150	15.3	8.5 - 22	237	13.9	9 - 18.8

Table 40: Frequency of alcohol consumption in the past 12 months among population who drank in the last 12 months.

Men

Age range	n	% Daily	95% CI	% 5-6 days/ wk	95% CI	% 3-4 days/ wk	95% CI	% 1-2 days/ wk	95% CI	% 1-3 days/ mnth	95% CI	% < 1 a mnth	95% CI
18-44	416	3.7	1.8 - 5.7	3.0	1.2 - 4.9	12.8	9.3 - 16.3	35.1	29.9 - 40.3	24.0	19.1 - 28.9	20.4	16.1 - 24.7
45-69	299	5.4	2.7 - 8.2	5.4	2.7 - 8.1	15.8	11.2 - 20.3	30.7	24.8 - 36.6	17.8	12.9 - 22.7	24.3	18.6 - 30
18-69	715	4.4	2.8 - 6	3.9	2.4 - 5.5	13.9	11.2 - 16.7	33.4	29.5 - 37.3	21.6	18 - 25.2	21.9	18.5 - 25.4

Women

Age range	n	% Daily	95% CI	% 5-6 days/ wk	95% CI	% 3-4 days/ wk	95% CI	% 1-2 days/ wk	95% CI	% 1-3 days/ mnth	95% CI	% < 1 a mnth	95% CI
18-44	392	1.1	0.2 - 2.1	2.0	0.7 - 3.3	5.9	3.5 - 8.3	25.9	21.1 - 30.8	22.4	17.7 - 27.1	42.1	36.4 - 47.8
45-69	250	2.1	0.1 - 4.2	1.7	0.3 - 3.1	9.4	5.7 - 13.2	18.0	12.7 - 23.2	20.8	15.4 - 26.3	47.5	40.2 - 54.7
18-69	642	1.5	0.6 - 2.5	1.9	0.9 - 2.9	7.2	5.1 - 9.2	23.1	19.5 - 26.7	21.8	18.3 - 25.4	44.0	39.5 - 48.5

Both sexes

Age range	n	% Daily	95% CI	% 5-6 days/ wk	95% CI	% 3-4 days/ wk	95% CI	% 1-2 days/ wk	95% CI	% 1-3 days/ mnth	95% CI	% < 1 a mnth	95% CI
18-44	808	2.6	1.4 - 3.7	2.6	1.4 - 3.8	9.7	7.5 - 11.9	31.0	27.4 - 34.7	23.3	19.9 - 26.7	30.1	26.4 - 33.7
45-69	549	4.1	2.2 - 5.9	3.9	2.1 - 5.6	13.1	10 - 16.2	25.4	21.3 - 29.5	19.1	15.4 - 22.7	34.0	29.3 - 38.6
18-69	1,357	3.1	2.1 - 4.1	3.1	2.1 - 4	11.0	9.2 - 12.8	28.9	26.2 - 31.7	21.7	19.2 - 24.3	31.5	28.6 - 34.4

Table 41: Mean number of occasions with at least one drink in the past 30 days among current (past 30 days) drinkers

	Men			Women			Both Sexes		
Age range	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-44	347	5.2	4.5 - 5.9	279	5.0	4.3 - 5.7	626	5.1	4.6 - 5.6
45-69	249	7.1	6 - 8.2	172	5.7	4.6 - 6.9	421	6.6	5.8 - 7.4
18-69	596	5.9	5.3 - 6.5	451	5.3	4.7 - 5.9	1,047	5.7	5.2 - 6.1

Table 42: Mean number of standard drinks consumed on a drinking occasion among current drinkers. A standard drink contains approximately 10g of pure alcohol

	Men			Women			Both Sexes		
Age range	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-44	348	3.1	2.8 - 3.3	281	2.3	2.1 - 2.5	629	2.7	2.6 - 2.9
45-69	250	2.6	2.3 - 2.8	171	2.0	1.8 - 2.2	421	2.4	2.2 - 2.5
18-69	598	2.9	2.7 - 3	452	2.2	2 - 2.3	1,050	2.6	2.5 - 2.7

Table 43: Proportion of the population with different drinking levels.

Drinking at high-end level

	Men			Women			Both Sexes		
Age range	n	% ≥60g	95% CI	n	% ≥40g	95% CI	n	% high-end level	95% CI
18-44	492	8.4	5.5 - 11.3	546	5.9	3.9 - 7.8	1,038	7.1	5.4 - 8.9
45-69	428	3.5	1.6 - 5.4	495	3.7	2 - 5.5	923	3.6	2.3 - 4.9
18-69	920	6.3	4.4 - 8.1	1,041	4.9	3.6 - 6.3	1,961	5.6	4.5 - 6.8

Drinking at intermediate level

	Men			Women			Both Sexes		
Age range	n	% 40-59.9g	95% CI	n	% 20-39.9g	95% CI	n	% intermediate level	95% CI
18-44	492	13.3	10 - 16.7	546	25.9	21.8 - 30	1,038	19.5	16.8 - 22.2
45-69	428	7.4	4.5 - 10.3	495	17.9	13.8 - 21.9	923	12.6	10.1 - 15.1
18-69	920	10.8	8.5 - 13.1	1,041	22.4	19.5 - 25.4	1,961	16.5	14.7 - 18.4

Drinking at lower-end level

	Men			Women			Both Sexes		
Age range	n	% <40g	95% CI	n	% <20g	95% CI	n	% lower-end level	95% CI
18-44	492	49.6	44.5 - 54.6	546	16.9	13.4 - 20.5	1,038	33.5	30.2 - 36.8
45-69	428	48.2	42.8 - 53.5	495	13.2	9.9 - 16.6	923	30.9	27.4 - 34.3
18-69	920	49.0	45.3 - 52.6	1,041	15.4	12.9 - 17.8	1,961	32.4	30 - 34.8

Table 44: Proportion of current drinkers with different drinking levels. A standard drink contains approximately 10g of pure alcohol.

Drinking at high-end level among current drinkers

	Men			Women			Both Sexes		
Age range	n	% ≥60g	95% CI	n	% ≥40g	95% CI	n	% high-end level	95% CI
18-44	348	11.8	7.8 - 15.8	281	12.0	8 - 16	629	11.9	9 - 14.7
45-69	250	5.9	2.8 - 9	171	10.7	5.8 - 15.7	421	7.7	5 - 10.4
18-69	598	9.5	6.8 - 12.3	452	11.6	8.4 - 14.7	1,050	10.3	8.2 - 12.4

Drinking at intermediate level among current drinkers

	Men			Women			Both Sexes		
Age range	n	% 40-59.9g	95% CI	n	% 20-39.9g	95% CI	n	% intermediate level	95% CI
18-44	348	18.7	14.1 - 23.2	281	53.2	46.6 - 59.8	629	32.4	28.4 - 36.5
45-69	250	12.6	7.8 - 17.3	171	51.3	42.6 - 59.9	421	26.8	21.9 - 31.7
18-69	598	16.3	13 - 19.7	452	52.5	47.3 - 57.7	1,050	30.3	27.2 - 33.5

Drinking at low-end level among current drinkers

	Men			Women			Both Sexes		
Age range	n	% <40g	95% CI	n	% <20g	95% CI	n	% low-end level	95% CI
18-44	348	69.5	64.1 - 75	281	34.8	28.5 - 41.1	629	55.7	51.3 - 60.1
45-69	250	81.5	76.1 - 87	171	38.0	29.7 - 46.3	421	65.6	60.4 - 70.8
18-69	598	74.1	70.1 - 78.2	452	35.9	30.9 - 41	1,050	59.4	56 - 62.7

Table 45: Largest number of drinks consumed during a single occasion in the past 30 days among current drinkers

	Men			Women			Both Sexes		
Age range	n	Mean max number	95% CI	n	Mean max number	95% CI	n	Mean max number	95% CI
18-44	349	4.5	4 - 5	279	3.1	2.8 - 3.4	628	4.0	3.6 - 4.3
45-69	248	3.4	3 - 3.7	171	2.6	2.3 - 2.9	419	3.1	2.8 - 3.3
18-69	597	4.1	3.7 - 4.4	450	2.9	2.7 - 3.2	1,047	3.6	3.4 - 3.9

Table 46: Proportion of the population who had six or more drinks on a single occasion in the past 30 days

	Men			Women			Both Sexes		
Age range	n	% ≥6 drinks	95% CI	n	% ≥6 drinks	95% CI	n	% ≥6 drinks	95% CI
18-44	498	30.3	25.7 - 34.9	552	11.6	8.8 - 14.3	1,050	21.1	18.3 - 23.9
45-69	430	18.5	14.5 - 22.6	499	8.6	6 - 11.2	929	13.6	11.2 - 16
18-69	928	25.3	22.1 - 28.5	1,051	10.3	8.4 - 12.2	1,979	17.9	16 - 19.8

Table 47: Mean number of times in the past 30 days at which current drinkers consumed six or more drinks during a single occasion

	Men			Women			Both Sexes		
Age range	n	Mean number of times	95% CI	n	Mean number of times	95% CI	n	Mean number of times	95% CI
18-44	336	1.1	0.9 - 1.4	269	0.6	0.4 - 0.9	605	0.9	0.8 - 1.1
45-69	240	0.9	0.6 - 1.2	168	0.4	0.3 - 0.6	408	0.7	0.5 - 1
18-69	576	1.1	0.9 - 1.3	437	0.6	0.4 - 0.7	1,013	0.9	0.7 - 1

Table 48: Frequency of alcohol consumption in the past 7 days by current drinkers

Men

Age range	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
18-44	348	8.9	5.9 - 11.9	3.1	1.2 - 4.9	13.0	9.2 - 16.8	55.0	49.1 - 60.9	20.1	15 - 25.1
45-69	250	14.3	9.7 - 18.9	6.7	3.4 - 10	15.1	10.2 - 19.9	47.8	40.7 - 54.9	16.2	10.8 - 21.5
18-69	598	10.9	8.4 - 13.5	4.5	2.7 - 6.2	13.8	10.8 - 16.8	52.2	47.7 - 56.8	18.6	14.8 - 22.3

Women

Age range	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
18-44	282	7.1	4.1 - 10.2	3.6	1.2 - 5.9	15.4	10.5 - 20.4	51.7	45.1 - 58.3	22.1	16.4 - 27.9
45-69	173	10.1	5.4 - 14.8	1.7	-0.3 - 3.8	12.3	7.3 - 17.4	53.2	44.7 - 61.8	22.6	15.3 - 29.8
18-69	455	8.2	5.6 - 10.8	2.9	1.2 - 4.6	14.4	10.7 - 18	52.3	47 - 57.5	22.3	17.7 - 26.8

Both sexes

Age range	n	% Daily	95% CI	% 5-6 days	95% CI	% 3-4 days	95% CI	% 1-2 days	95% CI	% 0 days	95% CI
18-44	630	8.2	6 - 10.3	3.3	1.8 - 4.7	14.0	11 - 17	53.7	49.3 - 58.1	20.9	17.1 - 24.7
45-69	423	12.8	9.4 - 16.2	4.9	2.7 - 7.1	14.1	10.5 - 17.6	49.8	44.3 - 55.3	18.5	14.2 - 22.8
18-69	1,053	9.9	8 - 11.7	3.9	2.6 - 5.1	14.0	11.7 - 16.3	52.2	48.8 - 55.7	20.0	17.1 - 22.9

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Table 49: Mean number of standard drinks consumed on average per day in the past 7 days among current drinkers

	Men			Women			Both Sexes		
Age range	n	Mean number	95% CI	n	Mean number	95% CI	n	Mean number	95% CI
18-44	348	0.8	0.7 - 0.9	282	0.5	0.4 - 0.6	630	0.7	0.6 - 0.8
45-69	250	0.9	0.7 - 1	173	0.5	0.4 - 0.7	423	0.8	0.6 - 0.9
18-69	598	0.8	0.7 - 0.9	455	0.5	0.4 - 0.6	1,053	0.7	0.6 - 0.8

Table 50: Proportion of the population that consumed unrecorded alcohol (homebrewed alcohol, alcohol brought over the border, not intended for drinking or other untaxed alcohol) during the past 7 days among current drinkers

	Men			Women			Both Sexes		
Age range	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI	n	% consuming unrecorded alcohol	95% CI
18-44	350	0.5	0 - 1.1	283	0.2	0 - 0.7	633	0.4	0 - 0.8
45-69	250	1.2	0 - 2.6	173	0.0	0 - 0	423	0.7	0 - 1.6
18-69	600	0.8	0.1 - 1.4	456	0.1	0 - 0.4	1,056	0.5	0.1 - 0.9

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Table 51: Frequency of failing to do what was normally expected from you because of drinking during the past 12 months among past 12 month drinkers

Men

Age range	n	% Monthly or more frequently	95% CI	% Less than monthly	95% CI	% Never	95% CI
18-44	416	1.4	0.2 - 2.7	3.7	1.7 - 5.8	94.8	92.4 - 97.2
45-69	299	0.2	0 - 0.6	2.0	0 - 4.2	97.8	95.6 - 100
18-69	715	1.0	0.2 - 1.8	3.1	1.5 - 4.6	96.0	94.3 - 97.7

Women

Age range	n	% Monthly or more frequently	95% CI	% Less than monthly	95% CI	% Never	95% CI
18-44	392	0.8	0 - 1.7	2.0	0.8 - 3.3	97.2	95.6 - 98.7
45-69	250	0.0	0 - 0	0.5	0 - 1.1	99.5	98.9 - 100
18-69	642	0.5	0 - 1.1	1.5	0.6 - 2.3	98.0	97 - 99

Both Sexes

Age range	n	% monthly or more frequently	95% CI	% less than monthly	95% CI	% never	95% CI
18-44	808	1.1	0.3 - 2	3.0	1.7 - 4.2	95.9	94.4 - 97.4
45-69	549	0.1	0 - 0.3	1.3	0 - 2.7	98.5	97.2 - 99.9
18-69	1,357	0.8	0.2 - 1.3	2.4	1.4 - 3.3	96.9	95.8 - 97.9

Table 52: Frequency of having had problems with family or partner due to someone else's drinking in the past 12 months among all population

Men

Age range	n	% Monthly or more frequently	95% CI	% Less than monthly	95% CI	% Never	95% CI
18-44	498	0.0	0 - 0	2.0	0.2 - 3.8	98.0	96.2 - 99.8
45-69	430	0.1	0 - 0.4	1.0	0 - 2.1	98.9	97.7 - 100
18-69	928	0.1	0 - 0.2	1.6	0.5 - 2.7	98.4	97.2 - 99.5

Women

Age range	n	% Monthly or more frequently	95% CI	% Less than monthly	95% CI	% Never	95% CI
18-44	552	0.6	0 - 1.2	2.0	0.8 - 3.1	97.5	96.2 - 98.8
45-69	499	0.9	0 - 2	0.2	0 - 0.7	98.9	97.7 - 100
18-69	1,051	0.7	0.1 - 1.3	1.2	0.6 - 1.9	98.1	97.2 - 99

Both Sexes

Age range	n	% Monthly or more frequently	95% CI	% Less than monthly	95% CI	% Never	95% CI
18-44	1,050	0.3	0 - 0.6	2.0	0.9 - 3.1	97.7	96.6 - 98.8
45-69	929	0.5	0 - 1.1	0.6	0 - 1.2	98.9	98 - 99.7
18-69	1,979	0.4	0.1 - 0.7	1.4	0.7 - 2.1	98.2	97.5 - 99

Diet

Table 53: Mean number of days fruit and vegetables consumed

Mean number of days fruit consumed in a typical week

Age range	Men			Women			Both Sexes		
	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
18-44	494	4.2	4 - 4.5	550	4.6	4.4 - 4.8	1,044	4.4	4.3 - 4.6
45-69	430	5.0	4.8 - 5.2	497	5.2	5 - 5.5	927	5.1	4.9 - 5.3
18-69	924	4.6	4.4 - 4.7	1,047	4.9	4.7 - 5	1,971	4.7	4.6 - 4.8

Mean number of days vegetables consumed in a typical week

Age range	Men			Women			Both Sexes		
	n	Mean number of days	95% CI	n	Mean number of days	95% CI	n	Mean number of days	95% CI
18-44	496	4.8	4.6 - 5	548	4.8	4.6 - 5	1,044	4.8	4.7 - 5
45-69	430	5.3	5.1 - 5.5	495	5.0	4.8 - 5.2	925	5.1	5 - 5.3
18-69	926	5.0	4.8 - 5.2	1,043	4.9	4.8 - 5.1	1,969	5.0	4.8 - 5.1

Table 54: Mean number of fruit, vegetable, and combined fruit and vegetable servings on average per day

Mean number of servings of fruit on average per day

Age range	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
18-44	490	1.1	1 - 1.2	547	1.3	1.2 - 1.4	1,037	1.2	1.1 - 1.3
45-69	428	1.4	1.3 - 1.6	496	1.5	1.4 - 1.7	924	1.5	1.4 - 1.6
18-69	918	1.2	1.2 - 1.3	1,043	1.4	1.3 - 1.5	1,961	1.3	1.3 - 1.4

Mean number of servings of vegetables on average per day

Age range	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
18-44	495	1.4	1.2 - 1.5	543	1.4	1.3 - 1.5	1,038	1.4	1.3 - 1.5
45-69	429	1.5	1.4 - 1.7	494	1.5	1.4 - 1.6	923	1.5	1.4 - 1.6
18-69	924	1.4	1.3 - 1.5	1,037	1.4	1.3 - 1.5	1,961	1.4	1.4 - 1.5

Mean number of servings of fruit and/or vegetables on average per day

Age range	Men			Women			Both Sexes		
	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI	n	Mean number of servings	95% CI
18-44	495	2.5	2.3 - 2.7	548	2.7	2.5 - 2.8	1,043	2.6	2.4 - 2.7
45-69	429	3.0	2.7 - 3.2	496	3.0	2.8 - 3.2	925	3.0	2.8 - 3.1
18-69	924	2.7	2.5 - 2.8	1,044	2.8	2.7 - 3	1,968	2.7	2.7 - 2.8

Table 55: Frequency of fruit and/or vegetable consumption per day

Men

Age range	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-44	495	18.8	14.8 - 22.7	49.3	44.3 - 54.3	19.9	16 - 23.8	12.0	8.8 - 15.3
45-69	429	9.0	5.9 - 12.1	50.8	45.5 - 56.2	25.2	20.5 - 29.9	15.0	11.1 - 18.8
18-69	924	14.6	12 - 17.3	50.0	46.3 - 53.6	22.2	19.1 - 25.2	13.3	10.8 - 15.8

Women

Age range	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-44	548	15.8	12.3 - 19.3	48.8	43.9 - 53.6	21.9	17.9 - 26	13.5	10.4 - 16.6
45-69	496	11.0	7.6 - 14.4	43.1	38.1 - 48.1	26.5	22 - 30.9	19.5	15.5 - 23.4
18-69	1,044	13.7	11.3 - 16.2	46.3	42.8 - 49.8	23.9	20.9 - 26.9	16.1	13.6 - 18.5

Both sexes

Age range	n	% no fruit and/or vegetables	95% CI	% 1-2 servings	95% CI	% 3-4 servings	95% CI	% ≥5 servings	95% CI
18-44	1,043	17.3	14.7 - 20	49.0	45.6 - 52.5	20.9	18.1 - 23.7	12.7	10.5 - 15
45-69	925	10.0	7.7 - 12.3	47.0	43.3 - 50.7	25.8	22.6 - 29.1	17.2	14.4 - 19.9
18-69	1,968	14.2	12.4 - 16	48.2	45.6 - 50.7	23.0	20.9 - 25.1	14.6	12.9 - 16.4

Table 56: Proportion of the population eating less than five servings of fruit and/or vegetables on average per day

Age range	Men			Women			Both Sexes		
	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI	n	% < five servings per day	95% CI
18-44	495	88.0	84.7 - 91.3	548	86.6	83.6 - 89.7	1,043	87.3	85.1 - 89.6
45-69	429	85.1	81.3 - 88.9	496	80.6	76.7 - 84.5	925	82.9	80.1 - 85.6
18-69	924	86.8	84.3 - 89.2	1,044	84.0	81.6 - 86.5	1,968	85.4	83.7 - 87.2

Table 57: Proportion of the population who always or often add salt or salty sauce to their food before eating or as they are eating

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	495	13.5	10.2 - 16.8	552	15.5	12.2 - 18.7	1,047	14.5	12.1 - 16.8
45-69	429	8.3	5.6 - 11.1	496	8.8	6.1 - 11.4	925	8.5	6.6 - 10.4
18-69	924	11.3	9.1 - 13.5	1,048	12.6	10.4 - 14.8	1,972	11.9	10.4 - 13.5

Table 58: Proportion of the population who always or often add salt to their food when cooking or preparing foods at home

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	496	65.4	60.7 - 70.1	551	66.2	61.8 - 70.6	1,047	65.8	62.6 - 69
45-69	428	54.6	49.3 - 59.9	498	57.2	52.3 - 62.2	926	55.9	52.3 - 59.5
18-69	924	60.8	57.3 - 64.4	1,049	62.3	59 - 65.6	1,973	61.6	59.2 - 64

Table 59: Proportion of the population who always or often eat processed foods high in salt

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	23.4	19.1 - 27.7	552	27.9	23.4 - 32.4	1,050	25.6	22.5 - 28.7
45-69	430	9.8	6.8 - 12.8	498	12.5	8.9 - 16	928	11.1	8.8 - 13.5
18-69	928	17.6	14.8 - 20.5	1,050	21.3	18.2 - 24.3	1,978	19.4	17.3 - 21.5

Table 60: Proportion of the population who think they consume far too much or too much salt

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	486	14.7	11.1 - 18.2	546	19.0	15.1 - 22.9	1,032	16.8	14.2 - 19.4
45-69	417	10.8	7.5 - 14	491	14.4	10.6 - 18.3	908	12.6	10.1 - 15.1
18-69	903	13.0	10.6 - 15.5	1,037	17.0	14.3 - 19.8	1,940	15.0	13.2 - 16.9

Table 61: Self-reported quantity of salt consumed

Men

Age range	n	% Far too much	95% CI	% Too much	95% CI	% The right amount	95% CI	% Too little	95% CI	% Far too little	95% CI
18-44	486	2.3	0.8 - 3.8	12.4	9.1 - 15.7	74.1	69.7 - 78.4	8.0	5.3 - 10.6	3.3	1.5 - 5
45-69	417	2.2	0.7 - 3.7	8.6	5.6 - 11.5	74.4	69.7 - 79	11.3	7.9 - 14.6	3.6	1.6 - 5.6
18-69	903	2.3	1.2 - 3.4	10.8	8.5 - 13.1	74.2	71 - 77.4	9.4	7.3 - 11.5	3.4	2.1 - 4.7

Women

Age range	n	% Far too much	95% CI	% Too much	95% CI	% The right amount	95% CI	% Too little	95% CI	% Far too little	95% CI
18-44	546	4.5	2.4 - 6.6	14.5	11 - 18	73.9	69.6 - 78.1	5.3	3.3 - 7.3	1.9	0.8 - 2.9
45-69	491	2.5	1.1 - 4	11.9	8.2 - 15.6	71.3	66.6 - 76	9.3	6.4 - 12.3	4.9	2.8 - 6.9
18-69	1,037	3.7	2.3 - 5	13.4	10.8 - 15.9	72.8	69.6 - 75.9	7.0	5.4 - 8.7	3.2	2.1 - 4.2

Both sexes

Age range	n	% Far too much	95% CI	% Too much	95% CI	% The right amount	95% CI	% Too little	95% CI	% Far too little	95% CI
18-44	1,032	3.4	2.1 - 4.7	13.4	11 - 15.8	74.0	70.9 - 77	6.7	5 - 8.3	2.6	1.6 - 3.6
45-69	908	2.4	1.3 - 3.4	10.2	7.9 - 12.6	72.8	69.5 - 76.2	10.3	8.1 - 12.5	4.2	2.8 - 5.7
18-69	1,940	3.0	2.1 - 3.8	12.1	10.4 - 13.8	73.5	71.2 - 75.7	8.2	6.9 - 9.6	3.3	2.4 - 4.1

Table 62: Proportion of the population who think lowering salt in diet is very, somewhat or not at all important

Men

Age range	n	% Very important	95% CI	% Somewhat important	95% CI	%Not at all important	95% CI
18-44	485	51.6	46.6 - 56.7	27.9	23.4 - 32.3	20.5	16.4 - 24.6
45-69	422	63.5	58.3 - 68.8	20.2	15.8 - 24.7	16.2	12.2 - 20.2
18-69	907	56.7	53 - 60.4	24.6	21.4 - 27.8	18.7	15.7 - 21.6

Women

Age range	n	% Very important	95% CI	% Somewhat important	95% CI	%Not at all important	95% CI
18-44	549	49.1	44.3 - 53.9	34.0	29.3 - 38.7	16.9	13.6 - 20.3
45-69	495	68.1	63.4 - 72.7	14.9	11.4 - 18.4	17.0	13.3 - 20.8
18-69	1,044	57.2	53.8 - 60.7	25.8	22.6 - 29	17.0	14.5 - 19.5

Both sexes

Age range	n	% Very important	95% CI	% Somewhat important	95% CI	%Not at all important	95% CI
18-44	1,034	50.4	46.9 - 53.8	30.9	27.7 - 34.2	18.7	16.1 - 21.4
45-69	917	65.8	62.3 - 69.3	17.6	14.7 - 20.4	16.6	13.9 - 19.4
18-69	1,951	57.0	54.4 - 59.5	25.2	22.9 - 27.5	17.8	15.9 - 19.8

Table 63: Proportion of the population who think consuming too much salt could cause a serious health problem

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	94.2	92.1 - 96.4	552	96.8	94.8 - 98.7	1,050	95.5	94 - 96.9
45-69	430	96.5	94.7 - 98.2	499	95.6	93.5 - 97.6	929	96.0	94.7 - 97.3
18-69	928	95.2	93.7 - 96.6	1,051	96.2	94.8 - 97.7	1,979	95.7	94.7 - 96.7

Table 64: Proportion of the population who take specific action on a regular basis to control salt intake

Limit consumption of processed foods

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	73.4	69 - 77.9	552	79.6	75.9 - 83.3	1,050	76.5	73.5 - 79.4
45-69	430	85.3	81.6 - 88.9	499	84.9	81.4 - 88.3	929	85.1	82.6 - 87.6
18-69	928	78.5	75.4 - 81.5	1,051	81.9	79.3 - 84.5	1,979	80.1	78.1 - 82.1

Look at the salt or sodium content on food labels

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	43.8	38.8 - 48.8	552	48.7	43.9 - 53.5	1,050	46.2	42.8 - 49.7
45-69	430	52.0	46.6 - 57.3	499	58.5	53.5 - 63.5	929	55.2	51.6 - 58.9
18-69	928	47.3	43.6 - 50.9	1,051	52.9	49.4 - 56.4	1,979	50.1	47.5 - 52.6

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Buy low salt/sodium alternatives

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	45.0	40 - 50	552	51.0	46.2 - 55.8	1,050	47.9	44.5 - 51.4
45-69	430	50.4	45.1 - 55.7	499	52.8	47.8 - 57.8	929	51.6	47.9 - 55.3
18-69	928	47.3	43.6 - 50.9	1,051	51.8	48.3 - 55.3	1,979	49.5	47 - 52

Use spices other than salt when cooking

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	79.5	75.7 - 83.4	552	81.1	77.6 - 84.6	1,050	80.3	77.7 - 82.9
45-69	430	79.9	75.8 - 84.1	499	87.7	84.5 - 90.9	929	83.8	81.2 - 86.4
18-69	928	79.7	76.9 - 82.5	1,051	83.9	81.5 - 86.4	1,979	81.8	79.9 - 83.7

Avoid eating foods prepared outside of a home

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	51.9	46.9 - 56.9	552	53.1	48.3 - 57.9	1,050	52.5	49 - 55.9
45-69	430	56.1	50.8 - 61.4	499	58.8	53.8 - 63.8	929	57.4	53.8 - 61.1
18-69	928	53.7	50 - 57.3	1,051	55.6	52.1 - 59	1,979	54.6	52.1 - 57.1

Do other things specifically to control your salt intake

Age range	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	498	27.4	22.8 - 32	552	26.1	21.8 - 30.5	1,050	26.8	23.6 - 29.9
45-69	430	30.7	25.8 - 35.7	499	31.5	26.9 - 36.2	929	31.1	27.7 - 34.5
18-69	928	28.8	25.4 - 32.2	1,051	28.5	25.3 - 31.6	1,979	28.6	26.3 - 30.9

Physical Activity

Table 65: Proportion of the population not meeting WHO recommendations on physical activity for health (population doing less than 150 minutes of moderate-intensity physical activity per week, or equivalent)

Age range	Men			Women			Both Sexes		
	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI	n	% not meeting recs	95% CI
18-44	486	8.4	5.7 - 11.1	537	27.9	23.5 - 32.4	1,023	18.0	15.3 - 20.7
45-69	422	18.1	13.7 - 22.5	489	26.0	21.5 - 30.4	911	22.0	18.9 - 25.1
18-69	908	12.5	10.1 - 15	1,026	27.1	23.9 - 30.3	1,934	19.7	17.7 - 21.7

Table 66: Proportion of the population classified into three categories of total physical activity according to former recommendations

Men

Age range	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-44	486	18.0	14.2 - 21.8	11.3	8.2 - 14.4	70.7	66.1 - 75.2
45-69	422	28.3	23.2 - 33.3	13.3	9.7 - 17	58.4	53 - 63.8
18-69	908	22.4	19.3 - 25.5	12.2	9.8 - 14.6	65.5	61.9 - 69

Women

Age range	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-44	537	41.7	36.9 - 46.5	18.1	14.3 - 21.9	40.2	35.4 - 44.9
45-69	489	38.7	33.8 - 43.6	24.5	20.2 - 28.8	36.8	31.8 - 41.8
18-69	1,026	40.4	36.9 - 43.9	20.9	18 - 23.7	38.7	35.3 - 42.1

Both sexes

Age range	n	% Low	95% CI	% Moderate	95% CI	% High	95% CI
18-44	1,023	29.6	26.4 - 32.8	14.7	12.2 - 17.1	55.7	52.2 - 59.2
45-69	911	33.4	29.9 - 37	18.9	16 - 21.7	47.7	44 - 51.4
18-69	1,934	31.3	28.9 - 33.6	16.5	14.6 - 18.3	52.3	49.7 - 54.8

Table 67: Mean minutes of total physical activity on average per day

Age range	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-44	486	285.6	258.4 - 312.9	537	140.4	123.8 - 157	1,023	214.4	197.3 - 231.5
45-69	422	243.3	216.7 - 269.9	489	148.3	130.9 - 165.7	911	196.3	180 - 212.5
18-69	908	267.6	248.2 - 287	1,026	143.8	131.7 - 155.8	1,934	206.6	194.6 - 218.6

Table 68: Median minutes of total physical activity on average per day

Age range	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-44	486	245.7	60 - 442	537	52.3	15 - 214	1,023	104.0	34 - 377
45-69	422	155.3	41 - 407	489	77.1	17 - 231	911	103.9	26 - 343
18-69	908	182.9	52 - 422	1,026	64.3	17 - 219	1,934	104.0	26 - 354

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Table 69: Mean minutes spent in work, transport and recreation-related physical activity on average per day

Work-related physical activity

Age range	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-44	486	212.9	188.3 - 237.6	537	90.9	76.5 - 105.2	1,023	153.1	137.9 - 168.3
45-69	422	185.5	161.1 - 209.9	489	100.5	85.4 - 115.6	911	143.4	128.7 - 158.1
18-69	908	201.3	183.7 - 218.9	1,026	95.0	84.6 - 105.4	1,934	148.9	138.2 - 159.7

Transport-related physical activity

Age range	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-44	486	24.4	17.7 - 31	537	16.8	12 - 21.7	1,023	20.7	16.5 - 24.8
45-69	422	24.6	17.5 - 31.7	489	15.2	10.2 - 20.3	911	19.9	15.6 - 24.3
18-69	908	24.5	19.6 - 29.3	1,026	16.1	12.6 - 19.7	1,934	20.4	17.4 - 23.4

Recreation-related physical activity

Age range	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-44	486	48.3	40.4 - 56.2	537	32.7	27.1 - 38.3	1,023	40.6	35.7 - 45.5
45-69	422	33.2	28.4 - 38.1	489	32.6	27.2 - 37.9	911	32.9	29.3 - 36.5
18-69	908	41.9	36.9 - 46.9	1,026	32.6	28.7 - 36.6	1,934	37.3	34.1 - 40.5

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Table 70: Median minutes spent on average per day in work, transport and recreation-related physical activity

Work-related physical activity

Age range	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-44	486	120.0	0 - 387	537	0	0 - 129	1,023	12.9	0 - 309
45-69	422	77.1	0 - 344	489	0	0 - 155	911	25.7	0 - 279
18-69	908	98.6	0 - 386	1,026	0	0 - 137	1,934	17.3	0 - 300

Transport-related physical activity

Age range	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-44	486	0	0 - 13	537	0	0 - 0	1,023	0	0 - 6
45-69	422	0	0 - 9	489	0	0 - 0	911	0	0 - 0
18-69	908	0	0 - 13	1,026	0	0 - 0	1,934	0	0 - 0

Recreation-related physical activity

Age range	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-44	486	27.1	0 - 60	537	17.3	0 - 45	1,023	25.7	0 - 52
45-69	422	15.0	0 - 49	489	12.9	0 - 43	911	12.9	0 - 43
18-69	908	21.4	0 - 52	1,026	17.1	0 - 43	1,934	17.4	0 - 51

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Table 71: Proportion of the population classified as doing no work, transport or recreational-related physical activity

No work-related physical activity

Age range	Men			Women			Both Sexes		
	n	% no work activity	95% CI	n	% no work activity	95% CI	n	% no work activity	95% CI
18-44	486	39.2	34.3 - 44.1	537	57.6	52.8 - 62.4	1,023	48.2	44.7 - 51.7
45-69	422	40.8	35.5 - 46.2	489	51.0	45.9 - 56.1	911	45.9	42.2 - 49.6
18-69	908	39.9	36.3 - 43.5	1,026	54.8	51.3 - 58.3	1,934	47.2	44.7 - 49.8

No transport-related physical activity

Age range	Men			Women			Both Sexes		
	n	% no transport activity	95% CI	n	% no transport activity	95% CI	n	% no transport activity	95% CI
18-44	486	70.3	65.7 - 75	537	78.4	74.2 - 82.5	1,023	74.3	71.1 - 77.4
45-69	422	72.4	67.6 - 77.1	489	80.0	75.9 - 84	911	76.1	73 - 79.3
18-69	908	71.2	67.9 - 74.5	1,026	79.1	76.1 - 82	1,934	75.1	72.8 - 77.3

No recreation-related physical activity

Age range	Men			Women			Both Sexes		
	n	% no leisure activity	95% CI	n	% no leisure activity	95% CI	n	% no leisure activity	95% CI
18-44	486	32.2	27.5 - 36.9	537	37.3	32.6 - 42	1,023	34.7	31.4 - 38
45-69	422	39.2	34 - 44.5	489	39.3	34.3 - 44.3	911	39.3	35.6 - 42.9
18-69	908	35.2	31.7 - 38.7	1,026	38.2	34.7 - 41.6	1,934	36.7	34.2 - 39.1

Table 72: Proportion of work, transport and recreational activity contributing to total activity

Men

Age range	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-44	456	52.6	48.2 - 57	10.2	7.9 - 12.5	37.2	33 - 41.4
45-69	376	55.6	50.7 - 60.5	13.0	9.7 - 16.3	31.4	27 - 35.9
18-69	832	53.8	50.5 - 57.1	11.3	9.4 - 13.2	34.8	31.8 - 37.9

Women

Age range	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-44	441	38.2	33.8 - 42.6	11.0	8.1 - 13.9	50.8	46.2 - 55.4
45-69	412	46.0	41.2 - 50.8	9.0	6.6 - 11.4	45.0	40.3 - 49.8
18-69	853	41.6	38.3 - 44.9	10.1	8.2 - 12.1	48.3	44.9 - 51.6

Both Sexes

Age range	n	% Activity from work	95% CI	% Activity for transport	95% CI	% Activity during leisure time	95% CI
18-44	897	46.0	42.8 - 49.3	10.6	8.7 - 12.4	43.4	40.2 - 46.5
45-69	788	50.9	47.5 - 54.4	11.0	9 - 13.1	38.0	34.7 - 41.3
18-69	1,685	48.1	45.8 - 50.5	10.8	9.4 - 12.1	41.1	38.8 - 43.4

Table 73: Proportion of the population not engaging in vigorous physical activity

Age range	Men			Women			Both Sexes		
	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI	n	% no vigorous activity	95% CI
18-44	486	23.1	19 - 27.2	537	66.4	61.9 - 70.9	1,023	44.3	40.9 - 47.8
45-69	422	47.3	42 - 52.7	489	79.4	75.5 - 83.3	911	63.2	59.7 - 66.8
18-69	908	33.4	30 - 36.9	1,026	72.0	68.9 - 75.1	1,934	52.4	49.9 - 55

Table 74: Mean minutes spent in sedentary activities on a typical day

Age range	Men			Women			Both Sexes		
	n	Mean minutes	95% CI	n	Mean minutes	95% CI	n	Mean minutes	95% CI
18-44	498	300.2	279.3 - 321.2	552	368.3	347.4 - 389.2	1,050	333.6	318.5 - 348.7
45-69	430	288.1	265.9 - 310.3	499	313.2	294.6 - 331.9	929	300.6	286.1 - 315.1
18-69	928	295.1	279.8 - 310.4	1,051	344.6	330.1 - 359.1	1,979	319.5	308.9 - 330.1

Table 75: Median minutes spent in sedentary activities on a typical day

Age range	Men			Women			Both Sexes		
	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range	n	Median minutes	Inter-quartile range
18-44	498	241	135 - 421	552	361	181 - 510	1,050	301	150 - 481
45-69	430	241	130 - 390	499	301	181 - 450	929	250	150 - 421
18-69	928	241	130 - 421	1,051	301	181 - 481	1,979	270	150 - 481

History of Raised Blood Pressure

Table 76: Blood pressure measurement and diagnosis among all population

Men

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	498	7.9	5.3 - 10.6	78.9	74.9 - 82.9	7.4	5.1 - 9.8	5.7	3.4 - 8.1
45-69	430	3.8	1.8 - 5.7	58.9	53.6 - 64.1	23.4	18.8 - 27.9	14.0	10.3 - 17.6
18-69	928	6.2	4.4 - 7.9	70.4	67.1 - 73.7	14.2	11.8 - 16.6	9.2	7.2 - 11.3

Women

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	552	2.7	1.4 - 4.1	82.1	78.6 - 85.5	9.2	6.5 - 11.8	6.0	3.9 - 8.2
45-69	499	1.9	0.6 - 3.3	56.8	51.8 - 61.8	27.1	22.6 - 31.5	14.2	10.6 - 17.8
18-69	1,051	2.4	1.4 - 3.3	71.2	68.1 - 74.2	16.9	14.4 - 19.4	9.6	7.6 - 11.6

Both Sexes

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	1,050	5.4	3.8 - 6.9	80.4	77.8 - 83.1	8.3	6.5 - 10.1	5.9	4.3 - 7.5
45-69	929	2.9	1.7 - 4.1	57.8	54.2 - 61.5	25.2	22 - 28.4	14.1	11.5 - 16.7
18-69	1,979	4.3	3.3 - 5.3	70.8	68.5 - 73	15.5	13.8 - 17.3	9.4	8 - 10.8

Table 77: Proportion of those diagnosed with raised blood pressure who are taking medication

Age range	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-44	70	31.4	19.4 - 43.3	90	34.7	23.6 - 45.9	160	33.1	25 - 41.3
45-69	157	68.1	59.9 - 76.3	208	71.8	64.9 - 78.7	365	70.0	64.7 - 75.4
18-69	227	56.2	49 - 63.4	298	59.7	53.3 - 66	525	58.0	53.2 - 62.8

Table 78: Proportion of the population who have sought advice or received treatment from a traditional healer for raised blood pressure among those previously diagnosed with raised blood pressure

Seen a traditional healer among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
18-44	70	2.6	0 - 6.5	90	2.9	0.1 - 5.8	160	2.8	0.4 - 5.1
45-69	157	2.2	0.2 - 4.3	208	4.5	1.1 - 8	365	3.4	1.4 - 5.5
18-69	227	2.4	0.5 - 4.2	298	4.0	1.5 - 6.5	525	3.2	1.6 - 4.8

Currently taking herbal or traditional remedy for raised blood pressure among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
18-44	70	9.7	2.8 - 16.6	90	5.7	0 - 11.6	160	7.6	3.1 - 12.1
45-69	157	9.9	5.1 - 14.7	208	9.1	4.6 - 13.7	365	9.5	6.2 - 12.8
18-69	227	9.8	5.9 - 13.8	298	8.0	4.4 - 11.6	525	8.9	6.2 - 11.5

History of Diabetes

Table 79: Blood sugar measurement and diagnosis among all population

Men

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	498	37.0	32.1 - 41.8	60.1	55.1 - 65	1.6	0.1 - 3	1.4	0.4 - 2.4
45-69	430	19.8	15.4 - 24.1	65.2	60 - 70.3	7.9	5.1 - 10.6	7.2	4.3 - 10.1
18-69	928	29.7	26.3 - 33.1	62.2	58.6 - 65.8	4.2	2.8 - 5.7	3.9	2.5 - 5.2

Women

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	552	20.3	16.5 - 24	73.0	68.8 - 77.2	3.4	1.7 - 5.1	3.3	1.6 - 5
45-69	499	13.7	10.2 - 17.2	63.9	58.9 - 68.8	15.1	11.2 - 19.1	7.3	4.7 - 9.9
18-69	1,051	17.4	14.8 - 20.1	69.1	65.8 - 72.3	8.5	6.4 - 10.5	5.0	3.5 - 6.5

Both Sexes

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	1,050	28.8	25.6 - 31.9	66.4	63.1 - 69.7	2.5	1.4 - 3.6	2.3	1.4 - 3.3
45-69	929	16.8	14 - 19.6	64.5	60.9 - 68.1	11.5	9 - 13.9	7.2	5.3 - 9.2
18-69	1,979	23.6	21.5 -	65.6	63.2 -	6.3	5.1 - 7.6	4.4	3.4 - 5.4

Table 80: Diabetes treatment results among those previously diagnosed with raised blood sugar or diabetes

Currently taking drugs (medication) prescribed for diabetes among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-44	15	-	-	37	-	-	52	38.5	22.7 - 54.3
45-69	60	65.1	51.8 - 78.3	100	71.6	61.2 - 82	160	69.0	60.8 - 77.2
18-69	75	66.6	54.9 - 78.3	137	57.8	48.2 - 67.4	212	61.2	53.7 - 68.6

Currently taking insulin prescribed for diabetes among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% taking insulin	95% CI	n	% taking insulin	95% CI	n	% taking insulin	95% CI
18-44	15	-	-	37	-	-	52	8.8	0 - 21.2
45-69	60	28.1	15.2 - 40.9	100	33.9	22.2 - 45.5	160	31.5	22.8 - 40.2
18-69	75	27.4	15.1 - 39.6	137	24.7	15.6 - 33.8	212	25.7	18.4 - 33

Table 81: Proportion of the population who are have sought advice or treatment from a traditional healer for diabetes among those previously diagnosed

Seen a traditional healer for diabetes among those previously diagnosed

Age range	Men			Women			Both Sexes	
	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
18-44	15	-	-	37	-	-	52	9.8	0 - 22.5
45-69	60	3.7	0 - 9.3	100	4.9	0 - 10	160	4.4	0.6 - 8.2
18-69	75	7.3	0 - 16.5	137	4.9	0.8 - 9	212	5.8	1.4 - 10.2

Currently taking herbal or traditional treatment for diabetes among those previously diagnosed

Age range	Men			Women			Both Sexes	
	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
18-44	15	-	-	37	-	-	52	1.1	0 - 3.2
45-69	60	8.6	0.8 - 16.4	100	8.3	2.4 - 14.1	160	8.4	3.7 - 13.1
18-69	75	6.8	0.6 - 13	137	6.4	2 - 10.7	212	6.5	2.9 - 10.1

Table 82: Proportion of those with diagnosed diabetes who have received at least two HbA1C (glycated hemoglobin) tests in the past year as part of the diabetes control

Age range	Men			Women			Both Sexes	
	n	% had at least 2 tests	95% CI	n	% had at least 2 tests	95% CI	n	% had at least 2 tests	95% CI
18-44	15	-	-	34	-	-	49	-	-
45-69	56	62.8	49.2 - 76.4	97	54.7	43 - 66.3	153	57.9	49 - 66.7
18-69	71	62.3	50.1 - 74.5	131	53.4	43.4 - 63.3	202	56.7	49 - 64.5

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Table 83: Recency of an eye examination among those with diagnosed diabetes as part of their diabetes control

Men

Age range	n	% Within past 2 yrs	95% CI	% More than 2 years ago	95% CI	% Never	95% CI
18-44	15	-	-	-	-	-	-
45-69	57	73.4	61.4 - 85.4	6.9	1 - 12.8	19.7	8.7 - 30.7
18-69	72	72.3	61.3 - 83.3	7.1	1.4 - 12.8	20.6	10.6 - 30.5

Women

Age range	n	% Within past 2 yrs	95% CI	% More than 2 years ago	95% CI	% Never	95% CI
18-44	37	-	-	-	-	-	-
45-69	100	61.2	49.9 - 72.5	12.5	5.4 - 19.7	26.3	15.9 - 36.7
18-69	137	53.7	44 - 63.5	10.8	5.1 - 16.5	35.5	26.2 - 44.7

Both Sexes

Age range	n	% Within past 2 yrs	95% CI	% More than 2 years ago	95% CI	% Never	95% CI
18-44	52	45.5	29.6 - 61.3	6.9	0 - 14.5	47.6	32.2 - 63
45-69	157	66.0	57.6 - 74.4	10.3	5.4 - 15.2	23.7	16 - 31.3
18-69	209	60.7	53.2 - 68.1	9.4	5.3 - 13.6	29.9	22.9 - 36.9

Table 84: Recency of a foot examination among those with diagnosed diabetes as part of their diabetes control

Men

Age range	n	% Within past year	95% CI	% More than 1 year ago	95% CI	% Never	95% CI
18-44	15	-	-	-	-	-	-
45-69	58	37.6	23.5 - 51.7	20.6	9.1 - 32.1	41.8	27.8 - 55.9
18-69	73	38.2	25.1 - 51.3	16.2	6.9 - 25.5	45.6	32.8 - 58.5

Women

Age range	n	% Within past year	95% CI	% More than 1 year ago	95% CI	% Never	95% CI
18-44	37	-	-	-	-	-	-
45-69	100	36	25.4 - 46.7	18.1	8.6 - 27.6	45.8	34.1 - 57.6
18-69	137	31.8	23 - 40.7	15.4	7.6 - 23.2	52.7	42.9 - 62.5

Both Sexes

Age range	n	% Within past year	95% CI	% More than 1 year ago	95% CI	% Never	95% CI
18-44	52	27.3	11.6 - 42.9	6.0	0 - 15.3	66.8	50.4 - 83.1
45-69	158	36.7	28.2 - 45.1	19.1	11.8 - 26.4	44.2	35.2 - 53.2
18-69	210	34.2	26.8 - 41.7	15.7	9.8 - 21.7	50.1	42.2 - 57.9

History of Raised Total Cholesterol

Table 85: Total cholesterol measurement and diagnosis among all population

Men

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	498	51.3	46.3 - 56.3	38.1	33.3 - 43	5.6	3.5 - 7.7	4.9	2.9 - 7
45-69	430	26.0	21.2 - 30.7	44.7	39.4 - 50	18.2	13.9 - 22.5	11.2	7.9 - 14.5
18-69	928	40.6	36.9 - 44.2	40.9	37.3 - 44.5	10.9	8.7 - 13.2	7.6	5.7 - 9.4

Women

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	552	39.2	34.5 - 44	52.1	47.3 - 56.9	4.6	2.8 - 6.4	4.0	2.3 - 5.7
45-69	499	18.5	14.6 - 22.4	54.6	49.6 - 59.6	16.2	12.5 - 19.8	10.8	7.6 - 14
18-69	1,051	30.3	27 - 33.6	53.2	49.7 - 56.7	9.6	7.7 - 11.5	6.9	5.2 - 8.6

Both Sexes

Age range	n	% Never measured	95% CI	% measured, not diagnosed	95% CI	% diagnosed, but not within past 12 months	95% CI	% diagnosed within past 12 months	95% CI
18-44	1,050	45.4	41.9 - 48.9	45.0	41.6 - 48.4	5.1	3.7 - 6.5	4.5	3.1 - 5.8
45-69	929	22.3	19.2 - 25.3	49.6	45.9 - 53.2	17.2	14.4 - 20	11.0	8.7 - 13.3
18-69	1,979	35.5	33.1 - 38	47.0	44.4 - 49.5	10.3	8.8 - 11.8	7.3	6 - 8.5

Table 86: Cholesterol treatment results among those previously diagnosed with raised cholesterol

Currently taking drugs (medication) prescribed for diabetes among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% taking meds	95% CI	n	% taking meds	95% CI	n	% taking meds	95% CI
18-44	52	10.2	1.5 - 18.9	52	2.6	0 - 7.8	104	6.9	1.4 - 12.3
45-69	120	45.5	35.4 - 55.6	138	42.5	33 - 52.1	258	44.1	37.1 - 51.1
18-69	172	34.0	26 - 41.9	190	30.7	23.3 - 38.1	362	32.4	27 - 37.9

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Table 87: Proportion of the population who are have sought advice or treatment from a traditional healer for raised cholesterol among those previously diagnosed

Seen a traditional healer for raised cholesterol among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI	n	% seen trad. healer	95% CI
18-44	52	3.3	0 - 9.6	52	0	0 - 0	104	1.8	0 - 5.4
45-69	120	3.3	0 - 6.9	138	0	0 - 0	258	1.8	0 - 3.7
18-69	172	3.3	0.1 - 6.5	190	0	0 - 0	362	1.8	0.1 - 3.5

Currently taking herbal or traditional treatment for raised cholesterol among those previously diagnosed

Age range	Men			Women			Both Sexes		
	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI	n	% taking trad. meds	95% CI
18-44	52	3.3	0 - 9.6	52	2.5	0 - 7.3	104	2.9	0 - 7.1
45-69	120	9.3	3.6 - 15	138	6.0	0.5 - 11.4	258	7.7	3.7 - 11.7
18-69	172	7.3	2.9 - 11.7	190	4.9	0.8 - 9	362	6.2	3.2 - 9.2

History of Cardiovascular Disease

Table 88: Proportion of the population who have ever had a heart attack or chest pain from heart disease (angina) or a stroke among all population

Age range	Men			Women			Both Sexes		
	n	% CVD history	95% CI	n	% CVD history	95% CI	n	% CVD history	95% CI
18-44	498	1.4	0 - 2.9	552	3.0	1.2 - 4.7	1,050	2.2	1 - 3.3
45-69	430	6.0	3.6 - 8.4	499	5.6	2.9 - 8.3	929	5.8	4 - 7.6
18-69	928	3.4	2 - 4.7	1,051	4.1	2.6 - 5.6	1,979	3.7	2.7 - 4.7

Table 89: Proportion of the population who are currently taking aspirin or statins regularly to prevent or treat heart disease

Currently taking aspirin regularly to prevent or treat heart disease

Age range	Men			Women			Both Sexes		
	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI	n	% taking aspirin	95% CI
18-44	498	0.6	0 - 1.2	552	1.3	0.2 - 2.4	1,050	0.9	0.3 - 1.6
45-69	430	8.6	5.8 - 11.5	499	10.7	7.3 - 14.1	929	9.7	7.4 - 11.9
18-69	928	4.0	2.7 - 5.3	1,051	5.4	3.7 - 7	1,979	4.7	3.6 - 5.7

Currently taking statins regularly to prevent or treat heart disease

Age range	Men			Women			Both Sexes		
	n	% taking statins	95% CI	n	% taking statins	95% CI	n	% taking statins	95% CI
18-44	498	0.6	0 - 1.4	552	0.1	0 - 0.3	1,050	0.4	0 - 0.8
45-69	430	8.1	5.2 - 11	499	5.8	3.4 - 8.1	929	7.0	5.1 - 8.8
18-69	928	3.8	2.5 - 5.1	1,051	2.5	1.5 - 3.6	1,979	3.2	2.3 - 4

Lifestyle Advice

Table 90: Proportion of the population advised by doctor or health worker to quit using tobacco or not to start during the past 12 months

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	12.9	8.9 - 17	491	4.3	2.4 - 6.1	867	8.3	6.1 - 10.4
45-69	339	10.0	6.2 - 13.8	438	6.7	4 - 9.3	777	8.2	6 - 10.5
18-69	715	11.6	8.8 - 14.5	929	5.3	3.7 - 6.8	1,644	8.3	6.7 - 9.8

Table 91: Proportion of the population advised by doctor or health worker to reduce salt in the diet during the past 12 months

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	12.4	8.6 - 16.3	491	10.5	7.4 - 13.5	867	11.4	9 - 13.8
45-69	339	20.8	15.9 - 25.8	438	20.7	16.1 - 25.4	777	20.8	17.4 - 24.1
18-69	715	16.1	13 - 19.2	929	14.8	12.1 - 17.5	1,644	15.4	13.4 - 17.4

Table 92: Proportion of the population advised by doctor or health worker to eat at least five servings of fruit and/or vegetables each day during the past 12 months

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	26.3	21.2 - 31.3	491	25.8	21.3 - 30.3	867	26.0	22.6 - 29.4
45-69	339	32.0	26.4 - 37.5	438	32.7	27.6 - 37.8	777	32.4	28.6 - 36.1
18-69	715	28.7	25 - 32.5	929	28.7	25.3 - 32.1	1,644	28.7	26.2 - 31.2

Table 93: Proportion of the population advised by doctor or health worker to reduce fat in the diet during the past 12 months

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	19.7	15.1 - 24.2	491	23.8	19.4 - 28.2	867	21.9	18.7 - 25.1
45-69	339	30.9	25.5 - 36.4	438	31.8	26.7 - 37	777	31.4	27.7 - 35.1
18-69	715	24.6	21 - 28.1	929	27.2	23.9 - 30.6	1,644	26.0	23.5 - 28.4

Table 94: Proportion of the population advised by doctor or health worker to start or do more physical activity during the past 12 months

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	24.1	19.3 - 28.9	491	34.6	29.7 - 39.6	867	29.7	26.2 - 33.3
45-69	339	41.2	35.2 - 47.1	438	46.1	40.7 - 51.5	777	43.7	39.8 - 47.7
18-69	715	31.5	27.7 - 35.4	929	39.5	35.8 - 43.2	1,644	35.8	33.1 - 38.4

Table 95: Proportion of the population advised by doctor or health worker to maintain a healthy body weight or to lose weight

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	27.3	22.2 - 32.3	491	36.2	31.3 - 41.1	867	32.1	28.5 - 35.6
45-69	339	43.3	37.4 - 49.2	438	45.5	40.1 - 50.9	777	44.5	40.5 - 48.4
18-69	715	34.2	30.3 - 38.1	929	40.2	36.5 - 43.8	1,644	37.4	34.7 - 40.1

Table 96: Proportion of the population advised by doctor or health worker to reduce sugary beverages in your diet

Age range	Men			Women			Both Sexes		
	n	% Advised	95% CI	n	% Advised	95% CI	n	% Advised	95% CI
18-44	376	17.7	13.5 - 22	491	21.6	17.4 - 25.8	867	19.8	16.8 - 22.8
45-69	339	29.7	24.2 - 35.1	438	32.3	27.1 - 37.4	777	31.0	27.3 - 34.8
18-69	715	22.9	19.5 - 26.4	929	26.1	22.8 - 29.4	1,644	24.6	22.3 - 27

Cervical Cancer Screening

Table 97: Proportion of all females who have ever had a screening test for cervical cancer

Age range	Women		
	n	% ever tested	95% CI
18-44	548	61.0	56.2 - 65.8
45-69	496	75.0	70.7 - 79.2
18-69	1,044	67.1	63.7 - 70.4

Table 98: Proportion of females aged 25-49 years who have ever had a screening test for cervical cancer among

Age range	Women		
	n	% ever tested	95% CI
25-49	634	67.8	63.6 - 72

Table 99: Recency of cervical cancer screening test among all females

Women

Age range	n	% Less than 1 year ago	95% CI	% 1-2 years ago	95% CI	% 3-5 years ago	95% CI	% More than 5 years ago	95% CI	% Never screened/ unknown	95% CI
18-44	548	26.2	22.1 - 30.3	22.0	18.1 - 25.8	10.1	7.3 - 12.9	2.2	1 - 3.4	39.5	34.7 - 44.3
45-69	496	25.7	21.4 - 30	27.9	23.2 - 32.6	11.3	8.1 - 14.4	9.2	6.3 - 12.2	25.9	21.6 - 30.2
18-69	1,044	26.0	23 - 29	24.5	21.6 - 27.5	10.6	8.5 - 12.7	5.2	3.8 - 6.7	33.6	30.3 - 37

Table 100: Recency of cervical cancer screening test among all females aged 25-49 years

Women

Age range	n	% Less than 2 year ago	95% CI	% 3-5 years ago	95% CI	% More than 5 years ago	95% CI	% Never screened/ unknown	95% CI
25-49	634	54.0	49.6 - 58.4	9.9	7.3 - 12.5	3.6	1.9 – 5.3	32.5	28.3 - 36.7

Health Screening

Table 101: Time since last saw a dentist or dental hygienist

Men

Age range	n	% <6 months	95% CI	% 6-12 months	95% CI	% 1-2 years	95% CI	% 2-5 years	95% CI	% 5+ years	95% CI	% Never	95% CI
18-44	498	27.7	23.3 - 32.1	26.5	22 - 31	19.9	15.8 - 23.9	13.6	10.3 - 16.9	8.1	5.2 - 11.1	4.2	2.1 - 6.3
45-69	430	36.9	31.7 - 42	24.7	20 - 29.4	14.5	10.9 - 18.1	13.3	9.6 - 17	9.8	6.7 - 12.9	0.7	0 - 1.5
18-69	928	31.6	28.2 - 34.9	25.8	22.5 - 29	17.6	14.8 - 20.4	13.5	11 - 15.9	8.9	6.7 - 11	2.7	1.5 - 4

Women

Age range	n	% <6 months	95% CI	% 6-12 months	95% CI	% 1-2 years	95% CI	% 2-5 years	95% CI	% 5+ years	95% CI	% Never	95% CI
18-44	552	38.4	33.8 - 42.9	26.5	22.2 - 30.8	18.6	14.6 - 22.7	10.6	7.7 - 13.6	4.0	1.9 - 6.1	1.9	0.7 - 3
45-69	499	39.9	35 - 44.8	25.7	21.2 - 30.3	16.3	12.7 - 19.8	10.7	7.4 - 14	6.9	4.4 - 9.4	0.5	0 - 1.1
18-69	1,051	39.0	35.7 - 42.4	26.2	23.1 - 29.3	17.6	14.8 - 20.4	10.7	8.5 - 12.9	5.2	3.6 - 6.8	1.3	0.6 - 2

Both Sexes

Age range	n	% <6 months	95% CI	% 6-12 months	95% CI	% 1-2 years	95% CI	% 2-5 years	95% CI	% 5+ years	95% CI	% Never	95% CI
18-44	1,050	32.9	29.8 - 36.1	26.5	23.4 - 29.6	19.3	16.4 - 22.1	12.1	9.9 - 14.4	6.1	4.3 - 7.9	3.1	1.8 - 4.3
45-69	929	38.4	34.8 - 41.9	25.2	22 - 28.5	15.4	12.9 - 17.9	12.0	9.5 - 14.5	8.4	6.4 - 10.4	0.6	0.1 - 1.1
18-69	1,979	35.3	32.9 - 37.6	26.0	23.7 - 28.2	17.6	15.6 - 19.6	12.1	10.4 - 13.7	7.1	5.7 - 8.4	2.0	1.3 - 2.7

Table 102: Proportion of the population who have had a faecal examination to look for hidden blood

Age range	Men			Women			Both Sexes		
	n	% had faeces checked	95% CI	n	% had faeces checked	95% CI	n	% had faeces checked	95% CI
18-44	495	12.1	8.7 - 15.4	546	11.7	8.6 - 14.7	1,041	11.9	9.6 - 14.1
45-69	420	29.2	24.2 - 34.1	494	27.9	23.3 - 32.6	914	28.6	25.2 - 32
18-69	915	19.2	16.3 - 22.2	1,040	18.7	15.9 - 21.4	1,955	19.0	17 - 21

Table 103: Proportion of the population who have had a colonoscopy

Age range	Men			Women			Both Sexes		
	n	% had colonoscopy	95% CI	n	% had colonoscopy	95% CI	n	% had colonoscopy	95% CI
18-44	498	7.1	4.6 - 9.6	552	4.9	3.2 - 6.7	1,050	6.0	4.5 - 7.6
45-69	430	30.2	25.2 - 35.1	499	30.7	25.9 - 35.5	929	30.5	27 - 33.9
18-69	928	16.9	14.2 - 19.6	1,051	16.0	13.5 - 18.6	1,979	16.5	14.6 - 18.3

Table 104: Proportion of men who have had a prostate examination

Age range	n	% had prostate exam	95% CI	% not had prostate exam	95% CI
18-44	498	13.2	9.9 - 16.6	86.8	83.4 - 90.1
45-69	430	53.6	48.3 - 58.9	46.4	41.1 - 51.7
18-69	928	30.4	27.1 - 33.7	69.6	66.3 - 72.9

Table 105: Proportion of women who have been shown how to examine their breasts

Age range	n	% shown how to examine	95% CI	% not shown how to examine	95% CI
18-44	552	29.5	24.9 - 34	70.5	66 - 75.1
45-69	499	12.3	9 - 15.7	87.7	84.3 - 91
18-69	1,051	22.1	19.1 - 25.1	77.9	74.9 - 80.9

Table 106: How recently women last had a breast examination

Age range	n	% 1 year or less	95% CI	% 1-2 years	95% CI	% >2 years	95% CI	% Never	95% CI
18-44	545	33.7	29.3 - 38	17.9	14.3 - 21.5	18.2	14.4 - 21.9	30.3	25.6 - 34.9
45-69	497	44.2	39.2 - 49.2	25.2	20.6 - 29.8	22.6	18.4 - 26.8	8.1	5.5 - 10.6
18-69	1,042	38.2	34.9 - 41.5	21.1	18.2 - 23.9	20.1	17.3 - 22.9	20.6	17.6 - 23.6

Table 107: How recently women last had a mammogram

Age range	n	% 1 year or less	95% CI	% 1-2 years	95% CI	% >2 years	95% CI	% Never	95% CI
18-44	548	9.9	7.3 - 12.6	5.4	3.3 - 7.5	10.6	7.7 - 13.6	74.0	69.9 - 78.1
45-69	499	32.1	27.4 - 36.8	25.9	21.4 - 30.5	21.7	17.8 - 25.7	20.2	16.1 - 24.4
18-69	1,047	19.5	16.9 - 22.2	14.3	11.9 - 16.7	15.4	13 - 17.8	50.8	47.3 - 54.3

Drug Use

Table 108: Proportion of the population who have ever used cannabis

Age range	Men			Women			Both Sexes		
	n	% ever used cannabis	95% CI	n	% ever used cannabis	95% CI	n	% ever used cannabis	95% CI
18-44	498	29.6	25.1 - 34	552	17.3	13.8 - 20.7	1,050	23.5	20.7 - 26.4
45-69	430	25.5	20.8 - 30.3	499	9.6	6.7 - 12.5	929	17.6	14.8 - 20.5
18-69	928	27.8	24.6 - 31.1	1,051	14.0	11.6 - 16.3	1,979	21.0	19 - 23

Table 109: Proportion of the population who have used cannabis in the past 12 months

Age range	Men			Women			Both Sexes		
	n	% used cannabis last 12 months	95% CI	n	% used cannabis last 12 months	95% CI	n	% used cannabis last 12 months	95% CI
18-44	498	14.4	10.8 - 18	552	7.2	4.9 - 9.5	1,050	10.8	8.7 - 13
45-69	430	5.6	2.8 - 8.3	499	3.5	1.4 - 5.6	929	4.6	2.8 - 6.3
18-69	928	10.6	8.2 - 13	1,051	5.6	4 - 7.2	1,979	8.2	6.7 - 9.6

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Table 110: Frequency of cannabis use among those who used cannabis in the past 12 months

Both sexes

Age range	n	% Daily or almost daily	95% CI	% 1-4 times per week	95% CI	% 1-3 times per month	95% CI	% Less than once a month	95% CI
18-44	111	27.9	18.3 - 37.4	15.7	7.8 - 23.6	23.7	12.9 - 34.5	32.7	22.8 - 42.6
45-69	34	-	-	-	-	-	-	-	-
18-69	145	27.3	18.8 - 35.8	18.9	11.4 - 26.3	19.6	10.8 - 28.4	34.2	25.3 - 43.2

Table 111: Proportion of the population who have ever used heroin or other opioids

Age range	Men			Women			Both Sexes		
	n	% ever used opioids	95% CI	n	% ever used opioids	95% CI	n	% ever used opioids	95% CI
18-44	498	0.1	0 - 0.3	552	0.0	0 - 0	1,050	0.1	0 - 0.2
45-69	430	0.2	0 - 0.5	499	0.1	0 - 0.4	929	0.1	0 - 0.3
18-69	928	0.1	0 - 0.3	1,051	0.1	0 - 0.2	1,979	0.1	0 - 0.2

Table 112: Proportion of the population who have ever used cocaine

Age range	Men			Women			Both Sexes		
	n	% ever used cocaine	95% CI	n	% ever used cocaine	95% CI	n	% ever used cocaine	95% CI
18-44	498	2.0	0.8 - 3.3	552	0.8	0.1 - 1.4	1,050	1.4	0.7 - 2.1
45-69	430	1.4	0.5 - 2.4	499	0.7	0.1 - 1.4	929	1.1	0.5 - 1.7
18-69	928	1.8	1 - 2.6	1,051	0.8	0.3 - 1.2	1,979	1.3	0.8 - 1.8

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Table 113: Proportion of the population who have ever used amphetamines or other stimulants

Age range	Men			Women			Both Sexes		
	n	% ever used amphetamines	95% CI	n	% ever used amphetamines	95% CI	n	% ever used amphetamines	95% CI
18-44	498	2.5	1.1 - 3.9	552	1.3	0.5 - 2.2	1,050	1.9	1.1 - 2.7
45-69	430	0.3	0 - 0.7	499	1.2	0 - 2.8	929	0.8	0 - 1.6
18-69	928	1.6	0.7 - 2.4	1,051	1.3	0.5 - 2.1	1,979	1.4	0.8 - 2

Table 114: Proportion of the population who have used prescription medicines to get high or feel good in the last 12 months

Age range	Men			Women			Both Sexes		
	n	% used prescription meds	95% CI	n	% used prescription meds	95% CI	n	% used prescription meds	95% CI
18-44	498	0.1	0 - 0.4	552	0.7	0 - 1.6	1,050	0.4	0 - 0.9
45-69	430	0.4	0 - 1	499	0.5	0 - 1.2	929	0.4	0 - 0.9
18-69	928	0.2	0 - 0.5	1,051	0.6	0 - 1.2	1,979	0.4	0.1 - 0.8

Table 115: Proportion of the population who have used synthetic cannabinoids or cathinones in the past 12 months

Age range	Men			Women			Both Sexes		
	n	% used synthetic cannabinoids	95% CI	n	% used synthetic cannabinoids	95% CI	n	% used synthetic cannabinoids	95% CI
18-44	498	2.0	0.8 - 3.2	552	0.4	0 - 0.8	1,050	1.2	0.6 - 1.8
45-69	430	1.0	0 - 1.9	499	0.2	0 - 0.6	929	0.6	0.1 - 1.1

Age range	Men			Women			Both Sexes		
	n	% used synthetic cannabinoids	95% CI	n	% used synthetic cannabinoids	95% CI	n	% used synthetic cannabinoids	95% CI
18-69	928	1.6	0.8 - 2.4	1,051	0.3	0 - 0.6	1,979	0.9	0.5 - 1.4

Physical Measurements

Table 116: Mean blood pressure among all population, including those currently on medication for raised blood pressure.

Mean systolic blood pressure (mmHg)

Age range	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-44	451	121.8	120.2 - 123.4	501	109.0	107.7 - 110.3	952	115.7	114.5 - 116.8
45-69	381	131.1	129.1 - 133.1	449	124.4	122.2 - 126.6	830	127.8	126.3 - 129.2
18-69	832	125.7	124.3 - 127	950	115.7	114.3 - 117.1	1,782	120.8	119.8 - 121.8

Mean diastolic blood pressure (mmHg)

Age range	Men			Women			Both Sexes		
	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-44	451	78.5	77.2 - 79.8	501	76.9	75.9 - 77.9	952	77.7	76.9 - 78.5
45-69	381	83.5	82.3 - 84.8	449	82.3	81 - 83.6	830	82.9	82 - 83.8
18-69	832	80.6	79.7 - 81.6	950	79.2	78.4 - 80.1	1,782	79.9	79.3 - 80.6

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Table 117: Proportion of the population with raised blood pressure

SBP ≥140 and/or DBP ≥ 90 mmHg

	Men			Women			Both Sexes		
Age range	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	438	18.0	13.9 - 22.2	483	10.7	7.6 - 13.9	921	14.6	11.9 - 17.2
45-69	371	33.4	27.5 - 39.3	430	29.3	23.7 - 34.9	801	31.4	27.3 - 35.4
18-69	809	24.4	20.8 - 28.1	913	18.9	15.7 - 22	1,722	21.7	19.3 - 24.1

SBP ≥140 and/or DBP ≥ 90 mmHg, excluding those on medication for raised blood pressure

	Men			Women			Both Sexes		
Age range	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	416	16.5	12.4 - 20.6	455	8.0	5.3 - 10.7	871	12.5	10 - 15
45-69	278	29.9	23.1 - 36.8	294	22.9	16.5 - 29.4	572	26.6	22 - 31.2
18-69	694	21.3	17.5 - 25.1	749	13.4	10.3 - 16.4	1,443	17.6	15.1 - 20

SBP ≥140 and/or DBP ≥ 90 mmHg, or currently on medication for raised blood pressure

	Men			Women			Both Sexes		
Age range	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	438	20.0	15.8 - 24.3	483	13.1	9.7 - 16.5	921	16.7	14 - 19.5
45-69	371	47.7	41.7 - 53.8	430	47.2	41.3 - 53.1	801	47.5	43.3 - 51.6
18-69	809	31.6	27.7 - 35.4	913	28.0	24.5 - 31.6	1,722	29.9	27.2 - 32.5

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SBP ≥160 and/or DBP ≥100, excluding those on medication for raised blood pressure

	Men			Women			Both Sexes		
Age range	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	416	2.8	1.2 - 4.4	455	1.9	0.7 - 3.2	871	2.4	1.4 - 3.4
45-69	278	8.2	4.7 - 11.8	294	4.7	2.7 - 6.8	572	6.6	4.5 - 8.7
18-69	694	4.7	3.1 - 6.4	749	2.9	1.8 - 4	1,443	3.9	2.9 - 4.9

SBP ≥160 and/or DBP ≥ 100 mmHg or currently on medication for raised blood pressure

	Men			Women			Both Sexes		
Age range	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-44	438	6.9	4.5 - 9.4	483	7.4	4.8 - 9.9	921	7.1	5.4 - 8.9
45-69	371	31.5	26.1 - 37	430	34.7	29 - 40.4	801	33.1	29.2 - 37.1
18-69	809	17.2	14.3 - 20	913	19.4	16.3 - 22.5	1,722	18.2	16.1 - 20.3

Table 118: Raised blood pressure diagnosis, treatment and control among those with raised blood pressure or currently on medication for raised blood pressure

Men

Age Range	n	% On meds and BP not raised	95% CI	% On meds and BP raised	95% CI	% Not on meds and BP raised	95% CI
18-44	97	10.0	3.8 - 16.1	11.2	4.1 - 18.3	78.9	69.9 - 87.8
45-69	181	30.0	22.1 - 37.9	23.2	15.9 - 30.5	46.8	37.7 - 55.9
18-69	278	22.6	17 - 28.2	18.8	13.4 - 24.1	58.7	51.8 - 65.6

Women

Age Range	n	% On meds and BP not raised	95% CI	% On meds and BP raised	95% CI	% Not on meds and BP raised	95% CI
18-44	68	18.2	8.7 - 27.7	24.3	11.8 - 36.7	57.6	44.2 - 71
45-69	204	37.9	28.8 - 47.1	28.8	21 - 36.5	33.3	24.3 - 42.3
18-69	272	32.7	25.4 - 40.1	27.6	21 - 34.2	39.7	32 - 47.3

Both sexes

Age Range	n	% On meds and BP not raised	95% CI	% On meds and BP raised	95% CI	% Not on meds and BP raised	95% CI
18-44	165	13.0	7.7 - 18.3	16.1	9.5 - 22.6	70.9	63.1 - 78.7
45-69	386	33.9	27.8 - 40	26.0	20.7 - 31.2	40.1	33.7 - 46.5
18-69	551	27.2	22.6 - 31.8	22.8	18.6 - 26.9	50.0	44.8 - 55.3

Table 119: Proportion of those with raised blood pressure (SBP ≥140 and/or DBP ≥ 90 mmHg) or currently on medication for raised blood pressure with treated and/or controlled raised blood pressure

Men

Age Range	n	% Not prev. diagnosed	95% CI	% Prev. diagnosed, not on meds	95% CI	% Prev. diagnosed, on meds, not controlled	95% CI	% Prev. diagnosed, on meds, controlled	95% CI
18-44	97	65.3	54.7 - 76	13.5	6.3 - 20.7	11.2	4.1 - 18.3	10.0	3.8 - 16.1
45-69	181	32.1	23 - 41.2	14.7	8.8 - 20.7	23.2	15.9 - 30.5	30.0	22.1 - 37.9
18-69	278	44.4	37.2 - 51.6	14.3	9.7 - 18.9	18.8	13.4 - 24.1	22.6	17 - 28.2

Women

Age Range	n	% Not prev. diagnosed	95% CI	% Prev. diagnosed, not on meds	95% CI	% Prev. diagnosed, on meds, not controlled	95% CI	% Prev. diagnosed, on meds, controlled	95% CI
18-44	68	39.4	26.1 - 52.7	18.2	8.4 - 28	24.3	11.8 - 36.7	18.2	8.7 - 27.7
45-69	204	18.7	12.5 - 25	14.5	6.6 - 22.5	28.8	21 - 36.5	37.9	28.8 - 47.1
18-69	272	24.2	18.2 - 30.2	15.5	9.1 - 21.9	27.6	21 - 34.2	32.7	25.4 - 40.1

Both sexes

Age Range	n	% Not prev. diagnosed	95% CI	% Prev. diagnosed, not on meds	95% CI	% Prev. diagnosed, on meds, not controlled	95% CI	% Prev. diagnosed, on meds, controlled	95% CI
18-44	165	55.7	47 - 64.4	15.3	9.4 - 21.1	16.1	9.5 - 22.6	13.0	7.7 - 18.3
45-69	385	25.5	19.6 - 31.4	14.6	9.6 - 19.6	26.0	20.7 - 31.2	33.9	27.8 - 40
18-69	550	35.2	30 - 40.3	14.8	11 - 18.7	22.8	18.6 - 26.9	27.2	22.6 - 31.8

Table 120: Mean heart rate (beats per minute) among the population

Mean heart rate (beats per minute)

	Men			Women			Both Sexes		
Age range	n	Mean	95% CI	n	Mean	95% CI	n	Mean	95% CI
18-44	452	76.1	74.8 - 77.5	504	80.6	79.5 - 81.8	956	78.3	77.4 - 79.2
45-69	382	77.4	76 - 78.8	449	77.8	76.7 - 78.9	831	77.6	76.7 - 78.5
18-69	834	76.7	75.7 - 77.6	953	79.4	78.6 - 80.2	1,787	78.0	77.4 - 78.6

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Table 121: Mean height, weight, and body mass index among all population

Mean height (cm)

	Men			Women		
Age range	n	Mean	95% CI	n	Mean	95% CI
18-44	435	175.5	174.2 - 176.9	481	165.3	164.4 - 166.2
45-69	370	175.4	174.1 - 176.7	436	163.4	162.3 - 164.5
18-69	805	175.5	174.5 - 176.4	917	164.5	163.7 - 165.2

Mean weight (kg)

	Men			Women		
Age range	n	Mean	95% CI	n	Mean	95% CI
18-44	454	83.2	81.1 - 85.3	497	79.6	77.3 - 81.8
45-69	386	87.3	84.8 - 89.8	453	82.9	80.5 - 85.3
18-69	840	84.9	83.3 - 86.5	950	81.1	79.4 - 82.7

Mean BMI

	Men			Women		
Age range	n	Mean	95% CI	n	Mean	95% CI
18-44	428	26.6	25.9 - 27.2	477	28.8	28.1 - 29.5
45-69	365	28.2	27.5 - 29	430	30.7	29.9 - 31.4
18-69	793	27.3	26.8 - 27.8	907	29.6	29.1 - 30.2

Table 122: Proportion of the population (excluding pregnant women) in each BMI category

Men

Age Range	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Overweight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-44	428	3.0	1.2 - 4.9	38.9	33.2 - 44.6	36.7	31.1 - 42.2	21.4	17.2 - 25.7
45-69	365	3.2	0.9 - 5.4	20.7	16.1 - 25.3	47.1	41 - 53.1	29.1	23.2 - 34.9
18-69	793	3.1	1.6 - 4.5	31.3	27.2 - 35.3	41.0	37 - 45	24.6	21 - 28.2

Women

Age Range	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Overweight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-44	477	1.6	0.5 - 2.7	29.5	24.7 - 34.3	35.0	29.3 - 40.7	33.9	29 - 38.8
45-69	430	0.8	0.1 - 1.5	19.1	14.8 - 23.3	29.8	24.3 - 35.3	50.3	44.4 - 56.3
18-69	907	1.2	0.5 - 1.9	24.9	21.6 - 28.2	32.7	28.7 - 36.7	41.1	37.2 - 45

Both sexes

Age Range	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% Overweight 25.0-29.9	95% CI	% Obese ≥30.0	95% CI
18-44	905	2.3	1.2 - 3.5	34.4	30.6 - 38.2	35.9	31.9 - 39.8	27.4	24.1 - 30.6
45-69	795	2.0	0.8 - 3.2	19.9	16.8 - 23	38.4	34.3 - 42.6	39.7	35.5 - 43.9
18-69	1,700	2.2	1.4 - 3	28.2	25.5 - 30.9	37.0	34.2 - 39.8	32.7	30 - 35.3

Table 123: Proportion of the population (excluding pregnant women) classified as overweight (BMI≥25)

Men

Age Range	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0+	95% CI
18-44	428	3.0	1.2 - 4.9	38.9	33.2 - 44.6	58.1	52.4 - 63.8
45-69	365	3.2	0.9 - 5.4	20.7	16.1 - 25.3	76.1	71.2 - 81.1
18-69	793	3.1	1.6 - 4.5	31.3	27.2 - 35.3	65.6	61.5 - 69.8

Women

Age Range	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0+	95% CI
18-44	477	1.6	0.5 - 2.7	29.5	24.7 - 34.3	68.9	64 - 73.8
45-69	430	0.8	0.1 - 1.5	19.1	14.8 - 23.3	80.2	75.9 - 84.4
18-69	907	1.2	0.5 - 1.9	24.9	21.6 - 28.2	73.9	70.5 - 77.2

Both sexes

Age Range	n	% Under-weight <18.5	95% CI	% Normal weight 18.5-24.9	95% CI	% BMI 25.0+	95% CI
18-44	905	2.3	1.2 - 3.5	34.4	30.6 - 38.2	63.2	59.4 - 67.1
45-69	795	2.0	0.8 - 3.2	19.9	16.8 - 23	78.1	74.9 - 81.4
18-69	1,700	2.2	1.4 - 3	28.2	25.5 - 30.9	69.6	66.9 - 72.4

Table 124: Mean waist circumference among all population (excluding pregnant women)

Waist circumference (cm)

	Men			Women		
Age range	n	Mean	95% CI	n	Mean	95% CI
18-44	454	91.5	90.2 - 92.9	497	90.1	88.6 - 91.6
45-69	384	98.0	96.5 - 99.5	452	97.7	96.1 - 99.4
18-69	838	94.2	93.2 - 95.3	949	93.5	92.3 - 94.7

Table 125: Mean hip circumference among all population (excluding pregnant women)

Hip circumference (cm)

	Men			Women		
Age range	n	Mean	95% CI	n	Mean	95% CI
18-44	454	100.9	99.7 - 102	497	107.1	105.7 - 108.6
45-69	384	104.0	102.8 - 105.2	451	110.4	108.8 - 111.9
18-69	838	102.2	101.3 - 103	948	108.6	107.5 - 109.6

Table 126: Mean waist-to-hip ratio among all population (excluding pregnant women)

Mean waist / hip ratio

	Men			Women		
Age range	n	Mean	95% CI	n	Mean	95% CI
18-44	454	0.9	0.9 - 0.9	497	0.8	0.8 - 0.8
45-69	384	0.9	0.9 - 1	451	0.9	0.9 - 0.9
18-69	838	0.9	0.9 - 0.9	948	0.9	0.9 - 0.9

Biochemical Measurements

Table 127: Mean fasting blood glucose results including those currently on medication for diabetes (non-fasting recipients excluded)

Mean fasting blood glucose (mg/dl)

	All ages		
Sex	n	Mean	95% CI
Men	470	83.9	80.4 - 87.4
Women	599	83.9	81 - 86.8
Both sexes	1,069	83.9	81.6 - 86.2

Table 128: Categorization of population into blood glucose level categories and percentage of population currently on medication for raised blood glucose (non-fasting recipients excluded).

*Impaired fasting glycaemia**

	All ages		
Sex	n	%	95% CI
Men	470	2.1	0.9 - 3.3
Women	600	2.7	1.4 - 4
Both sexes	1,070	2.4	1.5 - 3.3

*Impaired fasting glycaemia is defined as a plasma venous value ≥110mg/dl and <126mg/d

Raised blood glucose or on medication for diabetes**

	All ages		
Sex	n	%	95% CI
Men	470	8.0	5.2 - 10.8
Women	600	7.3	4.9 - 9.7
Both sexes	1,070	7.7	5.8 - 9.5

**Raised blood glucose is defined as a plasma venous value ≥126 mg/dl

Currently on medication for diabetes

	All ages		
Sex	n	%	95% CI
Men	481	7.8	5.1 - 10.5
Women	603	8.9	6.2 - 11.6
Both sexes	1,084	8.3	6.4 - 10.3

Table 129: Raised blood glucose diagnosis and treatment among all population

All ages

Sex	n	% Raised blood glucose, not previously diagnosed	95% CI	% Diagnosed but not on medication	95% CI	% Diagnosed and on medication	95% CI
Men	470	2.2	0.7 - 3.7	3.5	1.8 - 5.3	7.0	4.4 - 9.7
Women	600	1.0	0.2 - 1.9	6.1	3.7 - 8.5	8.5	5.9 - 11.2
Both sexes	1,070	1.6	0.8 - 2.5	4.8	3.3 - 6.3	7.8	5.9 - 9.7

Table 130: Mean total cholesterol among all population including those currently on medication for raised cholesterol

Mean total cholesterol (mg/dl)

	All ages		
Sex	n	Mean	95% CI
Men	481	166.1	161.2 - 171.1
Women	603	172.2	167.9 - 176.5
Both sexes	1,084	169.1	165.9 - 172.4

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Table 131: Proportion of the population with raised total cholesterol

Total cholesterol >= 190 mg/dl

	All ages		
Sex	n	%	95% CI
Men	481	26.9	22.5 - 31.4
Women	603	31.1	27 - 35.3
Both sexes	1,084	29.0	25.9 - 32.1

Total cholesterol >= 240 mg/dl

	All ages		
Sex	n	%	95% CI
Men	481	6.3	3.8 - 8.8
Women	603	6.2	4 - 8.4
Both sexes	1,084	6.2	4.6 - 7.9

Table 132: Proportion of the population with raised total cholesterol and proportion of the population currently on medication for raised cholesterol

Total cholesterol ≥ 190 mg/dl or currently on medication for raised cholesterol

	All ages		
Sex	n	%	95% CI
Men	481	30.4	25.8 - 35
Women	603	33.4	29.2 - 37.7
Both sexes	1,084	31.9	28.8 - 35

Total cholesterol ≥ 240 mg/dl or currently on medication for raised cholesterol

	All ages		
Sex	n	%	95% CI
Men	481	11.2	8.1 - 14.2
Women	603	9.6	6.9 - 12.2
Both sexes	1,084	10.4	8.4 - 12.4

Table 133: Mean HDL among all population and proportion of the population with low HDL

Mean HDL (mg/dl)

	All ages		
Sex	n	Mean	95% CI
Men	481	40.9	39.5 - 42.2
Women	603	50.7	49.3 - 52.1
Both sexes	1,084	45.7	44.6 - 46.7

Proportion of men with low HDL

Age Range	n	% HDL <40mg/dl	95% CI
18-69	481	50.1	45 - 55.3

Proportion of women with low HDL

Age Range	n	% HDL <50mg/dl	95% CI
18-69	603	52.9	48.2 - 57.6

Summary of Combined Risk Factors

Table 134: Proportion of the population with 0, 1-2, or 3-5 of the following risk factors:

- Current daily smoking
- Less than five servings of fruit and/or vegetables per day
- Not meeting WHO recommendations on physical activity for health (<150 minutes of moderate activity per week, or equivalent)
- Overweight or obese (BMI ≥ 25 kg/m2)
- Raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP).

Both Sexes

Age range	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	860	2.9	1.7 - 4.1	73.0	69.4 - 76.7	24.1	20.6 - 27.6
45-69	769	2.6	1.4 - 3.7	50.7	46.6 - 54.9	46.7	42.5 - 50.9
18-69	1,629	2.8	1.9 - 3.6	63.4	60.5 - 66.3	33.8	31 - 36.7

Men

Age range	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	411	2.8	1 - 4.6	75.3	70.6 - 80	21.9	17.4 - 26.4
45-69	354	1.7	0.3 - 3.2	52.9	46.7 - 59.2	45.3	39.1 - 51.6
18-69	765	2.3	1.1 - 3.6	65.9	61.9 - 70	31.7	27.7 - 35.7

Women

Age range	n	% with 0 risk factors	95% CI	% with 1-2 risk factors	95% CI	% with 3-5 risk factors	95% CI
18-44	449	3.5	1.8 - 5.2	71.6	66.6 - 76.6	24.9	20 - 29.8
45-69	415	3.1	1.5 - 4.7	50.9	45.4 - 56.5	45.9	40.4 - 51.5
18-69	864	3.3	2.2 - 4.5	62.6	58.9 - 66.4	34.0	30.3 - 37.8

STEPS Survey 2023

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