



Bhutan (Thimphu) STEPS Survey 2007

Fact Sheet

The STEPS survey of chronic disease risk factors in Bhutan (Thimphu) was carried out from Aug. 2007 to Sept. 2007. Bhutan (Thimphu) 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, cholesterol and triglyceride levels in Step 3. The STEPS survey in Bhutan (Thimphu) was a population-based survey of adults aged 25-74. A multi-stage cluster sample design was used to produce representative data for that age range in Bhutan (Thimphu). A total of 2,484 adults participated in the Bhutan (Thimphu) STEPS survey.

Results for adults aged 25-74 years (incl. 95% CI)	Both Sexes	Males	Females
Step 1 Tobacco Use			
Percentage who currently smoke tobacco	6.8% (5.6-8.0)	8.4% (6.5-10.3)	4.7% (3.4-6.1)
Percentage who currently smoke tobacco daily	5.6% (4.5-6.7)	6.9% (5.2-8.6)	3.9% (2.6-5.1)
<i>For those who smoke tobacco daily</i>			
Average age started smoking (years)	20.9 (19.5-22.2)	20.6 (18.9-22.3)	*
Percentage smoking manufactured cigarettes	61.2% (51.3-71.2)	67.6% (55.5-79.7)	*
Mean number of manufactured cigarettes smoked per day	4.6 (3.6-5.5)	*	*
Step 1 Alcohol Consumption			
Percentage of abstainers (who did not drink alcohol in the last year)	63.7% (61.5-65.8)	59.9% (56.8-63.0)	68.5% (65.7-71.3)
Percentage of current drinkers (who drank alcohol in the past 30 days)	30.8% (28.7-32.8)	34.9% (31.9-38.0)	25.5% (22.9-28.1)
<i>Among current drinkers</i>			
Percentage who drank alcohol on 4 or more days in the last week	35.8% (31.0-40.7)	40.0% (33.5-46.4)	27.7% (21.1-34.3)
Percentage who binge drink (men who had 5 or more / women who had 4 or more drinks on any day in the last week)	--	11.9% (7.9-15.8)	12.1% (7.6-16.7)
Step 1 Fruit and Vegetable Consumption (in a typical week)			
Mean number of days fruit consumed	3.7 (3.6-3.8)	3.7 (3.5-3.8)	3.8 (3.7-4.0)
Mean number of servings of fruit consumed on average per day	1.2 (1.1-1.3)	1.2 (1.1-1.3)	1.2 (1.1-1.3)
Mean number of days vegetables consumed	6.4 (6.3-6.4)	6.4 (6.3-6.4)	6.4 (6.3-6.5)
Mean number of servings of vegetables consumed on average per day	3.2 (3.2-3.3)	3.4 (3.3-3.6)	3.0 (2.9-3.1)
Percentage who ate less than 5 combined servings of fruit and/or vegetables on average per day	66.6% (64.5-68.8)	65.0% (61.9-68.2)	68.7% (65.8-71.5)
Step 1 Physical Activity			
Percentage with low levels of activity (defined as < 600 MET-minutes per week)*	58.6% (56.4-60.9)	49.8% (46.5-53.1)	69.6% (66.8-72.4)
Percentage with high levels of activity (defined as ≥ 3000 MET-minutes per week)*	23.7% (21.7-25.7)	29.3% (26.2-32.3)	16.8% (14.5-19.0)
Median time spent in physical activity per day (minutes), with interquartile range	17.1 (0.0-85.7)	34.3 (0.0-120.0)	4.3 (0.0-51.4)
Percentage not engaging in vigorous physical activity	82.9% (81.1-84.7)	74.9% (71.9-77.8)	92.9% (91.3-94.4)

* For definitions of low and high levels of physical activity, please see the GPAQ Analysis Guide, available at: <http://www.who.int/chp/steps/GPAQ/en/index.html>



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Results for adults aged 25-74 years (incl. 95% CI)	Both Sexes	Males	Females
Step 2 Physical Measurements			
Mean body mass index - BMI (kg/m ²)	25.5 (25.3-25.7)	25.3 (25.1-25.5)	25.8 (25.6-26.1)
Percentage with BMI ≥25 kg/m ²	52.4% (50.2-54.6)	51.6% (48.4-54.8)	53.5% (50.5-56.5)
Percentage with BMI ≥30 kg/m ²	12.1% (10.7-13.4)	9.5% (7.8-11.3)	15.3% (13.2-17.3)
Average waist circumference (cm)	--	83.7 (83.1-84.3)	82.1 (81.4-82.7)
Mean systolic blood pressure - SBP (mmHg), excluding those currently on medication for raised BP	124.7 (123.9-125.4)	127.0 (125.9-128.1)	121.7 (120.7-122.7)
Mean diastolic blood pressure - DBP (mmHg), excluding those currently on medication for raised BP	79.5 (79.0-80.0)	80.1 (79.3-80.9)	78.8 (78.1-79.4)
Percentage with raised BP (SBP ≥140 and/or DBP ≥90 mmHg or currently on medication for raised BP)	26.0% (24.2-27.8)	28.3% (25.6-31.0)	23.2% (20.9-25.4)
Percentage with raised BP (SBP ≥160 and/or DBP ≥100 mmHg or currently on medication for raised BP)	11.6% (10.4-12.9)	12.2% (10.3-14.0)	11.0% (9.4-12.6)
Step 3 Biochemical Measurement			
Mean fasting blood glucose (mmol/L), excluding those currently on medication for raised blood glucose	5.9 (5.8-6.0)	5.9 (5.8-6.0)	6.0 (5.9-6.1)
Percentage with impaired fasting glycaemia as defined below • Fasting glucose: ≥6.1mmol/L (110mg/dl) and <7.0mmol/L (126mg/dl) AND • Post-glucose load: <7.8mmol/L (140 mg/dl)	21.6% (19.8-23.3)	20.8% (18.3-23.3)	22.5% (20.1-24.9)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose • Fasting glucose: ≥ 7.0 mmol/L (126 mg/dl) OR • Post-glucose load: ≥ 11.1 mmol/L (200 mg/dl)	8.2% (7.1-9.3)	8.6% (7.1-10.2)	7.7% (6.2-9.1)
Mean total blood cholesterol (mmol/L)	4.8 (4.8-4.9)	4.9 (4.8-4.9)	4.8 (4.7-4.8)
Percentage with raised total cholesterol (≥5.0 mmol/L or ≥190 mg/dl)	44.3% (42.1-46.5)	45.7% (42.6-48.9)	42.5% (39.6-45.4)
Percentage with raised total cholesterol (≥6.2 mmol/L or ≥240 mg/dl)	9.2% (7.9-10.5)	10.5% (8.5-12.4)	7.6% (6.2-9.0)
Summary of combined risk factors			
<ul style="list-style-type: none"> current daily smokers less than 5 servings of fruits and/or vegetables on average per day Low level of activity overweight (BMI ≥ 25 kg/m²) raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP) 			
Percentage with none of the risk factors included above, aged 25 to 74 years	6.1% (4.8-7.3)	6.9% (5.0-8.7)	5.1% (3.6-6.6)
Percentage with at least three of the risk factors included above, aged 25 to 44 years	28.1% (25.2-31.1)	25.5% (21.3-29.7)	31.5% (27.4-35.7)
Percentage with at least three of the risk factors included above, aged 45 to 74 years	46.2% (43.3-49.1)	43.3% (39.0-47.6)	49.7% (45.8-53.6)
Percentage with at least three of the risk factors included above, aged 25 to 74 years	34.8% (32.6-37.0)	31.9% (28.8-35.0)	38.4% (35.4-41.4)

* indicates less than 50 respondents