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Steps survey on the prevalence of noncommunicable disease and injury risk factors, Mongolia-2013 summary of findings



Summary

Ulaanbaatar
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NONCOMMUNICABLE DISEASES

Cardiovascular diseases, cancer, diabetes and chronic obstructive pulmonary diseases are named as common noncommunicable diseases (NCDs). The common primary risk factors can lead to intermediate risk factors and both of them are responsible for most of the main NCDs.

THE CAUSES OF NONCOMMUNICABLE DISEASES

Underlying Socioeconomic, cultural, political and environmental determinants	Primary Risk Factors (Modifiable)	Intermediate Risk Factors	Common noncommunicable diseases
	Unhealthy diet	Overweight	Heart disease
Globalization	Physical inactivity	Central obesity	Stroke
Urbanization	Harmful use of alcohol	Raised blood pressure	Cancer
Population ageing	Tobacco use	Raised blood glucose	Diabetes
	Primary Risk Factors (Nonmodifiable)	Abnormal blood lipids	Chronic obstructed pulmonary disease
	Age		
	Heredity / Genetics		

EXECUTIVE SUMMARY

STEP Survey on The Prevalence of Noncommunicable Diseases and Injury (NCDI) Risk Factors was conducted at the national level in 8 districts of Ulaanbaatar city and 21 provinces by using WHO Stepwise surveillance approach. The goal of the survey was to determine the prevalence of common risk factors for NCDs and injuries and evaluate impact of the Integrated National Program on NCD Prevention and Control, and the Health Project of Millennium Challenge Account of Mongolia (MCAM). Survey findings were estimated by analyzing data collected from 6013 Mongolian residents aged 15-64 years.



Figure 1. Location of primary sampling units of the survey



STEPS SURVEY ON THE PREVALENCE OF NONCOMMUNICABLE DISEASE AND INJURY RISK FACTORS, MONGOLIA-2013

SUMMARY OF FINDINGS

The current Survey on the Prevalence of Non-Communicable Diseases and Injury (NCDI) Risk Factors is conducted to evaluate the implementation of the National Program on NCD Prevention and Control, and the Health Project funded by the Millennium Challenge Account (MCA) Mongolia.

A total of 6150 randomly selected 15-64 year-old Mongolian residents of both sexes from 36 soums of 21 aimags and 8 districts of Ulaanbaatar city participated in the survey.

The survey results showed that in Mongolia 27.1% of the population smoke, from which 49.1% of men and 5.3% of women were current smokers. The vast majority of smokers (91.7%) smoke daily. Nearly one in two persons (42.9%) was exposed to second-hand smoking at home and one in three (35.6%) were exposed at work.

Current drinking or consumption of alcohol in the past 30 days was reported by 38.3% of all respondents or 48.8% of men and 24.1% of women. The prevalence of binge drinking (more than 6 drinks on one occasion for men and women) was 37.5% in men and 9.7% in women.

Average daily servings of fruits and vegetables were 0.4 which was 3.6 servings less than the WHO recommendation.

Survey data indicate that 23.2% of population was not meeting the minimum recommendation for physical activity, which meant nearly 1 in 4 persons were at increased risk for physical inactivity.

The mean BMI of study population was 25.9 kg/m² and it was 25.3 kg/m² in men and 26.6 kg/m² in women, respectively. According to BMI risk assessment, 34.8% of the population was overweight and 19.7% was obese.

Prevalence of hypertension was 27.5%. Men had significantly higher prevalence (30.5%) of hypertension compared to those of women (24.5%). There was no significant difference in the prevalence of hypertension between urban and rural populations.

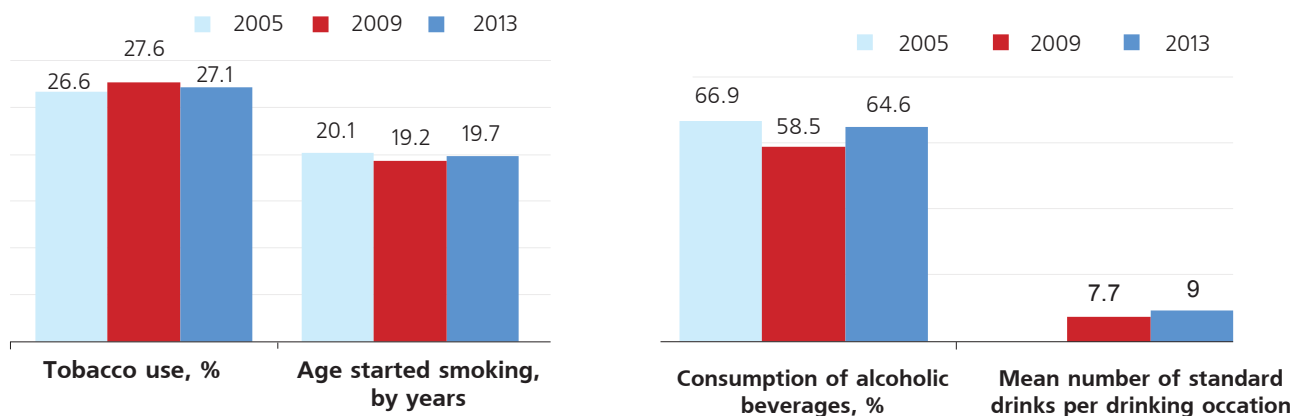
Prevalence of hypercholesterolemia (total cholesterol \geq 5.0 mmol/L or \geq 190 mg/dl) in the population was 61.9% and prevalence of high risk hypercholesterolemia (total cholesterol \geq 6.2 mmol/L or \geq 240 mg/dl) was 6.1%. Mean blood cholesterol and the percentage with or at risk of increased total cholesterol were increased significantly as compared with 2009 data. Prevalence of high risk triglyceride category and hypertriglyceridemia in the population was 19.6% with higher prevalence in men (22.4%) compared to those of women (17.1%).

In conclusion, the summary of combined NCD risk factors demonstrates that more than 1 in 3 (36.9%) Mongolian adults and 1 in 2 (53.2%) adults 45-64 years of age have three or more common modifiable NCDI risk factors. Twice as many young men aged 15-44 years as women of the same age (28.3% vs. 29.8%) have 3 or more NCDI risk factors.

These results show that the current prevalence of NCDs, and NCDI attributed morbidity and deaths have direct negative impacts on quality of life of Mongolian population.

TOBACCO AND ALCOHOL USE

Results for Mongolians aged 15–64 years (incl. 95% CI)	Both Sexes (N=6013)	Men (N=2719)	Women (N=3294)
Step 1. Tobacco use			
Percentage who currently smoke tobacco	27.1 (25.2–29.0)	49.1 (46.5–51.8)	5.3 (4.0–7.0)
Mean age started smoking (in years)	19.7 (19.2–20.3)	19.1 (18.6–19.7)	25.9 (23.6–28.2)
Mean duration of smoking (in years)	20.5 (19.5–21.5)	21.2 (20.2–22.1)	14.4 (11.1–17.6)
Mean number of manufactured cigarettes smoked per day	10.0 (9.2–10.8)	10.3 (9.5–11.2)	6.4 (5.5–7.4)
Second-hand smoking at home	40.9 (37.9–44.0)	36.0 (32.5–39.7)	45.8 (42.4–49.1)
Second-hand smoking at workplaces	25.5 (22.7–28.5)	31.9 (28.4–35.5)	19.4 (22.7–28.5)
Step 2. Alcohol consumption			
Proportion of population who consumed alcohol drinks in the past 12 months	64.6 (60.3–68.6)	74.5 (71.5–77.2)	54.8 (47.7–61.7)
Proportion of population who consumed alcohol drinks in the past 30 days	36.3 (33.3–39.3)	48.8 (46.0–51.5)	24.1 (20.2–27.9)
Mean number of drinking occasions in the past 30 days (frequency)	3.6 (2.9–4.4)	4.3 (3.3–5.2)	2.4 (1.9–2.9)
Mean number of standard drinks consumed per drinking occasion in the past 30 days (1 standard drink=vodka 25 ml, beer 330 ml, wine 100 ml)	9.0 (8.3–9.6)	10.8 (9.9–11.8)	5.2 (4.8–5.6)
Proportion of population who consumed ≥6 standard drinks per drinking occasion in the past 30 days	23.5 (21.2–25.7)	37.5 (34.4–40.6)	9.7 (8.0–11.7)

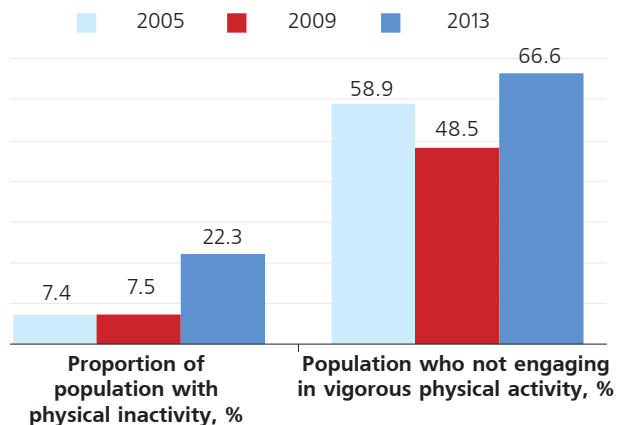
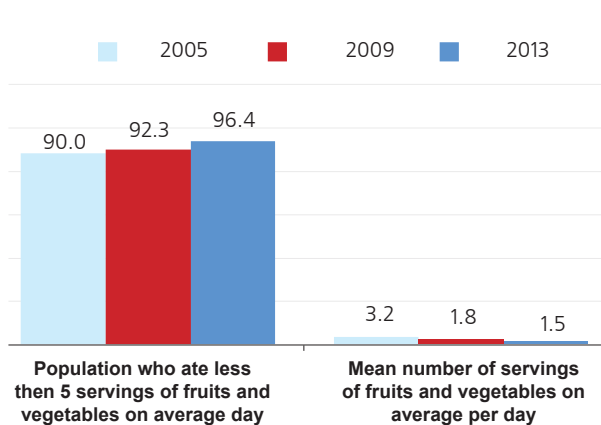


Key findings:

- Over 27.1 percent of 15-64 year-old Mongolian population and nearly half (49.1%) of men are current smokers. Since 2005, this indicator has not significantly decreased.
- Alcohol consumption rate has not tended to decrease and 64.6 percent of respondents were consumed alcoholic beverages in the past 12 months. The mean standard drinks per single occasion had increased as compared to the 2009 level.

FRUIT AND VEGETABLE CONSUMPTION, AND PHYSICAL ACTIVITY

Results for Mongolians aged 15–64 years (incl. 95% CI)	Both Sexes	Men	Women
Step 1. Fruit and Vegetable Consumption			
Mean number of days fruit consumed in a typical week	1.1 (1.0-1.2)	0.9 (0.7-1.0)	1.3 (1.2-1.5)
Mean number of servings of fruit on average per day (1 serving=80 g)	0.4 (0.4-0.5)	0.3 (0.3-0.4)	0.5 (0.4-0.6)
Mean number of days vegetables consumed in a typical week	4.5 (4.2-4.9)	4.5 (4.1-4.9)	4.6 (4.2-4.9)
Mean number of servings of vegetables on average per day (1 serving=80 gr)	1.0 (0.9-1.1)	1.0 (0.9-1.1)	1.1 (1.0-1.2)
Mean number of servings of vegetables on average per day (1 serving=80 gr)	1.5 (1.3-1.6)	1.3 (1.2-2.5)	1.6 (1.4-1.7)
Proportion of population who ate less than five servings of fruit and/or vegetables on average per day	96.4 (95.3-97.2)	97.1 (96.1-98.1)	95.7 (94.5-96.8)
Step 1. Physical Activity			
Proportion of population with low level of physical activity (Less than 600 MET minutes per week)	22.3 (18.4-26.7)	21.3 (17.3-25.3)	23.2 (18.3-28.2)
Proportion of population who not meeting WHO recommendations on physical activity for health	18.3 (14.5-22.2)	16.9 (13.3-20.4)	19.7 (15.0-24.4)
Median time spent in physical activity on average per day, minutes	105.7 (31.4-300.0)	114.3 (36.4-317.1)	95.7 (28.6-274.3)
Proportion of population not engaging in vigorous physical activity	66.6 (63.4-69.8)	57.6 (53.8-61.3)	75.5 (72.3-78.6)



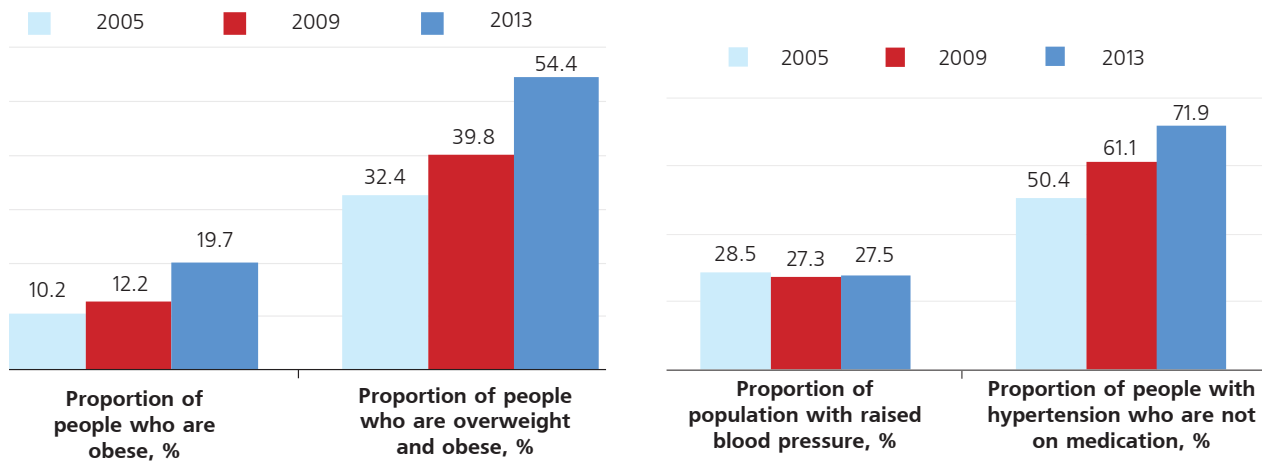
Key findings:

- Majority of the Mongolian population (96.4%) were consumed less than 5 servings of fruits and vegetables daily, which is lower than the WHO recommendations. Fruit and vegetable consumption of the general population has declined compared to the 2005 level.
- Nearly one fifth (18.3%) of the population did not meet WHO recommendations on physical activity for health, and 22.3 percent of the population were physically inactive.

OVERWEIGHT, OBESITY AND RAISED BLOOD PRESSURE

Results for Mongolians aged 15–64 years (incl. 95% CI)	Both sexes	Men	Women
Mean Body Mass Index (BMI) (kg/m ²)	25.9 (25.7-26.2)	25.3 (25-25.6)	26.6 (26.3-26.9)
Proportion of population with overweight and/or obesity (BMI ≥ 25 kg/m ²)	54.4 (52.3-56.6)	49.0 (45.8-52.2)	59.9 (57.7-62.1)
a. Proportion of population who are overweight (BMI=25-29.9 kg/m ²)	34.8 (32.6-36.9)	33.9 (31.0-36.7)	35.7 (33.0-38.4)
b. Proportion of population who are obese (BMI ≥ 30 kg/m ²)	19.7 (18.0-21.5)	15.2 (13.3-17.0)	24.2 (21.5-27.0)
Proportion of population classified as central obesity (waist circumference: for men ≥ 90 cm, for women ≥ 80 cm)	56.8 (54.0-59.6)	44.4 (40.8-47.9)	69.3 (66.6-71.9)
Hypertension			
Mean systolic blood pressure (mm HG)	127 (125.9-128)	130 (128.7-131.4)	124.0 (122.7-125.3)
Mean diastolic blood pressure (mm HG)	79.9 (79.3-80.4)	80.6 (79.7-81.5)	79.2 (78.5-79.9)
Proportion of population with raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 (mm HG))	27.5 (25.6-29.4)	30.5 (27.4-33.7)	24.5 (27.4-33.7)
Proportion of population with raised blood pressure (SBP ≥ 140 and/or DBP ≥ 90 mm HG) who are not currently on medication for hypertension.	71.9 (66.7-76.5)	77.0 (70.8-82.2)	65.6 (58.7-71.9)

$$\text{Body mass index} = \frac{\text{Body weight}_{(kg)}}{\{\text{body height}_{(m)} \times \text{body height}_{(m)}\}}$$



Key findings:

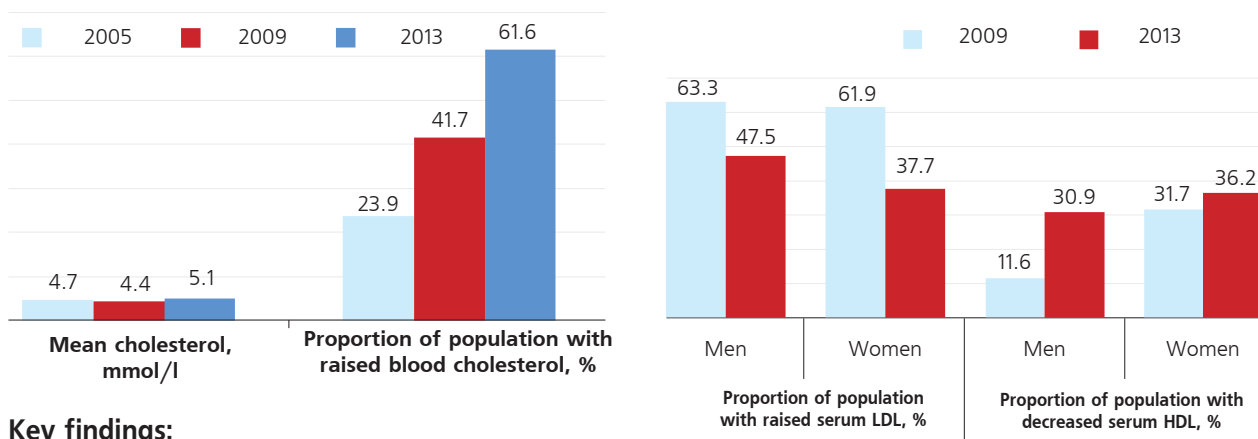
- Since 2005, the proportion of the population with overweight and obesity have been increasing continuously. In 2013, every second person of the population aged 15-64 years were overweight and obese, and one in every five persons (19.7%) had obesity or increased risks of NCDs.
- 27.5% of Mongolians aged 15-64 years had raised blood pressure and the prevalence of hypertension had not tended to increase compared with 2005 and 2009 situation. However, there were increased proportions of the people who had no anti-hypertensive medication and who had uncontrolled hypertension.

BLOOD LIPIDS: CHOLESTEROL AND TRIGLYCERIDES

Results for Mongolians aged 25–64 years (incl. 95% CI)	Both sexes (N=6013)	Men (N=2719)	Women (N=3294)
Mean total cholesterol (mmol/L)	5.1 (5.0-5.2)	5.0 (4.9-5.1)	5.2 (5.1-5.3)
Proportion of population with raised total cholesterol (total cholesterol in capillary blood ≥ 5.0 mmol/L)	61.9 (55.7-67.6)	56.0 (50.1-62.0)	67.3 (60.2-74.4)
Mean triglyceride in capillary blood (mmol/L)	1.3 (1.2-1.4)	1.4 (1.3-1.5)	1.2 (1.2-1.3)
Proportion of population with raised triglycerides (blood triglycerides ≥ 1.7 mmol/L)	19.6 (15.7-23.5)	22.4 (17.1-27.6)	17.1 (13.3-20.9)
Mean low density lipoprotein (LDL), mmol/L	2.9 (2.8-2.9)	3.0 (2.9-3.0)	2.8 (2.7-2.8)
Proportion of population with raised LDL (LDL ≥ 3.0 mmol/L)	42.5 (39.6-45.5)	47.5 (43.4-51.7)	37.7 (34.1-41.4)
Mean high density lipoprotein (HDL), mmol/L	1.3 (1.2-1.4)	1.2 (1.2-1.3)	1.4 (1.4-1.5)
Proportion of population with low HDL (HDL: for men < 1.03 mmol/L; for women < 1.29 mmol/L)	-	30.9 (26.1-35.7)	36.2 (31.8-40.6)

Atherosclerosis

Elevated total cholesterol, especially with raised LDL and low HDL indicate increased risk for atherosclerosis and can lead to serious health problems such as clogged arteries, heart disease and stroke.



Key findings:

- In 2013, the proportion of people with raised total cholesterol was 61.9 percent, and prevalence of elevated LDL was 42.5 percent. This indicates that four in every ten person aged 25-64 years has an increased risk of atherosclerosis and cardiovascular diseases.
- One in every third person of Mongolia had decreased serum HDL level, that indicating an urgent need to promote healthy eating, especially adequate use of fat and regular physical activity for health.



STEPS SURVEY ON THE PREVALENCE OF NONCOMMUNICABLE DISEASE AND INJURY RISK FACTORS, MONGOLIA-2013

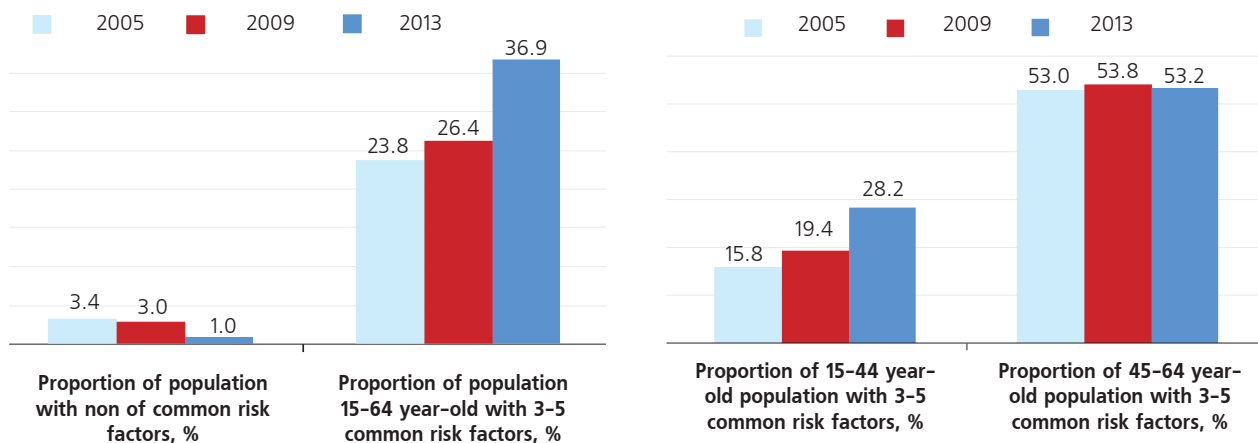
SUMMARY OF FINDINGS

PREVALENCE OF COMBINED COMMON NCD RISK FACTORS

Results for Mongolians aged 15-64 years (incl. 95% CI)	Both sexes (N=6013)	Men (N=2719)	Women (N=3294)
Prevalence of common risk factors for developing NCD:			
Proportion of population with non of common risk factors for NCDs	1 (0.6-1.4)	0.7 (0.3-1.0)	1.3 (0.7-1.9)
Percentage of 15-44 year-old population with 3-5 of common risk factors for NCDs.	28.3 (26.1-30.5)	35.2 (32.3-38.1)	21.6 (18.4-24.9)
Percentage of 45-64 year-old population with 3-5 of common risk factors for NCDs.	53.2 (49.8-56.5)	59.7 (55.6-63.7)	46.2 (41.3-51.1)
Percentage of 15-64 year-old population with 3-5 of common risk factors for NCDs.	36.9 (34.6-39.1)	43.9 (41.3-46.5)	29.8 (26.7-33.0)

Common Risk Factors for NCDs

Current daily smoking, use of less than five servings of fruit and vegetables per day, physical inactivity, overweight and obesity and raised blood pressure are named the five common risk factors for developing NCDs.



Key findings:

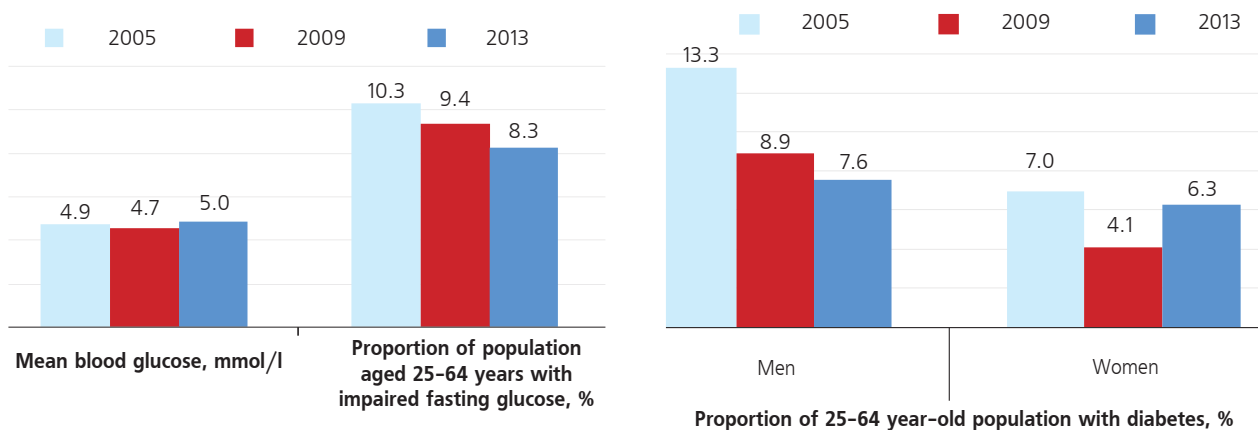
- The proportion of population with none of the common risk factors for NCD was only 1 percent, whereas 36.9 percent of 15-64 year-old population had 3-5 common risk factors, thus indicating high risks for developing NCDs.
- More than half (or 53.2 percent) of the population aged 45-65 years have high risk for NCDs. In 2013, the proportion of 15-44 year-old population with high risk for developing NCDs had increased sharply and reached 28.2 percent. This fact indicates that need to strengthen NCD prevention and control activities among youths.

DIABETES

Results for Mongolians aged 15–64 years (incl. 95% CI)	Both sexes (N=6013)	Men (N=2719)	Women (N=3294)
Mean fasting blood glucose (mmol/L)	5.0 (4.8-5.1)	5.0 (4.8-5.2)	4.9 (4.8-5.0)
Percentage of study population with impaired fasting glycaemia (glucose level 5.6-6.0 mmol/L)	8.3 (6.0-11.5)	10.0 (6.0-14.0)	6.8 (4.3-9.3)
Percentage of survey population with diabetes (blood glucose level ≥ 6.1 mmol/L or currently on medication for diabetes)	6.9 (4.3-11)	7.6 (2.8-12.3)	6.3 (3.8-8.8)

Diabetes

The surveyed people with peripheral blood glucose level between 5.6-6.0 mmol/l were classified in to impaired fasting glucose. Whereas, fasting blood glucose level is ≥ 6.1 mmol/l and person currently on medication for lowering blood glucose were classified in to diabetes.

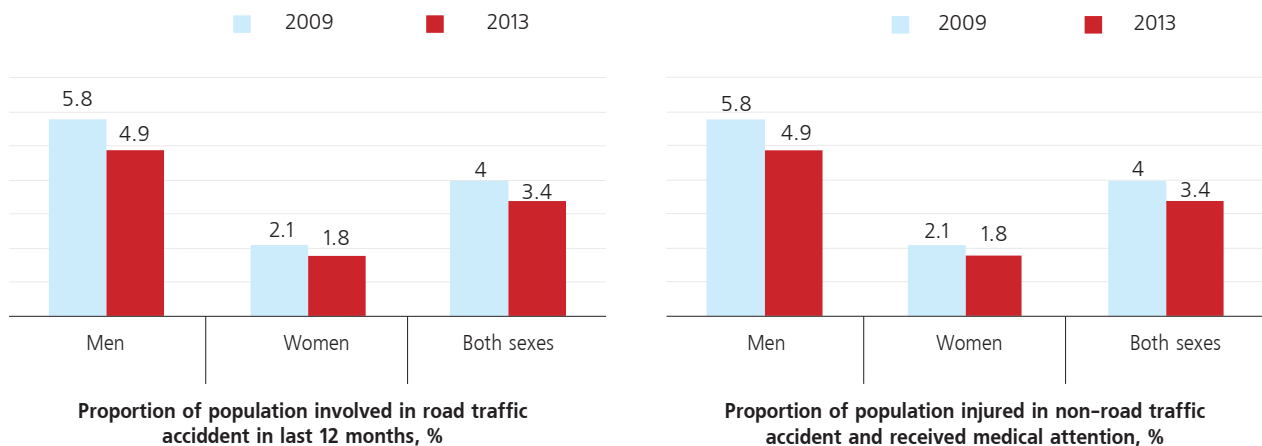


Key findings:

- Mean fasting blood glucose of the Mongolian population aged 25-64 years was 5.0 mmol/L and it was stable compared with the 2005 level.
- Proportion of population with impaired fasting glucose or at risks of diabetes was 8.3 percent and 6.9 percent of 25-64 year-old population had diabetes.

INJURIES AND VIOLENCE

Results for Mongolians aged 15–64 years (incl. 95% CI)	Both sexes (N=6013)	Men (N=2719)	Women (N=3294)
Step 1. Traffic Injuries			
Proportion of population involved in road traffic accident in the past 12 months	3.4 (2.6-4.3)	4.9 (3.7-6.4)	1.8 (1.3-2.6)
Proportion of population injured in a non-road traffic accident that required medical attention	6.9 (6.1-7.9)	8.8 (7.3-10.6)	5.1 (4.1-6.2)
Proportion of drivers or passengers of motor vehicle who do not use a seatbelt	75.4 (72.1-78.5)	70.1 (66.1-73.8)	80.7 (77.1-84.3)
Proportion of population who rode in motor vehicle with the drivers under influence of alcoholic drinks in the past 30 days	5.5 (4.2-7.1)	7.6 (5.8-9.8)	3.4 (2.3-5.0)
Proportion of drivers or passengers of a motorcycle or bicycle who do not always wear a helmet	86.3 (79.0-91.4)	82.4 (72.2-89.3)	92.3 (87.9-95.2)
Step 1. Violence			
Proportion of population injured in a violent incidence that required medical services	6.0 (4.5-8.2)	6.5 (3.7-11.1)	5.8 (3.9-8.6)
Proportion of population who reported being physically abused during their childhood	48.2 (45.0-51.4)	55.8 (52.0-59.6)	40.7 (37.4-44.1)

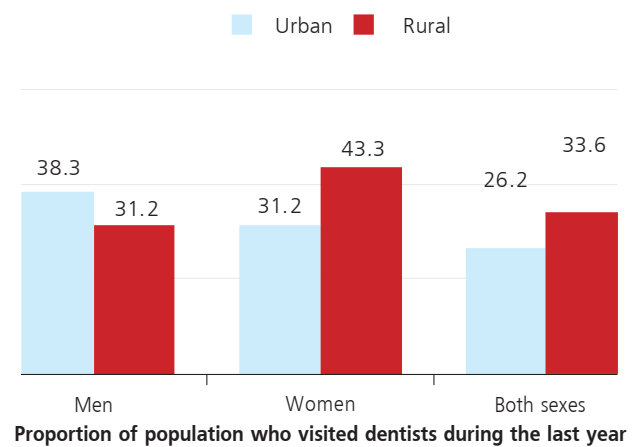
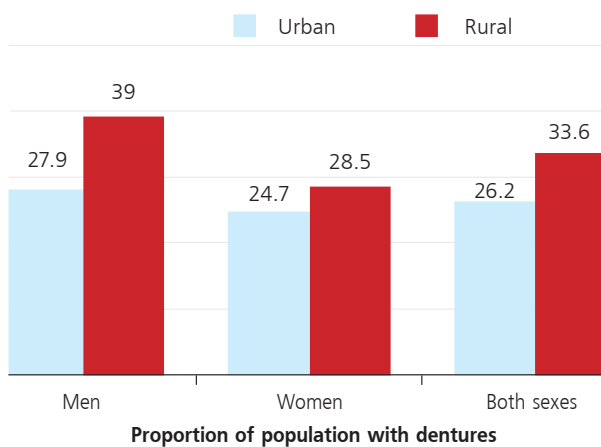


Key findings:

- Three in every four drivers or passengers aged 15-64 years did not use a seatbelt regularly, and nine in every ten (86.3%) drivers or passengers of a motorcycle or bicycle did not always wear a helmet.
- Prevalence of road traffic injuries among the survey population was 3.4 percent, and 5.5 percent of respondents reported that they rode in a motor vehicle with the drivers under influence of alcohol drinks and thus shows that drunk driving is still exists.
- Six percent of the surveyed population had received medical services due to injury resulted from violent incidence and one of the every second respondents (48.2%) reported being physically abused during their childhood.

ORAL HEALTH

Results for Mongolians aged 15–64 years (incl. 95% CI)	Both sexes (N=6013)	Men (N=2719)	Women (N=3294)
Proportion of population with removable dentures	29.9 (27.5-32.4)	26.2 (23.7-28.9)	33.6 (30.6-36.7)
Proportion of population had visited dentists during the past 12 months	40.5 (37.9-43.1)	46.5 (42.6-50.4)	34.5 (31.3-37.6)
Proportion of population who clean teeth at least twice a day	56.6 (53.5-59.7)	43.8 (39.4-48.1)	69.2 (66.6-71.9)



Key findings:

- Over seventy percent (73.7%) of the survey population has 20 and more teeth, whereas 2.1 percent has no teeth at all. The number of teeth tended to decrease with the age of population, and 29.9 percent of surveyed respondents had dentures.
- 40.5 percent of the survey population had visited to the dentist for treatment, follow-up examination, and toothache. The proportion of population who had visited dentist due to treatment and follow up examination was higher among urban residents and women. Case visits to the dentist due to toothache were more common in rural residents.
- 94.1 percent of total population reported that they clean teeth regularly at least once a day, and 56.6 percent clean teeth at least twice a day. The regular teeth cleaning behavior tended to decrease with the age of people. The teeth cleaning behavior was more common in women than in men.

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