2023 STEPs Survey findings

Raised Blood Glucose

Rationale

The rising burden of non-communicable diseases (NCDs) in Ghana is a critical public health issue, exacerbated by demographic shifts and lifestyle changes.

Raised blood glucose levels are significant contributors to this burden, with far-reaching impacts on individual health, productivity, and the healthcare system.
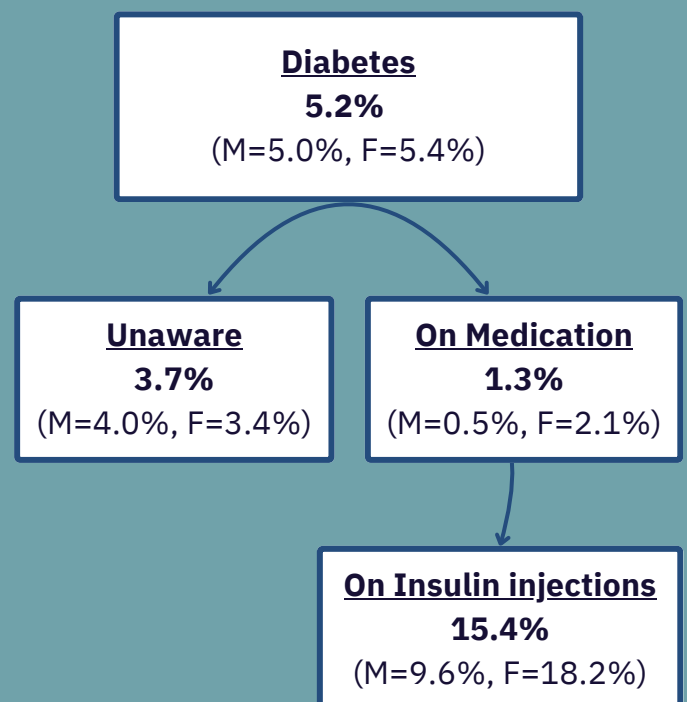
Raised blood glucose, a key indicator of diabetes risk, remains underdiagnosed and poorly managed in many cases.

The STEPS survey provided a baseline national data on raised blood glucose.

Key messages

- There is a significant gap in the diagnosis and treatment of raised blood glucose. Routine screening for raised blood glucose, particularly in high-risk populations, is essential to identify undiagnosed cases early and initiate timely interventions.
- There is a need to pick up impaired fasting glucose (IFG) as it is an early warning sign of diabetes type 2. Targeted interventions, including lifestyle modification programs, physical activity and weight management strategies, should be promoted to prevent the progression of IFG to full-blown diabetes.
- Urban populations in Ghana are experiencing higher rates of raised blood glucose compared to rural areas, highlighting the need for targeted public health interventions that address the unique lifestyle factors in urban settings.
- Improving access to diabetes care, including medication adherence support and regular follow-ups, is crucial to closing the treatment gap for those diagnosed with raised blood glucose. Special attention should be given to older adults who are more affected by this condition.

Diabetes
5.2%
(M=5.0%, F=5.4%)

Unaware
3.7%
(M=4.0%, F=3.4%)

On Medication
1.3%
(M=0.5%, F=2.1%)

On Insulin injections
15.4%
(M=9.6%, F=18.2%)

iAHO

World Health Organization
African Region

1. What is Raised blood glucose

Raised blood glucose also called Hyperglycaemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time leads to serious damage to many of the body's systems, especially the nerves and blood vessels

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood glucose.

Diabetes is a major cause of blindness, kidney failure, heart attacks, stroke and lower limb amputation.

Diabetes can be treated and its consequences avoided or delayed with diet, physical activity, medication and regular screening and treatment for complications.

2. 2023 STEPS Survey method
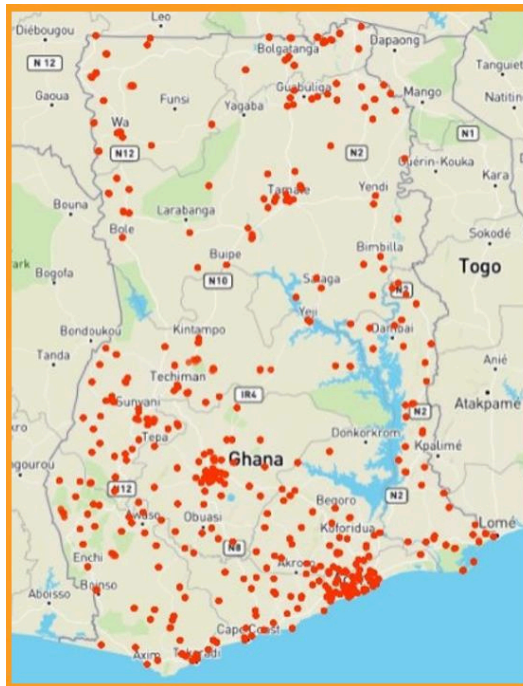
- Map of Ghana showing Nationwide household selection.
- A multi-stage sampling technique was used to obtain a nationally representative sample.
- Data was collected in all 16 regions, 385 enumeration areas and 5438 respondents aged 18 to 69.

3. Measured Blood Glucose

Majority of Ghanaians accounting for 70.3% of have never checked their blood sugar level. More adult males (76.6%) have never checked their blood glucose levels compared to females (63.9%).

There is the need to intensify intervention to ensure Ghanaians aged 18 - 69 have their blood Glucose measured.
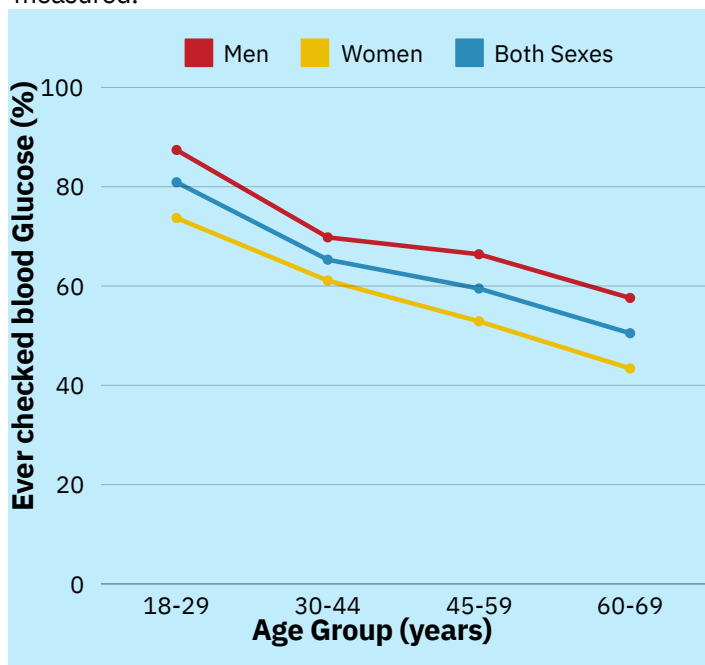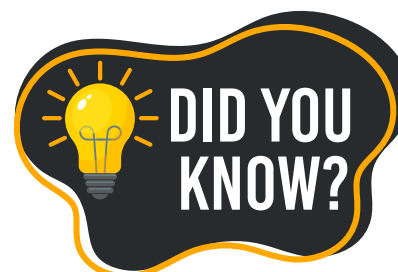

Younger individuals particularly those aged 18-29 years are less likely to have checked their blood glucose levels compared to older individuals.

Across all ages, a larger proportion of males have not checked their blood sugar levels.

7 in 10 adults have never checked their blood Glucose

DID YOU KNOW?

Checking your blood Sugar is lifesaving

let's DO THIS

✅ **Check blood Sugar**

4. Measured Raised Blood Glucose

Raised blood Glucose among adults aged 18-69 years	Both	Urban	Rural
Mean fasting blood glucose, including those currently on medication for raised blood glucose [mmol/L]	**5.5 (5.5-5.6)**	**5.6 (5.5-5.7)**	**5.5 (5.4-5.5)**
Percentage with impaired fasting glycaemia as defined below • Plasma venous value ≥6.1 mmol/L and <7.0 mmol/L	**10.2% (9.0-11.3)**	**10.5% (8.9-12.0)**	**9.7% (8.0-11.4)**
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose • Plasma venous value ≥ 7.0 mmol/L (126 mg/dl)	**5.2% (4.3-6.1)**	**6.1% (4.8-7.4)**	**3.9% (2.9-4.8)**

The Mean fasting blood glucose, including those currently on medication for raised blood glucose for both rural and urban is 5.5 mmol/L. There is no statistically significant difference in mean fasting blood glucose between rural and urban dwellers.

4.1 Prevalence of raised fasting blood glucose

The prevalence of raised fasting blood glucose (≥7.0mmol/l) among adults aged 18-69 in Ghana is 5.2%. The prevalence is similar between men (5.0%) and women (5.4%).

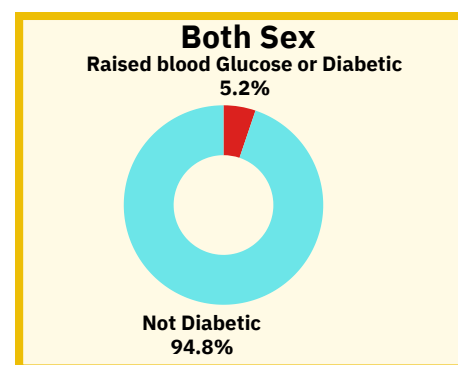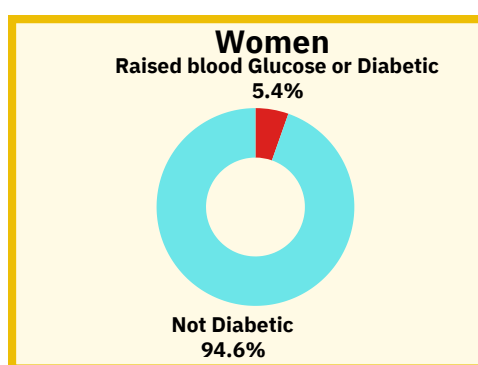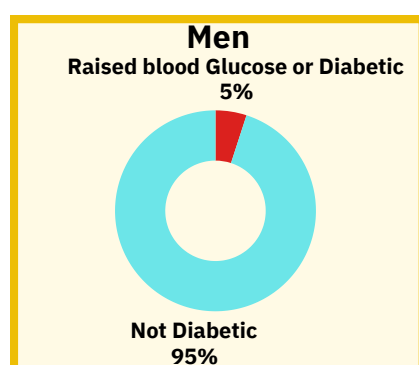**1 in 20 Adult Ghanaian have raised blood Glucose**

Urban populations have significantly higher rates of raised fasting blood glucose (6.1%) compared to rural areas (3.9%).

Raised blood glucose or currently on medication for diabetes*

Age Group (years)	Men			Women			Both Sexes		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
18-29	521	4.1	1.8-6.5	815	2.0	1.0-3.0	1336	3.1	1.8-4.5
30-44	680	3.4	1.8-5.1	1321	4.6	3.0-6.2	2001	4.1	2.9-5.2
45-59	473	6.7	3.9-9.5	768	12.5	9.5-15.4	1241	9.7	7.6-11.8
60-69	214	13.6	7.9-19.2	321	11.8	7.7-15.9	535	12.7	9.0-16.4
18-69 (All)	**1888**	**5.0**	**3.6-6.4**	**3225**	**5.4**	**4.4-6.4**	**5113**	**5.2**	**4.3-6.1**

* Raised blood glucose is defined as : plasma venous value: ≥ 7.0 mmol/L (126 mg/dl)
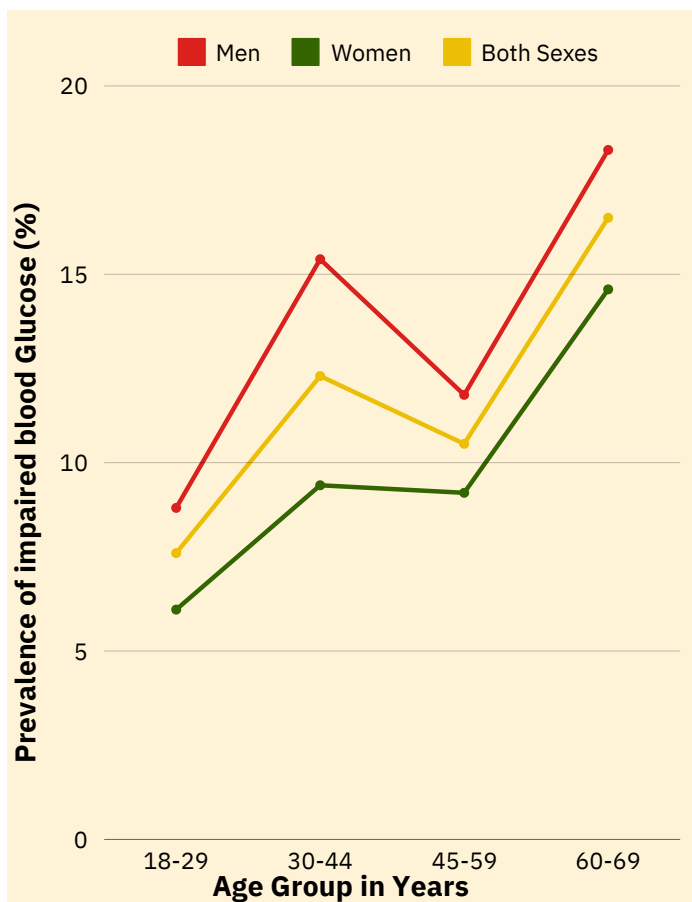
Across the age groups, the prevalence of diabetes increases with age. The prevalence among the 60–69-year group is 12.7% for both sexes, 13.6% among Men and 12.7% among Women. However, the prevalence among the young adults (18-29 years) is 3.1%

Men
Raised blood Glucose or Diabetic
5%
Not Diabetic
95%

Women
Raised blood Glucose or Diabetic
5.4%
Not Diabetic
94.6%

Both Sex
Raised blood Glucose or Diabetic
5.2%
Not Diabetic
94.8%

The prevalence of raised fasting blood glucose (≥7.0mmol/l) among adults aged 18-69 in Ghana is 5.2% for both sexes. The prevalence among Men is 5.0% and the prevalence among women is 5.4%.

5. Impaired Fasting Blood Glucose

Impaired fasting glycaemia is defined as plasma venous value: ≥6.1mmol/L (110mg/dl) and <7.0mmol/L (126mg/dl). The prevalence of impaired fasting blood glucose in Ghana is 10.2% with higher rates among men (11.9%) than women (8.3%).

Legend: ■ Men ■ Women ■ Both Sexes

Y-axis: **Prevalence of impaired blood Glucose (%)** (0 to 20)
X-axis: **Age Group in Years** (18-29, 30-44, 45-59, 60-69)

The prevalence of impaired blood glucose increases with age

LIFESTYLE CHANGES ARE THE BEST WAY TO PREVENT OR DELAY THE ONSET OF TYPE 2 DIABETES

To help prevent type 2 diabetes and its complications, people should:

Reach and keep a health body weight

Stay physically active with at least 30 minutes of moderate exercise each day

Eat a healthy diet and avoid sugar and saturated fat

Not smoke tobacco

Check blood Sugar today

6. Blood Glucose Diagnosis and Treatment

Among adults aged 18 - 69 years, 3.7% of the population has raised blood glucose without prior diagnosis. Among those diagnosed, only 1.3% are on treatment, while 2.4% are not taking any medication.

Raised blood glucose diagnosis and treatment among all respondents (Both Sexes)							
Age Group (years)	n	% with raised blood glucose, not previously diagnosed		% with previously diagnosed raised blood glucose, not on medication		% with previously diagnosed raised blood glucose, on medication	
		%	95% CI	%	95% CI	%	95% CI
18-29	1336	3.0	1.6-4.4	1.1	0.6-1.6	0.0	0.0-0.1
30-44	2002	3.0	2.1-4.0	3.4	2.2-4.6	0.6	0.1-1.0
45-59	1241	5.1	3.6-6.6	2.9	2.0-3.9	3.8	2.6-5.1
60-69	536	8.1	4.9-11.2	4.4	2.3-6.4	6.3	3.7-9.0
18-69 (All)	**5115**	**3.7**	**2.9-4.5**	**2.4**	**1.9-2.8**	**1.3**	**0.9-1.6**

7. Call to Action

The significant gap in those with raised blood glucose and those on medication, particularly in urban areas, underscores the need for early detection and proper management to prevent diabetes and related complications.

- **Implement routine screening programs:** Introduce regular blood glucose screening in both urban and rural healthcare settings to identify undiagnosed cases early.
- **Enhance diabetes management:** Strengthening selfcare programs that focus on adherence to treatment for persons living with diabetes.
- **Target urban populations**: Develop targeted interventions for urban populations, where the prevalence of raised blood glucose is higher, including lifestyle modification programs and increased access to healthcare services.
- **Strengthen efforts to manage impaired fasting glucose**: awareness creation on physical activity and healthy dietary habit. Integrate weight management into diabetes prevention strategies.

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