

12. Diabetes

Diabetes substantially increases the risk of CHD. Men with non-insulin dependent (Type 2) diabetes have a two to fourfold greater annual risk of CHD, with an even higher (three to fivefold) risk in women with Type 2 diabetes¹.

Diabetes not only increases the risk of CHD but also magnifies the effect of other risk factors for CHD such as raised cholesterol levels, raised blood pressure, smoking and obesity. There are two main types of diabetes: Type 1 and Type 2 diabetes².

The recent INTERHEART case-control study estimated that 15% of heart attacks in Western Europe and 9% of heart attacks in Central and Eastern Europe are due to diagnosed diabetes, and that people with diagnosed diabetes are at three times the risk of a heart attack compared to those without³.

Overall prevalence of diabetes

Over 5% of men and 4% of women in England have diagnosed diabetes (Table 12.1)⁴. The Quality and Outcomes Framework (QOF) provides information on the registrations for diabetes. In 2006, the overall prevalence of diabetes in Great Britain was estimated to be 4% (see Table 2.10).

Not all diabetes is diagnosed. The Health Survey for England 2003 suggests that 3.1% of men and 1.5% of women aged 35 and over have undiagnosed diabetes (Table 12.2).

Age and sex differences

For both men and women, the proportion of people with diabetes increases with age. The Health Survey for England 2006 suggests that around 1% of men aged 16 to 34 years have diagnosed diabetes compared with 13.5% of those aged 75 and over (Table 12.1 and Figure 12.1). This pattern is similar in women, although rates are slightly lower at most ages than for men.

Temporal trends

The prevalence of diabetes is increasing. Since 1991, the prevalence of diagnosed diabetes has more than doubled in men and women (Table 12.3 and Figure 12.3).

National and regional differences

The prevalence of diagnosed diabetes varies by Government Office Region in England for both men and women (Table 12.4). The age-standardised prevalence is highest for men (6.5%) in the North West and for women (5.4%) in Yorkshire and the Humber and the West Midlands. Rates are lowest for men in the East Midlands (4.6%) and for women in the South West (2.6%).

Socio-economic differences

Diabetes prevalence is also related to socio-economic position (Table 12.5). In the Health Survey for England 2003, men and women in managerial and professional and intermediate households had a lower prevalence of diagnosed diabetes than those from other households. In women,

for example, the prevalence was around twice as high in those living in manual compared to non-manual households (Table 12.5). Data from the 2006 Health Survey for England show that women living in households with the highest incomes had the lowest prevalence of diagnosed diabetes. There was no similar pattern among men (Table 12.6).

Ethnic differences

The prevalence of diabetes in 2004 was much higher among some ethnic minority communities than in the general population. In Black Caribbean and Indian men, the prevalence of diagnosed diabetes was more than twice that found in the general population. The prevalence for Black Caribbean and Pakistani women was two and a half times that of the general population. However, the prevalence for Black African and Irish women was substantially lower than for the general population (Table 12.7 and Figure 12.7).

International differences

Diabetes is now one of the most common non-communicable diseases globally. The International Diabetes Federation estimates that there are currently about 194 million people aged 20 to 79 with diabetes worldwide and that this will increase to 333 million by 2025 (Table 12.8).

Prevalence rates in the UK are average for developed countries (Table 12.8 and Figure 12.8). In general developed countries currently have higher rates than developing countries (Figure 12.8).

1. Garcia MJ, McNamara PM, Gordon T, Kannel WB (1974). Morbidity and mortality in the Framingham population. Sixteen year follow-up. *Diabetes*; 23:105-111.
2. Diabetes is characterised by high blood glucose levels. It arises when the pancreas fails to make enough insulin or when the body cannot effectively make use of the insulin produced or both. The chronic high blood glucose levels (hyperglycaemia) that result are associated with long-term damage, dysfunction and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels. Type 1 diabetes results from an autoimmune destruction of the cells in the pancreas which produce insulin. People with Type 1 diabetes must take daily injections of insulin for survival. Type 2 diabetes, which accounts for about 90% of all diabetes, is characterised by an inability on the part of the body to respond to insulin (insulin resistance) and/or abnormal insulin secretion. People with Type 2 diabetes are not usually treated with insulin. There are a number of other less common types of diabetes including gestational diabetes. This occasionally occurs during pregnancy in women not previously diagnosed with diabetes and is a marker of greater risk of developing Type 2 diabetes in later life.
3. Yusuf S, Hawken S, Ounpuu S, Dans T, Avezum A, Lanas F, McQueen M, Budaj A, Pais P, Varigo J, Lisheng A, on behalf of the INTERHEART Study Investigators (2004) Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART Study): case-control study. *The Lancet*; 364: 937-952.
4. Determining the prevalence of diabetes in the population is difficult. The best source of data on the prevalence of diabetes is the Health Survey for England and this relies on self reports of doctor diagnosed diabetes (Type 1 and Type 2 combined). These national survey data are likely to underestimate the true prevalence of diabetes, as those people who have the disease but have not yet been diagnosed will be omitted from the figures. For further data on overall prevalence, together with data on mortality from diabetes, morbidity from diabetes, prevalence of risk factors for CVD in people with diabetes, and the treatment and prevention of CVD in people with diabetes, see the British Heart Foundation's Diabetes supplement. Rayner M, Petersen S, Buckley C and Press V (2001) Coronary heart disease statistics: diabetes supplement, BHF: London. See www.heartstats.org

Table 12.1 Prevalence of diagnosed diabetes by sex and age, 2006, England

	All ages %	16-24 %	25-34 %	35-44 %	45-54 %	55-64 %	65-74 %	75+ %
MEN								
Type 1 Diabetes	0.5	0.6	0.9	0.6	0.2	0.4	0.2	-
Type 2 Diabetes	5.1	0.2	0.3	1.8	5.8	8.1	15.4	13.5
Types 1 and 2 combined	5.6	0.8	1.2	2.4	6.0	8.5	15.7	13.5
Unweighted base	5,625	650	862	1,183	1,050	1,126	437	317
Weighted base	6,854	1,041	1,129	1,356	1,123	1,015	694	496
WOMEN								
Type 1 Diabetes	0.5	0.6	0.6	0.4	1.3	0.2	-	0.4
Type 2 Diabetes	3.7	0.3	0.5	0.8	2.3	5.9	10.4	10.4
Types 1 and 2 combined	4.2	0.9	1.2	1.2	3.6	6.0	10.4	10.6
Unweighted base	6,923	794	1,148	1,494	1,279	1,268	470	470
Weighted base	7,307	1,014	1,160	1,379	1,141	1,049	768	796

Notes: Self-reported diagnosis of either Type 1 or Type 2 diabetes.

Source: Joint Health Surveys Unit (2008) Health Survey for England 2006. Cardiovascular disease and risk factors. The Information Centre: Leeds.

Figure 12.1 Prevalence of diagnosed diabetes by sex and age, 2006, England

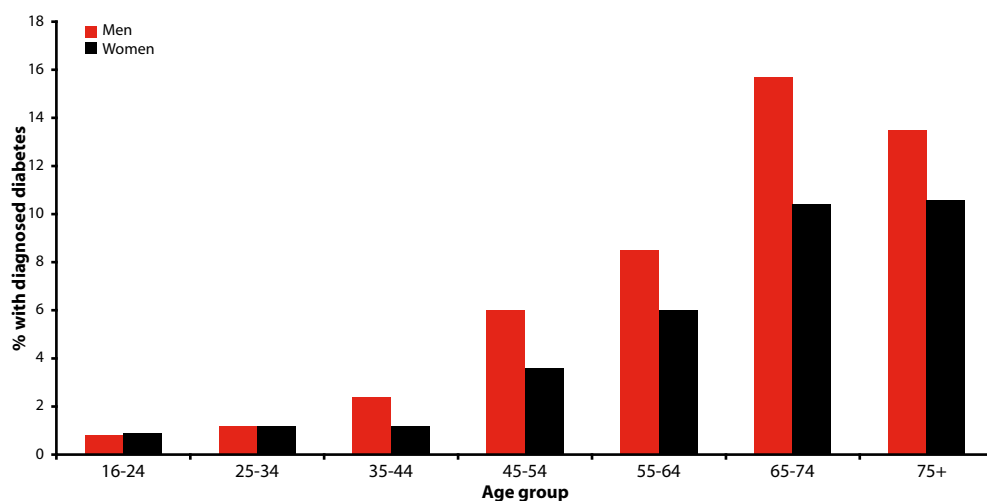


Table 12.2 Prevalence of undiagnosed diabetes by sex and age, adults aged 35 and over, 2003, England

	All ages %	35-44 %	45-64 %	65+ %
MEN				
Base	3.0	0.0	2.3	6.9
Base	334	97	146	91
WOMEN				
Base	0.7	0.8	0.0	1.9
Base	367	100	163	104

Notes: Undiagnosed diabetes defined as prevalence of glucose ≥ 7 mmol/l without doctor-diagnosed diabetes.

Source: Department of Health (2004) Health Survey for England 2003. The Stationery Office: London.

Table 12.3 Prevalence of diagnosed diabetes by sex and age, 1991 to 2006, England

	All ages %	16-24 %	25-34 %	35-44 %	45-54 %	55-64 %	65-74 %	75+ %
MEN								
1991	2.0	0.0	0.0	0.0	1.0	4.0	6.0	7.0
1993	3.0	0.0	1.0	1.0	3.0	6.0	7.0	8.0
1994	2.9	0.8	0.8	1.0	2.5	6.4	5.8	7.5
1998	3.3	0.1	0.7	1.6	2.9	5.8	7.0	8.7
2003	4.3	0.4	0.3	2.8	3.6	8.1	11.9	10.0
2006	5.6	0.8	1.2	2.4	6.0	8.5	15.7	13.5
WOMEN								
1991	2.0	0.0	1.0	1.0	2.0	4.0	6.0	5.0
1993	2.0	0.0	1.0	1.0	2.0	4.0	5.0	5.0
1994	1.9	0.6	0.3	0.9	1.5	2.5	4.8	5.2
1998	2.5	0.8	0.7	0.9	1.6	3.1	6.6	6.6
2003	3.4	0.9	0.9	1.5	2.6	4.7	8.4	8.9
2006	4.2	0.9	1.2	1.2	3.6	6.0	10.4	10.6
<i>Weighted base 2006</i>								
Men	6,854	1,041	1,129	1,356	1,123	1,015	694	496
Women	7,307	1,014	1,160	1,379	1,141	1,049	768	796

Notes: Self-reported diagnosis of either Type 1 or Type 2 diabetes.
Weighted data are provided from 2003.
See source for more details.

Source: Joint Health Surveys Unit (2008) Health Survey for England 2006. Cardiovascular disease and risk factors.
The Information Centre: Leeds.

Figure 12.3 Prevalence of diagnosed diabetes in adults, 1991 to 2006, England

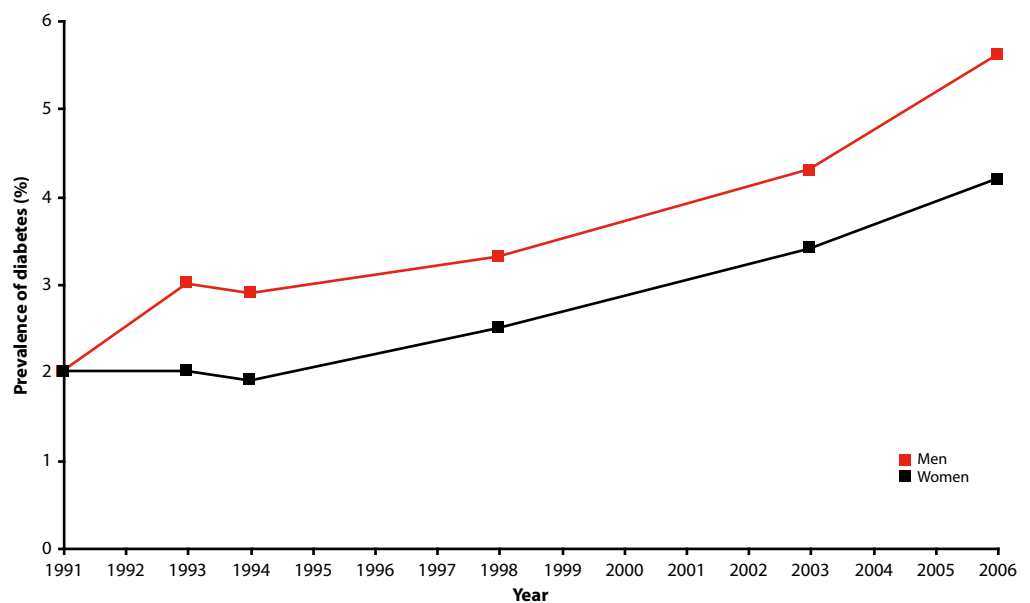


Table 12.4 Age-standardised prevalence of diagnosed diabetes by sex and Government Office Region, 2006, adults aged 16 and over, England

Doctor-diagnosed diabetes	Government Office Region									
	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East England	London	South East	South West	%
MEN	5.2	6.5	6.3	4.6	5.8	5.4	6.0	4.7	4.9	%
Weighted base	352	929	660	607	699	787	1,031	1,103	687	
WOMEN	4.8	4.3	5.4	4.1	5.4	4.2	4.3	3.9	2.6	%
Weighted base	398	1,012	751	653	786	790	966	1,175	780	

Source: Joint Health Surveys Unit (2008) Health Survey for England 2006. Cardiovascular disease and risk factors. The Information Centre: Leeds.

Table 12.5 Age-standardised prevalence of diagnosed diabetes by sex and socio-economic classification, 2003, adults aged 16 and over, England

<i>Doctor-diagnosed diabetes</i>	<i>NS-SEC of household reference person</i>				
	<i>Managerial & professional</i>	<i>Intermediate</i>	<i>Small employers & own account workers</i>	<i>Lower supervisory & technical</i>	<i>Semi-routine & routine</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
MEN	3.6	2.6	4.1	3.5	4.1
<i>Weighted base</i>	2,932	507	829	971	1,822
WOMEN	2.6	1.6	4.2	4.3	4.0
<i>Weighted base</i>	2,900	716	755	876	2,160

Source: Department of Health (2004) Health Survey for England 2003. The Stationery Office: London.

Table 12.6 Age-standardised prevalence of diagnosed diabetes by sex and household income, 2006, adults aged 16 and over, England

	<i>Equivalentised household income quintile</i>				
	<i>Highest</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>Lowest</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
MEN	6.8	4.2	5.6	6.1	7.0
<i>Weighted base</i>	1,325	1,263	1,102	948	823
WOMEN	1.3	3.3	3.0	5.8	6.3
<i>Weighted base</i>	1,166	1,196	1,185	1,279	996

Source: Joint Health Surveys Unit (2008) Health Survey for England 2006. Cardiovascular disease and risk factors. The Information Centre: Leeds.

Table 12.7 Prevalence of diagnosed diabetes by sex and ethnic group, adults aged 16 and over, 2004, England

	General population	Black Caribbean	Black African	Indian	Pakistani	Bangladeshi	Chinese	Irish
MEN	%	%	%	%	%	%	%	%
Type 1	0.6	0.5	0.7	0.9	n/a	0.2	0.3	n/a
Type 2	3.8	9.5	4.3	9.2	7.3	8.0	3.4	3.6
Types 1 and 2 combined	4.3	10.0	5.0	10.1	7.3	8.2	3.8	3.6
<i>Unweighted base</i>	6,602	414	390	550	433	411	348	497
WOMEN								
Type 1	0.3	0.8	0.1	n/a	0.2	0.6	n/a	0.3
Type 2	3.1	7.6	2.0	5.9	8.4	4.5	3.3	2.0
Types 1 and 2 combined	3.4	8.4	2.1	5.9	8.6	5.2	3.3	2.3
<i>Unweighted base</i>	8,234	653	469	634	508	478	375	656

Notes: Numbers may not add exactly due to rounding. Type 1 diabetes defined as doctor-diagnosed diabetes with diagnosis age <35 and currently on insulin.

General Population data taken from Health Survey for England 2003.

Source: Department of Health (2005) Health Survey for England 2004. See <http://www.ic.nhs.uk/pubs/hlthsvyeng2004upd>

Figure 12.7 Prevalence of diagnosed diabetes by ethnic group, 2004, adults aged 16 and over, England

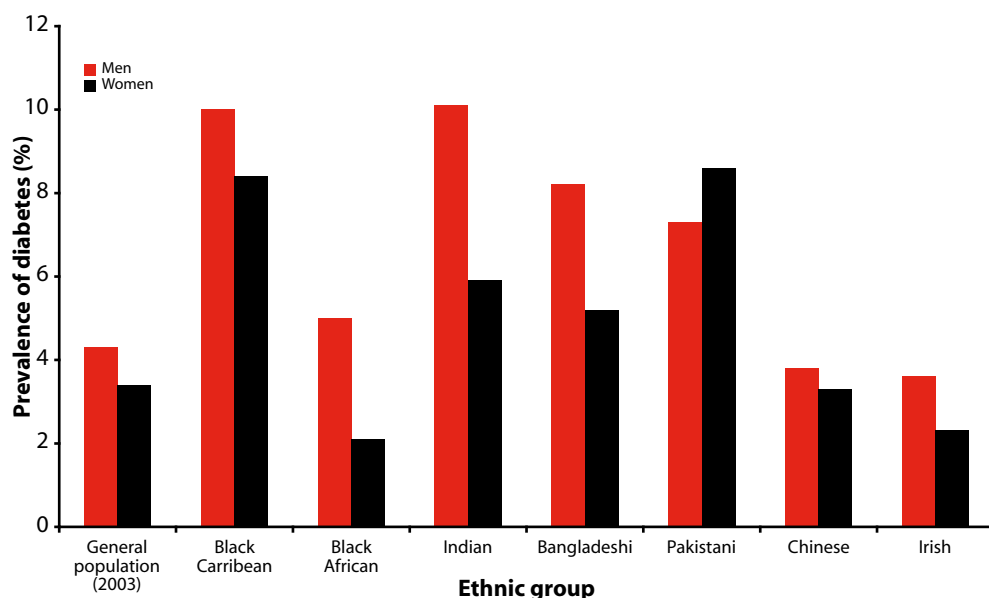


Table 12.8 *Estimated prevalence of diabetes and numbers of adults aged 20 to 79 with diabetes, 2003 and 2025, selected countries, the World*

	2003					2025				
	Population Aged 20-79 (000s)	Men (000s)	Women (000s)	Numbers with diabetes Total (000s)	Crude prevalence %	Population Aged 20-79 (000s)	Men (000s)	Women (000s)	Numbers with diabetes Total (000s)	Crude prevalence %
World	3,822,720	92,455	101,646	194,195	5.1	5,250,955	158,117	174,552	332,749	6.3
WHO Africa Region	295,065	3,580	3,491	7,072	2.4	541,140	7,870	7,171	15,041	2.8
Angola	5,846	84	73	157	2.7	11,873	206	177	383	3.2
Benin	2,911	33	30	63	2.1	5,851	74	69	143	2.4
Botswana	716	9	17	26	3.6	1,011	15	21	36	3.5
Burkina Faso	4,969	68	67	135	2.7	10,920	106	99	205	1.9
Burundi	2,860	19	19	38	1.3	5,534	53	45	98	1.8
Cameroon	7,278	24	35	58	0.8	12,625	65	83	148	1.2
Cape Verde	228	2	3	5	2.3	412	6	7	13	3.2
Central African Republic	1,780	21	20	41	2.3	2,988	37	35	72	2.4
Chad	3,674	39	62	101	2.7	7,349	82	126	208	2.8
Comoros	355	5	4	9	2.5	715	14	11	25	3.5
Congo, Democratic Republic of	22,436	295	257	552	2.5	49,259	799	673	1,472	3.0
Congo, Republic of	1,403	18	18	36	2.6	2,823	38	36	74	2.6
Cote d'Ivoire	7,959	107	79	186	2.3	13,673	182	138	320	2.3
Djibouti	300	5	10	15	4.9	378	4	10	13	3.5
Equatorial Guinea	226	3	6	9	2.5	430	6	6	11	2.7
Eritrea	1,906	20	17	36	1.9	3,628	51	43	94	2.6
Ethiopia	29,562	299	251	550	1.9	52,442	693	568	1,260	2.4
Gabon	647	10	9	19	2.9	1,095	16	15	31	2.8
Gambia	703	8	7	15	2.2	1,167	16	14	30	2.6
Ghana	9,986	185	149	334	3.3	17,839	408	316	724	4.1
Guinea	3,855	43	36	79	2.0	7,131	93	78	171	2.4
Guinea-Bissau	588	6	6	12	2.0	1,036	12	11	22	2.2
Kenya	14,604	194	166	360	2.5	25,033	473	388	861	3.4
Lesotho	1,040	12	20	32	3.1	1,195	14	21	35	2.9
Liberia	1,573	17	15	32	2.0	3,300	44	36	80	2.4
Madagascar	7,782	104	88	192	2.5	15,397	277	230	507	3.3
Malawi	5,131	47	41	87	1.7	8,961	109	87	196	2.2
Mali	5,231	56	51	107	2.0	10,339	124	107	231	2.2
Mauritania	1,309	18	28	46	3.5	2,590	41	61	101	3.9
Mozambique	8,681	142	124	267	3.1	13,773	270	227	497	3.6
Namibia	831	10	16	26	3.1	1,463	19	28	47	3.2
Niger	4,728	58	89	147	3.1	10,662	115	167	282	2.6
Nigeria	54,248	655	563	1,219	2.2	103,872	1,412	1,191	2,603	2.5
Reunion	474	29	33	62	13.1	640	49	55	105	16.4
Rwanda	3,645	23	19	41	1.1	6,305	50	41	91	1.4
Sao Tome and Principe	107	2	1	3	2.8	146	3	2	5	3.4
Senegal	4,607	55	49	104	2.3	8,798	120	108	228	2.6
Seychelles	79	3	3	6	12.3	67	5	5	10	14.9
Sierra Leone	2,268	26	23	49	2.2	4,181	52	42	98	2.3
Somalia	4,086	50	42	92	2.3	9,053	143	122	264	2.9
South Africa	24,741	323	519	841	3.4	26,816	417	638	1,055	3.9
Swaziland	450	5	8	13	3.0	589	7	10	17	2.9
Tanzania	16,616	203	176	379	2.3	31,855	545	457	1,002	3.1
Togo	2,196	24	21	45	2.1	4,178	52	45	98	2.3
Uganda	10,018	85	70	155	1.5	22,514	253	207	460	2.0
Western Sahara	149	3	4	7	4.9	269	6	8	14	5.2
Zambia	4,625	76	64	140	3.0	8,922	177	140	317	3.6
Zimbabwe	5,686	59	90	149	2.6	10,041	120	165	284	2.8
WHO Eastern Mediterranean and Middle East Region	276,025	9,713	9,524	19,237	7.0	493,560	19,257	20,153	39,410	8.0
Afghanistan	11,130	502	416	917	8.2	21,973	973	846	1,819	8.3
Algeria	17,737	321	407	728	4.1	28,950	693	898	1,591	5.5
Armenia	2,607	82	129	211	8.1	2,968	125	191	316	10.7
Bahrain	439	42	23	66	14.9	645	67	51	118	18.3
Egypt	39,299	1,730	2,140	3,869	9.8	63,676	3,441	4,362	7,803	12.3
Iran	38,506	706	685	1,391	3.6	65,757	1,439	1,458	2,896	4.4
Iraq	11,962	456	460	916	7.7	23,293	1,061	1,065	2,126	9.1
Jordan	2,648	96	89	185	7.0	5,054	245	227	472	9.3
Kuwait	1,240	107	51	158	12.8	2,178	220	138	358	16.4
Lebanon	2,202	67	73	140	6.4	3,214	140	153	293	9.1
Libya	3,128	48	67	115	3.7	5,215	95	148	243	4.7
Morocco	17,598	312	419	732	4.2	28,128	646	870	1,515	5.4
Occupied Palestinian Territories	1,525	55	58	113	7.4	3,543	148	144	291	8.2
Oman	1,274	85	60	145	11.4	2,710	173	150	323	11.9
Pakistan	72,760	3,311	2,870	6,180	8.5	136,909	5,891	5,716	11,607	8.5
Qatar	393	47	16	63	16.0	537	63	35	98	18.2
Saudi Arabia	10,544	597	395	992	9.4	21,851	1,146	955	2,101	9.6
Sudan	16,584	210	312	522	3.1	29,070	473	672	1,145	3.9
Syria	8,516	260	268	528	6.2	16,711	721	720	1,441	8.6
Tunisia	5,966	118	156	274	4.6	8,442	214	292	506	6.0
United Arab Emirates	1,829	273	95	367	20.1	2,482	410	197	607	24.5
Yemen	8,137	290	335	626	7.7	20,253	875	866	1,741	8.6
WHO European Region	621,235	22,337	26,041	48,378	7.8	646,334	27,842	30,796	58,638	9.1
Albania	1,966	35	40	75	3.8	2,559	61	70	131	5.1
Andorra	50	2	2	4	7.7	52	3	3	5	9.5
Austria	5,991	259	318	576	9.6	5,887	338	365	703	11.9
Azerbaijan	5,154	144	214	358	6.9	6,793	259	377	636	9.4
Belarus	7,336	309	374	683	6.9	7,233	357	417	773	10.7
Belgium	7,531	141	175	315	4.2	7,658	180	214	395	5.2
Bosnia and Herzegovina	3,074	117	178	295	9.6	3,270	166	237	402	12.3
Bulgaria	5,894	236	356	591	10.0	4,871	223	342	565	11.6
Croatia	3,412	82	117	199	5.8	3,304	97	124	221	6.7
Cyprus	541	12	15	28	5.1	637	18	22	40	6.3
Czech Republic	7,734	365	370	735	9.5	7,599	442	446	887	11.7
Denmark	3,863	121	144	265	6.9	3,988	148	182	330	8.3
Estonia	991	43	53	96	9.7	814	42	48	89	11.0
Finland	3,775	130	143	274	7.2	3,822	186	198	384	10.0
France	42,546	1,306	1,347	2,654	6.2	45,141	1,610	1,676	3,285	7.3
Georgia	3,681	129	203	332	9.0	3,341	143	215	358	10.7
Germany	61,895	2,879	3,415	6,294	10.2	60,030	3,459	3,685	7,144	11.9
Greece	8,069	217	276	493	6.1	7,767	254	312	566	7.3
Hungary	7,350	336	375	711	9.7	6,807	365	397	762	11.2
Iceland	192	2	2	4	2.0	229	3	3	6	2.5
Ireland	2,674	44	46	90	3.4	3,290	66	69	135	4.1
Israel	3,959	141	141	282	7.1	5,776	243	225	468	8.1
Italy	43,925	1,400	1,480	2,880	6.6	40,482	1,584	1,615	3,198	7.9
Kazakhstan	10,235	305	254	559	5.5	11,358	430	367	797	7.0
Kyrgyzstan	2,896	71	54	125	4.3	4,355	144	108	252	5.8
Latvia	1,758	78	96	174	9.9	1,610	84	94	178	11.1
Lithuania	2,648	115	134	249	9.4	2,626	136	148	284	10.8
Luxembourg	327	6	7	13	3.8	415	8	10	18	4.4
Macedonia	1,428	31	39	70	4.9	1,598	44	53	97	6.1
Malta	280	11	15	26	9.2	304	15	20	35	11.6
Moldova, Republic of	2,915	117	125	242	9.3	3,095	148	154	302	9.8
Monaco	23	1	1	1	6.1	24	1	1	2	7.2
Netherlands	11,678	203	229	432	3.7	12,538	291	344	635	5.1
Norway	3,154	96	116	212	6.7	3,534	129	159	289	8.2
Poland	27,852	1,239	1,268	2,507	9.0	28,567	1,546	1,607	3,153	11.0
Portugal	7,471	279	306	585	7.8	7,456	344	362	706	9.5

	2003				Crude prevalence %	2025				
	Population Aged 20-79 (000s)	Men (000s)	Women (000s)	Total (000s)		Population Aged 20-79 (000s)	Men (000s)	Women (000s)	Total (000s)	
Romania	16,392	760	759	1,519	9.3	15,860	834	843	1,677	10.6
Russian Federation	105,244	4,418	5,276	9,694	9.2	98,969	4,909	5,838	10,747	10.9
San Marino	20	1	1	1	6.1	21	1	1	2	7.2
Serbia and Montenegro	7,542	182	240	422	5.6	7,597	215	268	483	6.4
Slovakia	3,903	168	171	339	8.7	4,127	219	224	443	10.7
Slovenia	1,511	72	73	145	9.6	1,451	87	87	174	12.0
Spain	30,329	1,210	1,795	3,004	9.9	29,155	1,479	1,466	2,945	10.1
Sweden	6,290	206	251	457	7.3	6,373	246	303	548	8.6
Switzerland	5,310	235	270	505	9.5	5,114	308	339	647	12.6
Tajikistan	3,174	70	46	117	3.7	5,305	158	110	268	5.1
Turkey	42,411	1,254	1,704	2,959	7.0	59,689	2,285	3,145	5,430	9.1
Turkmenistan	2,648	62	43	105	4.0	4,537	143	105	248	5.5
Ukraine	35,625	1,552	1,901	3,453	9.7	31,102	1,558	1,800	3,358	10.8
United Kingdom*	42,423	814	858	1,672	3.9	45,322	1,080	1,062	2,141	4.7
Uzbekistan	14,144	333	228	561	4.0	22,883	754	544	1,297	5.7
WHO North American Region	289,550	10,947	12,070	23,016	7.9	374,364	16,996	19,179	36,175	9.7
Anguilla	8	0	0	0	5.5	11	0	0	1	6.7
Antigua and Barbuda	41	2	1	2	5.8	57	2	2	5	8.2
Aruba	43	2	2	4	9.7	59	3	3	6	10.9
Bahamas	193	6	11	17	9.0	266	11	20	30	11.4
Barbados	189	7	9	16	8.5	217	14	14	28	12.8
Belize	124	4	4	7	5.7	216	9	9	17	7.8
Bermuda	39	2	2	4	9.7	54	3	3	6	10.9
British Virgin Islands	13	1	1	1	8.3	18	1	1	2	9.6
Canada	22,640	1,099	835	2,034	9.0	27,135	1,651	1,381	3,032	11.2
Cayman Islands	22	1	1	2	9.7	31	2	2	3	10.9
Dominica, Commonwealth of	42	2	2	4	8.4	58	3	3	6	9.8
Grenada	54	2	2	4	6.8	74	3	3	6	8.4
Guadeloupe	289	9	10	19	6.5	345	13	15	28	8.2
Guyana	457	9	18	28	6.0	480	14	31	46	9.5
Haiti	4,113	80	157	236	5.7	6,679	157	308	464	7.0
Jamaica	1,528	39	71	111	7.2	2,197	75	135	210	9.6
Martinique	265	8	9	17	6.5	305	12	13	25	8.2
Mexico	59,336	1,617	2,792	4,409	7.4	87,640	3,235	5,800	9,035	10.3
St Kitts and Nevis	23	1	1	2	6.6	32	1	1	3	8.0
St Lucia	101	3	3	6	6.2	132	5	6	11	8.4
St Vincent and the Grenadines	71	3	3	5	7.7	97	5	5	9	9.4
Trinidad and Tobago	861	11	57	68	7.9	1,042	44	80	123	11.8
USA	199,097	8,041	7,980	16,020	8.0	247,219	11,735	11,345	23,081	9.3
WHO South and Central American Region	251,850	6,021	8,137	14,158	5.6	363,881	11,000	15,156	26,156	7.2
Argentina	23,958	563	742	1,305	5.4	31,775	836	1,006	1,842	5.8
Bolivia	4,480	100	117	217	4.8	7,927	209	241	450	5.7
Brazil	109,901	2,496	3,186	5,682	5.2	150,418	4,556	6,101	10,657	7.1
Chile	9,864	231	326	557	5.6	13,327	356	550	906	6.8
Colombia	25,524	492	607	1,099	4.3	39,178	1,025	1,250	2,274	5.8
Costa Rica	2,493	66	106	172	6.9	3,909	139	228	368	9.4
Cuba	7,980	386	667	1,053	13.2	8,749	541	979	1,512	17.3
Dominican Republic	4,991	191	309	500	10.0	7,081	332	589	920	13.0
Ecuador	7,548	171	190	361	4.8	11,887	357	406	763	6.4
El Salvador	3,620	80	146	225	6.2	5,775	168	306	474	8.2
French Guiana	100	5	6	11	11.1	190	11	15	26	13.7
Guatemala	5,620	117	192	309	5.5	11,171	271	456	728	6.5
Honduras	3,302	71	117	188	5.7	6,123	164	277	441	7.2
Netherlands Antilles	148	7	11	18	12.3	180	11	16	28	15.4
Nicaragua	2,567	58	99	157	6.1	5,124	146	149	395	7.7
Panama	1,779	50	79	129	7.3	2,590	97	163	260	10.0
Paraguay	2,979	52	64	115	3.9	5,533	115	151	265	4.8
Peru	15,397	367	425	793	5.1	23,753	724	864	1,588	6.7
Puerto Rico	2,671	116	236	351	13.2	3,251	168	340	508	15.6
Suriname	251	8	13	22	8.6	315	16	23	39	12.3
Uruguay	2,217	55	96	150	6.8	2,627	72	117	188	7.2
Venezuela	14,460	341	404	746	5.2	22,997	686	837	1,523	6.6
WHO South-East Asian Region	705,292	19,911	19,386	39,296	5.6	1,081,026	41,380	40,187	81,567	7.5
Bangladesh	75,020	1,496	1,419	2,915	3.9	130,288	3,218	3,089	6,307	4.8
Bhutan	1,054	19	20	39	3.7	2,044	44	45	89	4.3
India	603,677	17,970	17,534	35,504	5.9	909,790	37,276	36,200	73,476	8.1
Maldives	144	1	1	3	1.8	304	3	3	7	2.1
Mauritius	786	41	43	85	10.7	986	69	76	145	14.7
Nepal	12,004	245	243	488	4.1	21,644	553	556	1,108	5.1
Sri Lanka	12,607	138	125	263	2.1	15,971	217	218	435	2.7
WHO Western Pacific Region	1,383,705	19,938	23,091	43,029	3.1	1,750,653	33,765	41,997	75,762	4.3
Australia	13,805	476	379	854	6.2	16,950	721	580	1,301	7.7
Brunei Darussalam	209	10	13	22	10.7	332	22	28	50	15.0
Cambodia	6,332	44	81	125	2.0	12,191	98	162	260	2.1
China, Hong Kong	5,424	233	247	480	8.8	6,765	387	477	863	12.8
China, Macau	323	13	14	27	8.2	425	24	31	55	12.9
China, People's Republic of	877,935	10,751	13,059	23,809	2.7	1,079,641	19,913	26,217	46,130	4.3
Cook Islands	13	0	1	1	6.6	17	1	1	1	7.3
East Timor	403	3	3	6	1.4	764	6	6	13	1.6
Fiji	480	18	21	40	8.3	641	31	35	66	10.3
French Polynesia	147	5	6	12	8.0	217	10	13	23	10.8
Guam	93	3	3	6	6.7	148	6	5	11	7.5
Indonesia	132,849	1,195	1,353	2,548	1.9	186,983	2,507	2,703	5,210	2.8
Japan	97,090	3,477	3,252	6,729	6.9	90,130	3,654	3,495	7,149	7.9
Kiribati	60	2	2	4	6.2	82	3	3	7	7.9
Korea, Democratic People's Republic of	14,835	431	343	774	5.2	18,008	635	499	1,135	6.3
Korea, Republic of	34,147	1,210	976	2,186	6.4	39,095	1,820	1,423	3,243	8.3
Lao People's Democratic Republic	2,658	6	22	28	1.1	4,933	12	42	54	1.1
Malaysia	13,280	527	724	1,252	9.4	21,032	1,088	1,514	2,602	12.4
Marshall Islands	46	2	2	4	8.6	64	3	3	7	10.3
Micronesia	82	3	3	6	6.7	113	5	5	10	8.5
Mongolia	1,451	10	10	20	1.4	2,355	23	24	46	2.0
Myanmar	28,474	69	243	312	1.1	41,135	136	416	552	1.3
Nauru	8	1	1	2	30.2	10	2	2	4	33.0
New Caledonia	140	2	3	5	3.8	217	4	6	10	4.7
New Zealand	2,603	97	100	197	7.6	3,106	135	143	278	9.0
Niue	1	0	0	0	6.8	2	0	0	0	7.6
Palau	12	1	1	1	8.7	16	1	1	2	10.3
Papua New Guinea	2,551	20	29	49	1.9	4,546	52	79	131	2.9
Philippines	42,133	399	611	1,010	2.4	69,936	811	1,260	2,071	3.0
Samoa	74	2	3	4	5.9	109	3	3	7	6.1
Singapore, Republic of	3,032	172	201	374	12.3	3,884	331	427	758	19.5
Solomon Islands	221	2	3	5	2.1	480	5	9	14	2.9
Taiwan	13,767	307	459	766	5.6	18,911	481	759	1,240	6.6
Thailand	42,236	348	533	882	2.1	55,716	570	888	1,458	2.6
Tokelau	1	0	0	0	6.4	1	0	0	0	7.6
Tonga	65	4	5	8	12.4	90	6	8	14	15.9
Tuvalu	7	0	0	1	8.6	9	0	1	1	10.8
Vanuatu	101	1	1	2	2.2	195	2	4	6	3.2
Vietnam	46,620	95	386	481	1.0	71,403	256	726	982	1.4

Notes: * Note that the Health Survey for England 2003 verifies this estimate for diagnosed diabetes (types 1 and 2), but estimates that a further 3% of men and 0.7% of women aged over 35 may suffer from undiagnosed diabetes.

Source: International Diabetes Federation (2003) The Diabetes Atlas (Second edition) International Diabetes Federation:Brussels.

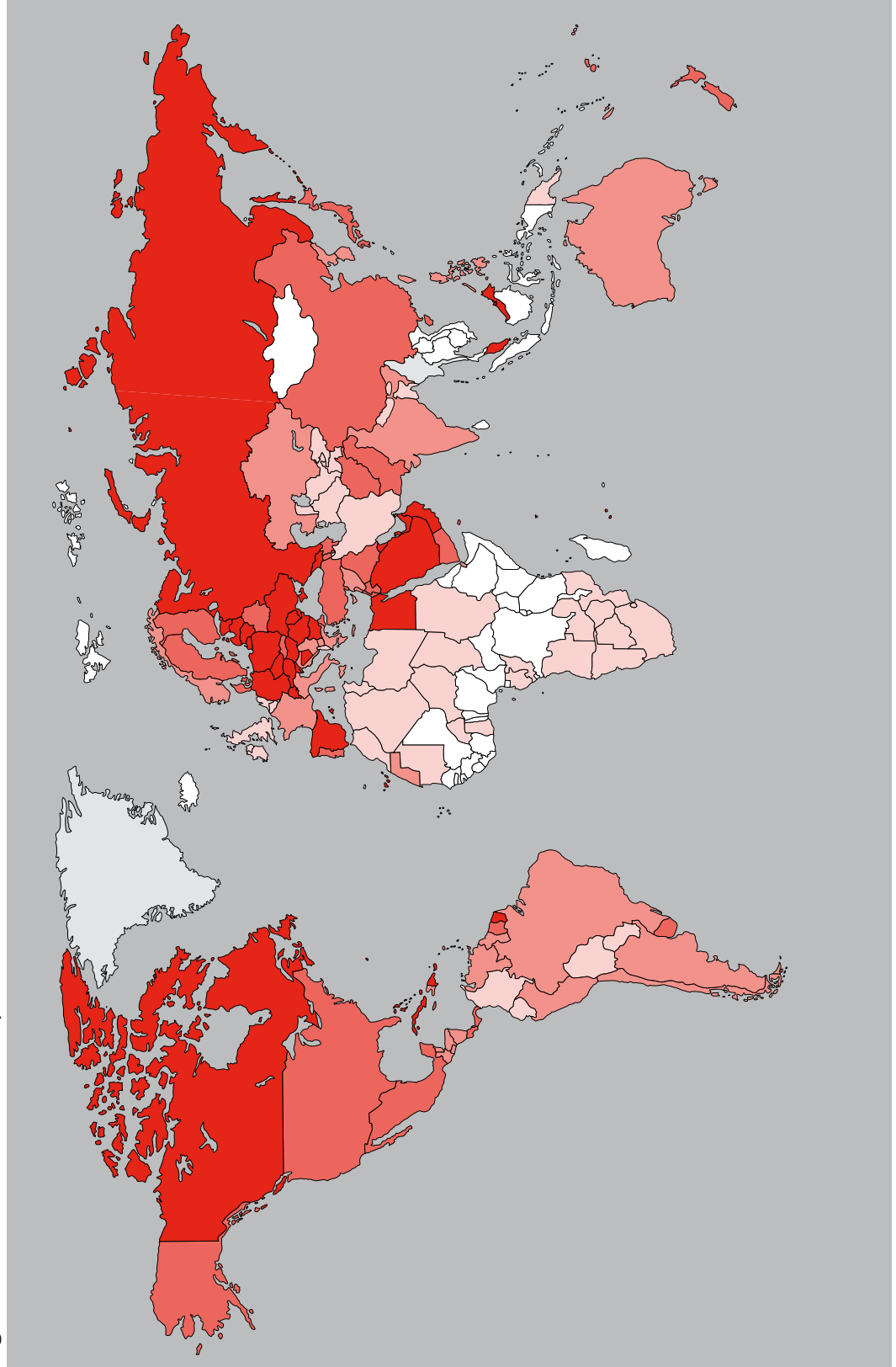
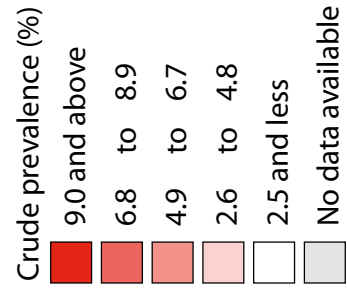


Figure 12.8 Prevalence of diabetes, 2003, the World