



# Sudan STEPS Survey 2016

## Fact Sheet by Region

The STEPS survey of noncommunicable disease (NCD) risk factors in Sudan was carried out from February to December 2016. Sudan carried out Step 1, Step 2 and Step 3. Socio demographic 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. Furthermore, urine was collected in one region in Khartoum state only with a sample representative to this region. The survey was a population-based survey of adults aged 18-69. A four stage stratified cluster sampling was used to produce representative data for that age range at country and regional level. The total sample size was 8145 participants; the response rate was 95% in step 1&2 and 88% in step 3. All results were weighted by gender and age. A repeat survey is planned after implementation of updated multi-sectoral action plan 2019-2023 if funds permit.

Results for adults aged 18-69 years (incl. 95% CI) ( <i>adjust if necessary</i> )	Total	Central	Darfur	Eastern	Khartoum	Kordofan	Northern
<b>Step 1 Tobacco Use</b>							
Percentage who currently smoke tobacco	<b>9.6%</b> (8.4-10.9)	<b>8.6%</b> (6.8-10.4)	<b>7.7%</b> (5.3-10.1)	<b>13.1%</b> (9.0-17.1)	<b>11.4%</b> (8.3-14.5)	<b>9.5%</b> (6.3-12.7)	<b>7.6%</b> (4.5-10.7)
Percentage who currently smoke tobacco daily	<b>7.7%</b> (6.7-8.8)	<b>6.3%</b> (4.7-7.9)	<b>5.8%</b> (4.0-7.7)	<b>11.4%</b> (7.5-15.3)	<b>10.1%</b> (7.1-13.1)	<b>7.5%</b> (5.1-9.9)	<b>4.5%</b> (2.1-6.9)
<i>For those who smoke tobacco daily</i>							
Average age started smoking (years)	<b>19.3</b> (18.5-20.1)	<b>20.3</b> (18.5-22.2)	<b>19.7</b> (17.9-21.5)	<b>19.6</b> (17.8-21.4)	<b>18.1</b> (16.3-19.8)	<b>18.7</b> (17.4-20.1)	<b>21.8</b> (18.6-25.0)
Percentage of daily smokers smoking manufactured cigarettes	<b>93.7%</b> (90.7-96.8)	<b>93.0%</b> (86.4-99.6)	<b>100%</b> (100-100)	<b>91.1%</b> (83.8-98.5)	<b>93.5%</b> (87.4-99.6)	<b>91.8%</b> (81.4-102.2)	<b>93.2%</b> (84.3-102.0)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	<b>8.4</b> (7.5-9.3)	<b>8.6</b> (5.9-11.2)	<b>8.2</b> (7.0-9.4)	<b>9.2</b> (6.3-12.1)	<b>8.5</b> (6.9-10.1)	<b>7.5</b> (6.3-8.7)	<b>7.7</b> (3.6-11.7)
<b>Step 1 Alcohol Consumption</b>							
Percentage who are lifetime abstainers	<b>94.8%</b> (93.9-95.7)	<b>95.6%</b> (94.0-97.1)	<b>94.8%</b> (93.0-96.6)	<b>90.8%</b> (87.5-94.2)	<b>97.1%</b> (95.4-98.8)	<b>94.2%</b> (92.3-96.1)	<b>97.9%</b> (96.0-99.7)
Percentage who are past 12 month abstainers	<b>2.5%</b> (2.0-3.1)	<b>2.8%</b> (1.7-4.0)	<b>0.8%</b> (0.2-1.5)	<b>6.0%</b> (3.6-8.4)	<b>1.3%</b> (0.4-2.2)	<b>3.2%</b> (1.8-4.5)	<b>0.9%</b> (0.2-2.1)
Percentage who currently drink (drank alcohol in the past 30 days)	<b>2.1%</b> (1.5-2.7)	<b>0.8%</b> (0.2-1.4)	<b>4.4%</b> (2.8-6.0)	<b>2.3%</b> (0.8-3.7)	<b>0.6%</b> (0.1-1.2)	<b>2.3%</b> (1.0-3.6)	<b>1.1%</b> (0.5-2.7)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	<b>1.9%</b> (1.3-2.4)	<b>0.6%</b> (0.0-1.2)	<b>4.0%</b> (2.4-5.6)	<b>2.2%</b> (0.8-3.6)	<b>0.5%</b> (0.1-1.1)	<b>1.9%</b> (0.7-3.2)	<b>0.4%</b> (0.4-1.2)
<b>Step 1 Diet</b>							
Mean number of days fruit consumed in a typical week	<b>1.9</b> (1.8-2.0)	<b>2.0</b> (1.8-2.3)	<b>2.4</b> (2.1-2.7)	<b>1.2</b> (0.9-1.5)	<b>2.2</b> (2.0-2.4)	<b>1.4</b> (1.2-1.6)	<b>2.1</b> (1.7-2.6)
Mean number of servings of fruit consumed on average per day	<b>0.5</b> (0.5-0.5)	<b>0.7</b> (0.6-0.8)	<b>0.6</b> (0.5-0.7)	<b>0.4</b> (0.3-0.5)	<b>0.5</b> (0.5-0.5)	<b>0.3</b> (0.3-0.4)	<b>0.5</b> (0.4-0.7)
Mean number of days vegetables consumed in a typical week	<b>4.0</b> (3.9-4.2)	<b>4.5</b> (4.1-4.9)	<b>3.3</b> (2.9-3.7)	<b>3.2</b> (2.7-3.8)	<b>5.6</b> (5.3-5.8)	<b>3.5</b> (3.1-4.0)	<b>4.7</b> (4.0-5.4)
Mean number of servings of vegetables consumed on average per day	<b>1.2</b> (1.1-1.3)	<b>1.4</b> (1.3-1.6)	<b>0.8</b> (0.7-0.9)	<b>1.1</b> (0.8-1.4)	<b>1.6</b> (1.4-1.8)	<b>0.9</b> (0.8-1.0)	<b>1.4</b> (1.1-1.7)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	<b>94.7%</b> (93.7-95.8)	<b>91.0%</b> (88.7-93.4)	<b>97.0%</b> (95.6-98.3)	<b>92.9%</b> (89.2-96.6)	<b>92.4%</b> (89.7-95.2)	<b>99.1%</b> (98.5-99.7)	<b>96.1%</b> (93.1-99.1)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	<b>32.4%</b> (28.9-35.8)	<b>32.3%</b> (27.8-36.9)	<b>44.1%</b> (34.1-54.2)	<b>19.6%</b> (15.0-24.1)	<b>28.4%</b> (20.5-36.2)	<b>25.1%</b> (17.9-32.4)	<b>57.8%</b> (48.5-67.1)
Percentage who always or often eat processed foods high in salt	<b>12.3%</b> (10.8-13.8)	<b>13.2%</b> (10.5-16.0)	<b>10.6%</b> (7.0-14.1)	<b>7.4%</b> (4.5-10.4)	<b>20.9%</b> (16.4-25.5)	<b>6.1%</b> (3.8-8.4)	<b>20.8%</b> (14.2-27.5)
<b>Step 1 Physical Activity</b>							
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent)*	<b>14.1%</b> (12.4-15.7)	<b>15.7%</b> (11.7-19.6)	<b>11.2%</b> (8.5-13.8)	<b>14.1%</b> (10.2-18.0)	<b>20.0%</b> (14.6-25.4)	<b>8.1%</b> (5.5-10.8)	<b>20.8%</b> (12.9-28.7)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	<b>42.9</b> (0.124.3)	<b>124.3</b> (40-282.9)	<b>113.7</b> (51.4-218.6)	<b>150</b> (57.1-290.0)	<b>85.7</b> (30-197.1)	<b>210</b> (81.4-377.1)	<b>68.6</b> (25.7-150)
Percentage not engaging in vigorous activity	<b>62.4%</b> (59.6-65.1)	<b>73.4%</b> (70.0-76.7)	<b>53.1%</b> (46.5-59.6)	<b>68.5%</b> (63.0-74.0)	<b>75.8%</b> (70.5-81.0)	<b>41.9%</b> (36.3-47.6)	<b>68.9%</b> (61.7-76.1)



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Results for adults aged 18-69 years (incl. 95% CI) (adjust if necessary)	Total	Central	Darfur	Eastern	Khartoum	Kordofan	Northern
<b>Step 1 Cervical Cancer Screening</b>							
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer	<b>1.7%</b> (0.9-2.4)	<b>1.0%</b> (0.1-1.9)	<b>1.2%</b> (0.2-2.1)	<b>0.8%</b> (0.3-1.9)	<b>2.3%</b> (0.7-3.9)	<b>4.4%</b> (0.8-8.0)	<b>0</b>
<b>Step 2 Physical Measurements</b>							
Mean body mass index - BMI (kg/m <sup>2</sup> )	<b>23.0</b> (22.7-23.3)	<b>23.4</b> (23.0-23.8)	<b>22.5</b> (21.8-23.1)	<b>22.5</b> (21.7-23.3)	<b>25.6</b> (25.0-26.2)	<b>21.0</b> (20.6-21.4)	<b>23.8</b> (22.9-24.7)
Percentage who are overweight (BMI ≥ 25-29.9 kg/m <sup>2</sup> )	<b>18.0%</b> (16.5-19.5)	<b>23.8%</b> (20.6-27.0)	<b>15.6%</b> (12.0-19.2)	<b>14.5%</b> (11.7-17.3)	<b>25.0%</b> (21.6-28.4)	<b>9.9%</b> (7.3-12.5)	<b>19.8%</b> (15.4-24.2)
Percentage who are obese (BMI ≥ 30 kg/m <sup>2</sup> )	<b>10.3%</b> (9.0-11.6)	<b>9.5%</b> (7.8-11.3)	<b>6.1%</b> (3.7-8.5)	<b>10.4%</b> (6.5-14.3)	<b>23.0%</b> (19.6-26.4)	<b>2.9%</b> (1.8-4.0)	<b>13.5%</b> (9.6-17.3)
Average waist circumference (cm) (Men)	<b>82.2</b> (81.1-83.2)	<b>85.3</b> (83.9-86.7)	<b>81.6</b> (79.9-83.4)	<b>81.0</b> (78.9-83.1)	<b>86.2</b> (83.5-88.9)	<b>76.8</b> (74.3-79.3)	<b>85.2</b> (81.7-88.6)
Average waist circumference (cm) (Women)	<b>83.5</b> (82.6-84.4)	<b>86.7</b> (85.5-88.0)	<b>79.4</b> (77.8-80.9)	<b>82.6</b> (79.9-85.3)	<b>88.1</b> (85.8-90.3)	<b>78.5</b> (76.5-80.5)	<b>85.8</b> (81.0-90.6)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	<b>127.6</b> (127.0-128.3)	<b>129.5</b> (128.4-130.7)	<b>127.0</b> (125.7-128.3)	<b>126.1</b> (124.9-127.4)	<b>127.3</b> (125.9-128.7)	<b>127.5</b> (125.8-129.2)	<b>129.4</b> (127.3-131.6)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	<b>82.8</b> (82.4-83.2)	<b>84.3</b> (83.5-85.2)	<b>80.9</b> (80.1-81.6)	<b>82.6</b> (81.6-83.5)	<b>84.6</b> (83.4-85.7)	<b>81.7</b> (80.8-82.5)	<b>84.7</b> (83.3-86.1)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	<b>31.5%</b> (29.8-33.2)	<b>35.9%</b> (32.2-39.5)	<b>27.4%</b> (24.2-30.6)	<b>29.5%</b> (25.4-33.6)	<b>36.5%</b> (31.6-41.4)	<b>27.0%</b> (23.4-30.5)	<b>37.2%</b> (31.1-43.3)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg) who are not currently on medication for raised BP	<b>86.7%</b> (84.8-88.5)	<b>84.6%</b> (80.7-88.5)	<b>93.2%</b> (90.0-96.5)	<b>87.9%</b> (82.1-93.7)	<b>76.5%</b> (72.2-80.9)	<b>92.0%</b> (88.2-95.8)	<b>89.2</b> (83.3-95.1)
<b>Step 3 Biochemical Measurement</b>							
Mean fasting blood glucose, including those currently on medication for raised blood glucose [choose accordingly: mmol/L or mg/dl]	<b>4.5</b> (4.4-4.6)	<b>4.7</b> (4.6-4.8)	<b>4.1</b> (4.0-4.3)	<b>4.4</b> (4.1-4.7)	<b>5.1</b> (4.9-5.4)	<b>4.2</b> (4.0-4.4)	<b>4.9</b> (4.5-5.4)
Percentage with impaired fasting glycaemia as defined below • plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) • capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl)	<b>3.4%</b> (2.7-4.1)	<b>4.4%</b> (3.0-6.0)	<b>1.7%</b> (0.5-2.9)	<b>3.4%</b> (1.8-5.0)	<b>7.0%</b> (4.6-9.4)	<b>1.3%</b> (0.6-2.1)	<b>2.5%</b> (1.1-3.9)
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) • capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl)	<b>6.0%</b> (5.1-6.9)	<b>6.2%</b> (4.9-7.6)	<b>2.0%</b> (1.1-3.0)	<b>7.5%</b> (4.3-10.7)	<b>11.6%</b> (9.1-14.1)	<b>3.2%</b> (1.7-4.6)	<b>9.7%</b> (5.0-14.5)
Mean total blood cholesterol, including those currently on medication for raised cholesterol [choose accordingly: mmol/L or mg/dl]	<b>3.8</b> (3.7-3.8)	<b>3.9</b> (3.8-4.0)	<b>3.7</b> (3.6-3.8)	<b>3.6</b> (3.4-3.7)	<b>4.1</b> (4.0-4.3)	<b>3.5</b> (3.4-3.6)	<b>3.8</b> (3.6-4.1)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol)	<b>13.6%</b> (12.2-15.1)	<b>17.0%</b> (14.0-19.9)	<b>9.2%</b> (6.3-12.1)	<b>10.0%</b> (7.3-12.6)	<b>24.2%</b> (19.6-28.7)	<b>8.8%</b> (6.6-10.9)	<b>13.3%</b> (8.2-18.3)
Mean intake of salt per day (in grams) for khartoum only					<b>8.2</b> (8.0-8.4)		

\*\* A 10-year CVD risk of ≥30% is defined according to age, sex, blood pressure, smoking status (current smokers OR those who quit smoking less than 1 year before the assessment), total cholesterol, and diabetes (previously diagnosed OR a fasting plasma glucose concentration >7.0 mmol/l (126 mg/dl)).

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