



Brunei Darussalam STEPS Survey 2022/23 Fact Sheet

The STEPS survey of noncommunicable disease (NCD) risk factors in Brunei Darussalam was carried out from November 2022 to November 2023. Brunei 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. The survey was a population-based survey of adults aged 18-69. A two-stage random sample design was used to produce representative data for that age range in 2022/2023. A total of 3017 adults participated in the survey. The response rate for Steps1&2 was 52.4% and for step 3 was 48.9%. A repeat survey is planned for 2028 if funds permit.

Results for adults aged 18-69 years (incl. 95% CI)	Both Sexes	Males	Females
Step 1 Tobacco and Electronic Cigarette Use			
Percentage who currently smoke tobacco	13.4% (10.7 - 16.6)	26.7% (21.2 - 33.0)	2.9% (1.7 - 4.7)
Percentage who currently smoke tobacco daily	8.0% (6.2 - 10.3)	16.7% (12.8 - 21.4)	1.1% (0.6 - 2.0)
Average age started smoking (years)	16.4 (15.8 - 17.1)	16.1 (15.4 - 16.8)	20.2 (17.9 - 22.5)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	11.3 (8.2 - 14.5)	11.7 (8.4 - 15.1)	6.1 (4.3 - 7.9)
Percentage who currently use electronic cigarettes	11.0% (8.8 - 13.7)	20.4% (16.1 - 25.5)	3.6% (2.4 - 5.4)
Percentage who currently use electronic cigarettes daily	36.9% (27.3 - 47.7)	40.6% (29.4 - 53.0)	20.2% (8.8 - 39.7)
Percentage who currently use tobacco and electronic cigarettes	5.1% (3.5 - 6.8)	9.9% (6.3 - 13.4)	1.4% (0.5 - 2.2)
Step 1 Alcohol Consumption			
Percentage who are lifetime abstainers	83.4% (78.4 - 87.5)	72.2% (63.1 - 79.8)	92.4% (88.7 - 94.9)
Percentage who are past-12-month abstainers	9.7% (6.5 - 14.4)	18.0% (11.4 - 27.2)	3.2% (2.1 - 5.0)
Percentage who currently drink (drank alcohol in the past 30 days)	5.2% (3.0 - 8.9)	7.6% (3.6 - 15.2)	3.3% (1.5 - 7.1)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	1.4% (0.7 - 3.0)	1.5% (0.8 - 2.8)	1.4% (0.4 - 4.8)
Step 1 Diet			
Mean number of days fruit consumed in a typical week	3.2 (3.0 - 3.4)	3.3 (3.0 - 3.6)	3.1 (2.8 - 3.4)
Mean number of servings of fruit consumed on average per day	0.8 (0.8 - 0.9)	0.9 (0.8 - 1.1)	0.8 (0.7 - 0.9)
Mean number of days vegetables consumed in a typical week	4.8 (4.5 - 5.0)	4.6 (4.2 - 5.0)	4.9 (4.6 - 5.2)
Mean number of servings of vegetables consumed on average per day	1.4 (1.3 - 1.5)	1.4 (1.2 - 1.6)	1.4 (1.3 - 1.6)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	92.1% (89.5 - 94.1)	90.8% (85.8 - 94.1)	93.2% (90.4 - 95.3)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	18.1% (14.4 - 22.6)	19.5% (15.1 - 24.7)	17.1% (12.1 - 23.5)
Percentage who always or often eat processed foods high in salt	18.6% (15.3 - 22.5)	22.1% (17.4 - 27.7)	15.9% (11.9 - 20.8)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent) *	13.4% (10.9 - 16.5)	10.3% (7.3 - 14.3)	15.9% (12.1 - 20.6)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	85.7 (38.6 - 157.1)	102.9 (51.4 - 205.7)	68.6 (32.9 - 141.4)
Percentage not engaging in vigorous activity	50.2% (44.6 - 55.7)	29.3% (23.3 - 36.2)	66.6% (58.2 - 74.0)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer	74.1% (65.9 - 80.9)	NA% (NA - NA)	74.1% (65.9 - 80.9)

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)	27.9 (27.2 - 28.6)	26.8 (25.9 - 27.6)	28.8 (27.8 - 29.8)
Percentage who are overweight (BMI ≥ 25 kg/m ²)	65.7% (60.4 - 70.7)	60.8% (52.4 - 68.6)	69.7% (63.6 - 75.3)
Percentage who are obese (BMI ≥ 30 kg/m ²)	32.4% (27.4 - 37.8)	23.9% (19.1 - 29.6)	39.2% (32.0 - 47.0)
Average waist circumference (cm)	91.2 (89.7 - 92.7)	92.4 (90.1 - 94.6)	90.3 (88.1 - 92.4)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	126.4 (124.6 - 128.1)	131.5 (128.9 - 134.0)	122.3 (120.1 - 124.4)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	82.7 (81.7 - 83.8)	83.9 (82.4 - 85.4)	81.8 (80.3 - 83.3)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	39.8% (34.9 - 44.9)	41.9% (34.3 - 49.8)	38.2% (32.3 - 44.3)
Percentage with raised BP on medication	44.6% (36.2 - 53.3)	37.3% (27.1 - 48.7)	50.9% (40.3 - 61.4)
Percentage with raised BP controlled	21.8% (16.2 - 28.8)	12.6% (8.4 - 18.5)	29.9% (21.2 - 40.2)
Step 3 Biochemical Measurements			
Mean fasting blood glucose, including those currently on medication for raised blood glucose [choose accordingly: mmol/L or mg/dl]	5.1 (4.9 - 5.4)	5.1 (4.8 - 5.4)	5.2 (4.8 - 5.6)
Percentage with impaired fasting blood glucose (FBG) as defined below • capillary whole blood value ≥ 5.6 mmol/L (100 mg/dl) and < 6.1 mmol/L (110 mg/dl)	3.9% (2.7 - 5.4)	3.7% (2.3 - 5.9)	4.0% (2.5 - 6.3)
Percentage with raised FBG as defined below or currently on medication for raised blood glucose • capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl)	15.0% (11.6 - 19.2)	12.1% (8.4 - 17.2)	17.4% (12.3 - 24.2)
Percentage with raised FBG diagnosed	72.0% (53.4 - 85.2)	77.1% (59.0 - 88.8)	69.1% (45.0 - 86.0)
Percentage with raised FBG on medication	61.5% (44.5 - 76.1)	69.5% (51.4 - 83.0)	57.0% (35.5 - 76.2)
Mean total blood cholesterol, including those currently on medication for raised cholesterol [mmol/L]	4.6 (4.5 - 4.7)	4.5 (4.2 - 4.7)	4.7 (4.6 - 4.9)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol)	33.4% (28.3 - 38.9)	30.0% (22.0 - 39.4)	36.1% (29.6 - 43.2)
Mean intake of salt per day (in grams)	9.6 (9.4 - 9.9)	10.9 (10.6 - 11.2)	8.5 (8.3 - 8.7)
Cardiovascular disease risk			
Percentage aged 40-69 years with a 10-year CVD risk ≥ 20%, or with existing CVD**	7.8% (5.5 - 11.0)	8.2% (4.9 - 13.4)	7.4% (4.4 - 12.3)
Summary of Combined Risk Factors			
Percentage with none of the above risk factors	1.5% (0.5 - 4.2)	2.3% (0.5 - 9.7)	0.8% (0.5 - 1.5)
Percentage with three or more of the above risk factors, aged 18 to 44 years	29.7% (24.5 - 35.4)	29.5% (22.9 - 37.1)	29.8% (22.3 - 38.6)
Percentage with three or more of the above risk factors, aged 45 to 69 years	49.9% (42.1 - 57.6)	47.8% (34.5 - 61.4)	51.9% (43.3 - 60.3)
Percentage with three or more of the above risk factors, aged 18 to 69 years	37.8% (33.2 - 42.7)	37.6% (30.9 - 44.8)	38.0% (32.4 - 44.0)

* For complete definitions of insufficient physical activity, refer to the GPAQ Analysis Guide (<https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/physical-activity-surveillance>) or to the WHO Global recommendations on physical activity for health (<https://www.who.int/news-room/fact-sheets/detail/physical-activity>).

** 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:
STEPS Survey Coordinator [Dr Lubna binti Haji Abdul Razak, Lubna.razak@moh.gov.bn]