



	Prevalence of smoking		Incidence of tuberculosis per 100,000 people 2004	Prevalence of diabetes % of population ages 20–79 2003	Mortality caused by road traffic injury per 100,000 people 1998–2003 <sup>a</sup>	Prevalence of HIV			
	% of adults					Total % of population ages 15–49 2001	2003	Female % of population with HIV	
	Male 2000–05 <sup>a</sup>	Female 2000–05 <sup>a</sup>						2001	2003
Afghanistan	..	..	333	8.2	..	..	..	..	
Albania	60	18	22	3.8	11.1	..	..	..	
Algeria	32	0 <sup>b</sup>	54	4.1	..	<0.1	0.1	11.8	
Angola	..	..	259	2.7	..	3.7	3.9	55.0	
Argentina	32	25	43	5.4	..	0.7	0.7	19.2	
Armenia	62	2	78	8.1	5.6	0.1	0.1	35.0	
Australia	19	16	6	6.2	8.2	0.1	0.1	6.7	
Austria	..	..	14	9.6	11.5	0.2	0.3	22.2	
Azerbaijan	..	1	75	6.9	6.9	..	<0.1	..	
Bangladesh	55	27	229	3.9	..	..	..	..	
Belarus	53	7	60	6.9	14.3	..	..	..	
Belgium	30	25	13	4.2	13.1	0.2	0.2	35.8	
Benin	..	..	87	2.1	..	1.9	1.9	57.6	
Bolivia	..	..	217	4.8	..	0.1	0.1	27.5	
Bosnia and Herzegovina	49	30	53	9.6	..	..	<0.1	..	
Botswana	..	..	670	3.6	..	38.0	37.3	57.6	
Brazil	22	14	60	5.2	..	0.6	0.7	37.1	
Bulgaria	44	23	36	10.0	10.2	..	0.1	..	
Burkina Faso	..	..	191	2.7	..	4.2	1.8 <sup>c</sup>	56.0	
Burundi	..	..	343	1.3	..	6.2	6.0	54.5	
Cambodia	..	..	510	2.0	..	2.7	2.6	30.0	
Cameroon	..	..	179	0.8	..	7.0	5.5 <sup>d</sup>	56.0	
Canada	22	17	5	9.0	8.7	0.3	0.3	25.0	
Central African Republic	..	..	322	2.3	..	13.5	13.5	56.5	
Chad	..	..	279	2.7	..	4.9	4.8	57.1	
Chile	48	37	16	5.6	10.7	0.3	0.3	32.0	
China	67	4	101	2.7	19.0	0.1	0.1	20.0	
Hong Kong, China	22	4	75	8.8	..	0.1	0.1	30.8	
Colombia	..	..	50	4.3	24.2	0.5	0.7	33.3	
Congo, Dem. Rep.	..	..	366	2.5	..	4.2	4.2	56.8	
Congo, Rep.	..	..	377	2.6	..	5.3	4.9	56.3	
Costa Rica	29	10	14	6.9	20.1	0.6	0.6	31.8	
Côte d'Ivoire	..	..	393	2.3	..	6.7	7.0	56.3	
Croatia	34	27	41	5.8	11.4	..	<0.1	..	
Cuba	..	..	10	13.2	13.9	0.1	0.1	31.3	
Czech Republic	31	20	11	9.5	14.2	<0.1	0.1	35.7	
Denmark	31	25	8	6.9	8.0	0.2	0.2	17.4	
Dominican Republic	16	11	91	10.0	41.1	1.8	1.0 <sup>e</sup>	26.4	
Ecuador	..	..	131	4.8	16.9	0.3	0.3	32.6	
Egypt, Arab Rep.	40	18	27	9.8	7.5	<0.1	<0.1	10.9	
El Salvador	42	15	54	6.2	41.7	0.6	0.7	32.1	
Eritrea	..	..	271	1.9	..	2.8	2.7	56.4	
Estonia	45	18	46	9.7	14.8	0.7	1.1	32.0	
Ethiopia	6	0 <sup>b</sup>	353	1.9	..	4.1	4.4	55.8	
Finland	26	19	9	7.2	7.3	0.1	0.1	..	
France	30	21	12	6.2	10.2	0.4	0.4	27.3	
Gabon	..	..	280	2.9	..	6.9	8.1	56.8	
Gambia, The	..	..	233	2.2	..	1.2	1.2	55.6	
Georgia	53	6	82	9.0	6.2	<0.1	0.1	..	
Germany	37	28	8	10.2	8.0	0.1	0.1	19.8	
Ghana	7	1	206	3.3	..	3.1	2.2 <sup>c</sup>	54.8	
Greece	47	29	19	6.1	19.3	0.2	0.2	20.5	
Guatemala	21	2	77	5.5	..	1.1	1.1	41.5	
Guinea	..	..	240	2.0	..	2.8	3.2	59.0	
Guinea-Bissau	..	..	199	2.0	..	..	..	..	
Haiti	15	6	306	5.7	..	5.5	5.6	58.3	

# Health risk factors and public health challenges

# 2.18

PEOPLE

	Prevalence of smoking		Incidence of tuberculosis per 100,000 people 2004	Prevalence of diabetes % of population ages 20–79 2003	Mortality caused by road traffic injury per 100,000 people 1998–2003 <sup>a</sup>	Prevalence of HIV			
	% of adults					Total % of population ages 15–49		Female % of population with HIV	
	Male 2000–05 <sup>a</sup>	Female 2000–05 <sup>a</sup>				2001	2003	2001	2003
Honduras	..	..	77	5.7	..	1.6	1.8	56.3	55.9
Hungary	41	28	26	9.7	13.1	..	0.1	..	..
India	47	17	168	5.9	..	0.8	0.9	39.5	38.0
Indonesia	58	3	245	1.9	..	0.1	0.1	12.1	13.6
Iran, Islamic Rep.	22	2	27	3.6	..	0.1	0.1	10.6	12.3
Iraq	..	..	132	7.7	8.4	..	<0.1	..	..
Ireland	28	26	11	3.4	10.1	0.1	0.1	31.8	30.8
Israel	32	18	9	7.1	5.9	..	0.1	..	..
Italy	31	17	7	6.6	10.5	0.5	0.5	32.3	32.1
Jamaica	..	..	7	7.2	..	0.8	1.2	51.4	47.6
Japan	47	15	30	6.9	7.0	<0.1	<0.1	22.5	24.2
Jordan	51	8	5	7.0	..	<0.1	<0.1	..	..
Kazakhstan	65	9	151	5.5	..	0.1	0.2	34.0	33.5
Kenya	21	1	619	2.5	..	8.0	6.7 <sup>c</sup>	62.5	65.5
Korea, Dem. Rep.	..	..	178	5.2	..	..	..	..	..
Korea, Rep.	..	..	90	6.4	15.1	<0.1	<0.1	10.7	10.8
Kuwait	..	..	26	12.8	23.7	..	..	..	..
Kyrgyz Republic	51	5	122	4.3	12.9	<0.1	0.1	..	..
Lao PDR	59	13	156	1.1	..	<0.1	0.1	..	..
Latvia	51	19	68	9.9	22.7	0.5	0.6	32.2	33.3
Lebanon	42	31	11	6.4	..	0.1	0.1	..	..
Lesotho	..	..	696	3.1	..	29.6	28.9	56.7	56.7
Liberia	..	..	310	2.0	..	5.1	5.9	56.3	56.3
Libya	..	..	20	3.7	..	..	0.3	..	..
Lithuania	44	13	63	9.4	19.3	0.1	0.1	..	..
Macedonia, FYR	..	..	30	4.9	5.1	<0.1	<0.1	..	..
Madagascar	..	..	218	2.5	..	1.3	1.7	56.1	58.5
Malawi	21	5	413	1.7	..	14.3	14.2	57.1	56.8
Malaysia	43	2	103	9.4	..	0.4	0.4	15.4	16.7
Mali	..	..	281	2.0	..	1.8 <sup>f</sup>	1.9	54.2	59.2
Mauritania	..	..	287	3.5	..	0.5	0.6	55.9	57.3
Mauritius	32	1	64	10.7	14.7	..	..	..	..
Mexico	13	5	32	7.4	11.8	0.3	0.3	32.7	33.1
Moldova	34	2	138	9.3	14.1	..	0.2	..	..
Mongolia	68	26	192	1.4	..	<0.1	<0.1	..	..
Morocco	29	0 <sup>b</sup>	110	4.2	..	..	0.1	..	..
Mozambique	..	..	460	3.1	..	12.1	12.2	58.2	55.8
Myanmar	36	12	171	1.1	..	1.0	1.2	28.9	30.3
Namibia	23	10	717	3.1	..	21.3	21.3	52.6	55.0
Nepal	49	24	184	4.1	..	0.4	0.5	20.7	26.7
Netherlands	36	28	8	3.7	6.4	0.2	0.2	19.4	20.0
New Zealand	24	22	11	7.6	11.5	0.1	0.1	..	..
Nicaragua	..	5	63	6.1	20.1	0.2	0.2	32.7	33.9
Niger	..	..	157	3.1	..	1.1	1.2	56.9	56.3
Nigeria	..	1	290	2.2	..	5.5	5.4	58.1	57.6
Norway	27	25	5	6.7	6.1	0.1	0.1	..	..
Oman	..	..	11	11.4	..	0.1	0.1	..	..
Pakistan	..	..	181	8.5	..	0.1	0.1	6.9	12.2
Panama	..	..	45	7.3	16.4	0.7	0.9	37.3	41.3
Papua New Guinea	..	..	233	1.9	..	0.4	0.6	29.0	30.0
Paraguay	23	7	71	3.9	..	0.4	0.5	27.0	26.0
Peru	..	..	178	5.1	17.6	0.4	0.5	31.4	33.8
Philippines	41	8	293	2.4	..	<0.1	<0.1	20.9	22.5
Poland	40	25	29	9.0	14.8	..	0.1	..	..
Portugal	..	..	42	7.8	14.8	0.4	0.4	20.0	19.5
Puerto Rico	17	10	5	13.2	..	..	..	..	..



	Prevalence of smoking		Incidence of tuberculosis per 100,000 people 2004	Prevalence of diabetes % of population ages 20–79 2003	Mortality caused by road traffic injury per 100,000 people 1998–2003 <sup>a</sup>	Prevalence of HIV			
	% of adults					Total % of population ages 15–49 2001	2003	Female % of population with HIV	
	Male 2000–05 <sup>a</sup>	Female 2000–05 <sup>a</sup>						2001	2003
Romania	32	10	146	9.3	16.8	..	<0.1	..	..
Russian Federation	60	16	115	9.2	19.4	0.7	1.1	32.1	33.7
Rwanda	..	..	371	1.1	..	5.1	5.1	54.5	56.5
Saudi Arabia	19	8	40	9.4	..	..	..	..	..
Senegal	..	..	245	2.3	..	0.8	0.8	55.3	56.1
Serbia and Montenegro	48	34	33	5.6	..	0.2	0.2	20.0	20.0
Sierra Leone	..	..	443	2.2	..	..	..	..	..
Singapore	24	4	40	12.3	5.2	0.2	0.2	23.5	24.4
Slovak Republic	..	..	19	8.7	11.3	..	<0.1	..	..
Slovenia	28	20	15	9.6	12.1	<0.1	<0.1	..	..
Somalia	..	..	411	2.3	..	..	..	..	..
South Africa	23	8	718	3.4	..	20.9	15.6 <sup>e</sup>	56.3	56.9
Spain	39	25	25	9.9	12.8	0.6	0.7	20.0	20.8
Sri Lanka	23	2	60	2.1	..	<0.1	<0.1	..	17.1
Sudan	..	..	220	3.2	..	1.9	2.3	56.7	57.9
Swaziland	11	3	1,226	3.0	..	38.2	38.8	57.9	55.0
Sweden	17	18	4	7.3	5.9	0.1	0.1	27.3	25.7
Switzerland	27	23	7	9.5	7.5	0.4	0.4	30.0	30.0
Syrian Arab Republic	..	..	41	6.2	..	..	<0.1	..	..
Tajikistan	..	..	177	3.7	5.6	..	<0.1	..	..
Tanzania	..	..	347	2.3	..	9.0	7.0 <sup>d</sup>	58.6	56.0
Thailand	49	3	142	2.1	..	1.7	1.5	32.3	35.7
Togo	..	..	355	2.1	..	4.3	4.1	56.4	56.3
Trinidad and Tobago	..	..	9	7.9	..	3.0	3.2	50.0	50.0
Tunisia	50	2	22	4.6	..	<0.1	<0.1	..	..
Turkey	49	18	28	7.0	..	..	..	..	..
Turkmenistan	..	..	65	4.0	10.3	..	<0.1	..	..
Uganda	25	3	402	1.5	..	5.1	4.1	59.6	60.0
Ukraine	53	11	101	9.7	10.8	1.2	1.4	32.0	33.3
United Arab Emirates	17	1	17	20.1	..	..	..	..	..
United Kingdom	27	25	12	3.9	6.1	0.2	0.2	28.2	29.8
United States	24	19	5	8.0	14.7	0.6	0.6	20.2	25.5
Uruguay	35	24	28	6.8	10.0	0.3	0.3	32.7	32.8
Uzbekistan	24	1	117	4.0	9.8	<0.1	0.1	33.3	33.6
Venezuela, RB	..	..	42	5.2	23.1	0.6	0.7	32.4	32.0
Vietnam	35	2	176	1.0	..	0.3	0.4	27.3	32.5
West Bank and Gaza	..	..	23	..	..	..	..	..	..
Yemen, Rep.	..	..	89	7.7	..	..	0.1	..	..
Zambia	16	1	680	3.0	..	16.7	15.6 <sup>f</sup>	56.3	56.6
Zimbabwe	20	2	674	2.6	..	24.9	24.6	56.3	58.1
<b>World</b>	<b>.. w</b>	<b>.. w</b>	<b>139 w</b>	<b>5.1 w</b>	<b>.. w</b>	<b>1.1 w</b>	<b>1.1 w</b>	<b>29.4 w</b>	<b>30.8 w</b>
<b>Low income</b>	..	15	224	4.7	..	2.1	2.1	41.2	41.1
<b>Middle income</b>	..	..	114	4.4	..	0.7	0.7	23.7	25.7
Lower middle income	..	..	114	3.6	..	0.3	0.3	21.9	24.1
Upper middle income	..	..	112	7.6	..	2.7	2.6	33.3	34.2
<b>Low &amp; middle income</b>	..	..	162	4.5	..	1.2	1.2	30.8	32.0
East Asia & Pacific	67	4	138	2.6	19.0	0.2	0.2	20.2	22.9
Europe & Central Asia	..	..	83	8.3	..	..	0.7	..	..
Latin America & Carib.	..	..	64	5.9	..	0.6	0.7	34.0	34.5
Middle East & N. Africa	..	..	54	6.2	..	..	0.1	..	..
South Asia	47	18	177	5.9	..	0.7	0.8	35.5	34.5
Sub-Saharan Africa	..	..	363	2.4	..	7.3	7.2	57.1	57.3
<b>High income</b>	..	..	17	7.6	10.9	0.3	0.4	22.0	24.2
Europe EMU	..	..	13	7.8	9.9	0.3	0.3	24.5	25.0

a. Data are for the most recent year available. b. Less than 0.5. c. Survey data, 2003. d. Survey data, 2004. e. Survey data, 2002. f. Survey data, 2001. g. Survey data, 2001/02.

**About the data**

The limited availability of data on health status is a major constraint in assessing the health situation in developing countries. Surveillance data are lacking for many major public health concerns. Estimates of prevalence and incidence are available for some diseases but are often unreliable and incomplete. National health authorities differ widely in their capacity and willingness to collect or report information. To compensate for the paucity of data and ensure reasonable reliability and international comparability, the World Health Organization (WHO) prepares estimates in accordance with epidemiological models and statistical standards.

Smoking is the most common form of tobacco use in many countries, and the prevalence of smoking is therefore a good measure of the extent of the tobacco epidemic (Corrao and others 2000). While the prevalence of smoking has been declining in some high-income countries, it has been increasing in many developing countries. Tobacco use causes heart and other vascular diseases and cancers of the lung and other organs. Given the long delay between starting to smoke and the onset of disease, the health impact of smoking in developing countries will increase rapidly in the next few decades. Because the data present a one-time estimate, with no information on the intensity or duration of smoking, and because the definition of adult varies across countries, the data should be interpreted with caution.

Tuberculosis is one of the main causes of death from a single infectious agent among adults in developing countries. In high-income countries tuberculosis has reemerged largely as a result of cases among immigrants. The estimates of tuberculosis incidence in the table are based on a new approach in which reported cases are adjusted using the ratio of case notifications to the estimated share of cases detected by panels of 80 epidemiologists convened by the WHO.

Diabetes, an important cause of ill health and a risk factor for other diseases in developed countries, is spreading rapidly in developing countries. While diabetes is most common among the elderly, prevalence rates are rising among younger and productive populations in developing countries. Economic development has led to the greater adoption of Western lifestyles and diet in developing countries, resulting in a substantial increase in diabetes. Without effective prevention and control programs, diabetes will likely continue to increase. Data are based on sample surveys.

Data for mortality caused by road traffic injury are collected by the WHO based on vital registries. There

is considerable difference in completeness of the vital registry data. In some countries the vital registry system covers only part of the country. In some, not all deaths are registered. In addition, mortality from different causes is difficult to measure. For countries with incomplete vital registry systems, the WHO has used demographic techniques to estimate deaths.

Adult HIV prevalence rates reflect the rate of HIV infection in each country's population. Low national prevalence rates can be very misleading, however. They often disguise serious epidemics that are initially concentrated in certain localities or among specific population groups and threaten to spill over into the wider population. In many parts of the developing world most new infections occur in young adults, with young women especially vulnerable.

Estimates from recent Demographic and Health Surveys that have collected data on HIV/AIDS differ from those of the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the WHO, which are based on surveillance systems that focus on pregnant women who attend sentinel antenatal clinics. There are reasons to be cautious about comparing the two sets of estimates. Demographic and Health Survey is a household survey that uses a representative sample from the whole population, whereas surveillance data from antenatal clinics is limited to pregnant women. Representative household surveys also frequently provide better coverage of rural populations. However, the fact that some respondents refuse to participate or are absent from the household adds considerable uncertainty to survey-based HIV estimates, because the possible association of absence or refusal with higher HIV prevalence is unknown. UNAIDS and WHO estimates are generally based on surveillance systems that focus on pregnant women who attend sentinel antenatal clinics. UNAIDS and the WHO use a methodology to estimate HIV prevalence for the adult population (ages 15–49) that assumes that prevalence among pregnant women is a good approximation of prevalence among men and women. However, this assumption might not apply to all countries or over time. There are also other potential biases associated with the use of antenatal clinic data, such as differences among women who attend antenatal clinics and those who do not.

**Definitions**

- **Prevalence of smoking** is the percentage of men and women who smoke cigarettes. The age range varies, but in most countries is 18 and older or 15 and older.
- **Incidence of tuberculosis** is the estimated number of new tuberculosis cases (pulmonary, smear positive, extrapulmonary).
- **Incidence of tuberculosis** is the estimated number of new pulmonary, smear positive, and extrapulmonary tuberculosis cases.
- **Prevalence of diabetes** refers to the percentage of people ages 20–79 who have type 1 or type 2 diabetes.
- **Mortality caused by road traffic injury** refers to the number of deaths per 100,000 people caused by road traffic injury.
- **Prevalence of HIV** is the percentage of people who are infected with HIV.

**Data sources**

Data on smoking are from the American Cancer Society's *Tobacco Atlas*, 2nd edition. Data on tuberculosis are from the WHO's *Global Tuberculosis Control Report 2006*. Data on diabetes are from the International Diabetes Federation's e-Atlas. Data on mortality caused by road traffic injury are from the WHO and the World Bank's *World Report on Road Traffic Injury Prevention* and the Organisation for Economic Co-operation and Development. Data on HIV are from UNAIDS and the WHO's *2004 Report on the Global AIDS Epidemic*.