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CHRONIC DISEASES AND RISK FACTORS

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As in most countries of the world, cardiovascular diseases are the leading cause of death in Uzbekistan, where they accounted for 65 percent of all deaths in 2001. Mortality rates for cardiovascular diseases differ between males and females. The age-standardized cardiovascular mortality rate for males exceeded that for females by 26 percent in 2001 (842 versus 669 per 100,000). For persons age 0-64 years, the rate for males was 70 percent greater than the rate for females (243 versus 143 per 100,000) (WHO, 2003a).

One of the objectives of the survey was to provide information on cardiovascular risk factors (hypertension, smoking, physical activity levels, and nutritional status), based on data representative of the general population as opposed to clinic-based data.

12.1 HYPERTENSION

12.1.1 Measurement Procedures

The Women's and Men's Questionnaires for the 2002 Uzbekistan Health Examination Survey (UHES) included questions to determine if the respondent had been diagnosed as hypertensive and if she/he was taking medication to control blood pressure. Respondents were also asked if their blood pressure could be measured as part of the survey. Among the 5,588 women and 2,447 men eligible for blood pressure measurement, response rates were 98 and 95 percent, respectively.

Female and male interviewers, who were nurses and doctors, made the blood pressure measurements. Prior to fieldwork, they were given refresher training in measurement procedures in nonclinical settings using sphygmomanometers[1] and stethoscopes according to the protocols of Westat Inc. (1993). Two measurements of systolic and diastolic blood pressure (measured in millimeters of mercury, mmHg) were made with an interval of at least 10 minutes between measurements.

The second measurements were used to classify individuals with respect to hypertension according to internationally recommended categories (WHO, 1999b).

Level of hypertension	Systolic (mmHg)	Diastolic (mmHg)
Optimal	<120	<80
Normal	120-129	80-84
High-normal	130-139	85-89
Stage 1, mildly elevated	140-159	90-99
Stage 2, moderately elevated	160-179	100-109
Stage 3, severely elevated	180+	110+

Individuals were classified as hypertensive if taking antihypertensive drugs, if their systolic blood pressure was ≥ 140 mmHg, or if their diastolic blood pressure was ≥ 90 mmHg.

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[1] Mercury safe, TRIMLINEtm Mercurial Desk Sphygmomanometer.

12.1.2 Levels of Hypertension

Tables 12.1.1 and 12.1.2 show hypertension prevalence rates for women and men. Among women, 8 percent were classified as hypertensive. Of these women, 3 percent were taking antihypertensive medication, 4 percent were stage 1 hypertensive, 1 percent stage 2, and 0.4 percent stage 3.

Table 12.1.1 Hypertension among women

Prevalence of hypertension among women and percent distribution of women by blood pressure status, according to background characteristics, Uzbekistan 2002

Bcckground characteristic	Prevalence of hyper-tension[1]	Classification of blood pressure								Total	Number
		Optimal	Normal	High normal	Blood pressure less than 140/90 mmHg with medication	Mildly elevated (stage 1)	Moder-ately elevated (stage 2)	Severely elevated (stage 3)	Missing		
Age											
15-19	0.9	85.2	12.0	1.6	0.1	0.7	0.1	0.1	0.3	100.0	1,091
20-24	2.0	85.8	10.6	1.7	1.0	0.9	0.0	0.0	0.0	100.0	1,049
25-29	2.9	83.5	10.9	2.5	0.9	1.8	0.3	0.0	0.2	100.0	809
30-34	5.4	77.3	14.4	3.0	2.1	2.8	0.4	0.1	0.0	100.0	734
35-39	10.8	63.9	19.3	6.0	5.1	4.3	1.3	0.2	0.0	100.0	687
40-44	18.1	55.2	20.2	6.3	7.3	7.7	2.1	1.0	0.3	100.0	626
45-49	29.4	43.7	17.4	9.5	8.2	13.4	4.9	2.9	0.0	100.0	466
Residence											
Urban	7.1	76.7	12.4	3.7	2.9	3.1	0.6	0.4	0.2	100.0	2,175
Rural	8.0	72.8	15.4	3.7	2.7	3.8	1.1	0.4	0.0	100.0	3,288
Region											
Western	8.7	66.9	17.1	7.3	3.7	3.6	0.8	0.6	0.0	100.0	699
Central	10.0	67.2	18.4	4.4	4.3	4.2	0.9	0.6	0.0	100.0	1,311
East-Central	8.5	75.6	11.4	4.3	1.4	4.9	1.7	0.4	0.1	100.0	1,431
Eastern	5.7	80.4	12.6	1.0	3.0	2.2	0.4	0.0	0.3	100.0	1,518
Tashkent City	3.4	81.5	11.9	3.3	1.0	1.4	0.3	0.7	0.0	100.0	503
Oversampled areas											
Karakalpakstan	6.1	68.2	17.9	7.7	1.2	3.5	0.6	0.8	0.0	100.0	387
Ferghana Oblast	5.0	77.6	15.9	1.5	2.8	2.2	0.0	0.1	0.0	100.0	632
Education											
Primary/middle	6.5	76.3	12.7	4.5	2.4	3.1	0.4	0.6	0.0	100.0	578
Secondary	7.5	74.0	14.8	3.5	2.3	3.6	1.2	0.5	0.2	100.0	3,189
Secondary special	6.6	75.8	13.5	3.9	3.0	2.9	0.5	0.3	0.2	100.0	1,122
Higher	11.5	71.1	13.5	3.9	6.0	4.7	0.6	0.3	0.0	100.0	574
Ethnic group											
Uzbek	7.4	74.5	14.2	3.8	2.7	3.4	0.9	0.3	0.1	100.0	4,669
Other	9.1	73.4	13.9	3.2	3.2	4.1	0.9	0.9	0.4	100.0	794
BMI											
<18.5	2.7	83.6	11.0	1.5	1.0	1.7	0.0	0.0	1.1	100.0	298
18.5-24.9	4.4	79.2	13.1	3.2	2.1	1.9	0.3	0.2	0.1	100.0	3,597
≥25	16.4	60.9	17.2	5.5	5.0	7.8	2.6	1.0	0.0	100.0	1,512
Missing	4.0	76.1	18.0	1.9	0.9	2.2	0.0	1.0	0.0	100.0	56
Total	7.6	74.3	14.2	3.7	2.8	3.5	0.9	0.4	0.1	100.0	5,463

Note: When systolic and diastolic blood pressures fall into different categories, the higher category determines the individual's status.
[1] Blood pressure ≥140/90 mmHg or currently taking antihypertensive medication

Table 12.1.2 Hypertension among men

Prevalence of hypertension among men and percent distribution of men by blood pressure status, according to background characteristics, Uzbekistan 2002

Bcckground characteristic	Prevalence of hyper-tension[1]	Classification of blood pressure								Total	Number
		Optimal	Normal	High normal	Blood pressure less than 140/90 mmHg with medication	Mildly elevated (stage 1)	Moder-ately elevated (stage 2)	Severely elevated (stage 3)	Missing		
Age											
15-19	2.1	76.3	18.7	2.9	0.4	1.5	0.1	0.0	0.0	100.0	380
20-24	4.2	61.7	29.8	3.7	0.7	3.3	0.2	0.0	0.6	100.0	388
25-29	3.6	51.7	37.8	6.9	0.5	2.7	0.4	0.0	0.1	100.0	399
30-34	5.8	46.3	39.6	8.2	0.0	5.5	0.3	0.0	0.0	100.0	293
35-39	6.5	43.5	43.3	6.7	0.8	4.1	0.0	1.6	0.0	100.0	256
40-44	15.4	26.9	44.3	12.5	2.2	11.2	1.9	0.1	1.0	100.0	227
45-49	20.5	19.8	42.5	17.2	0.9	14.2	5.4	0.1	0.0	100.0	196
50-54	24.8	24.0	37.4	13.8	5.5	15.8	3.3	0.2	0.0	100.0	140
55-59	19.9	18.4	43.5	18.2	0.8	16.5	0.5	2.1	0.0	100.0	54
15-49	6.9	50.6	35.0	7.3	0.7	5.1	0.9	0.2	0.2	100.0	2,140
Residence											
Urban	8.9	44.9	35.6	10.3	1.4	6.2	1.1	0.2	0.3	100.0	916
Rural	7.8	50.5	35.1	6.4	0.8	5.9	0.9	0.3	0.2	100.0	1,417
Region											
Western	13.4	43.8	31.7	11.1	3.1	7.5	2.5	0.3	0.0	100.0	314
Central	9.4	60.2	23.6	6.8	0.0	7.3	1.6	0.5	0.0	100.0	510
East-Central	6.4	46.1	39.1	7.8	0.0	6.2	0.0	0.3	0.6	100.0	646
Eastern	5.5	46.8	42.0	5.6	1.6	3.1	0.8	0.0	0.1	100.0	665
Tashkent City	12.3	37.0	36.6	14.0	1.5	9.4	0.9	0.5	0.1	100.0	198
Oversampled areas											
Karakalpakstan	13.9	30.9	37.8	17.4	0.8	8.9	3.7	0.4	0.0	100.0	185
Ferghana Oblast	7.9	41.5	43.7	6.6	0.7	5.8	1.3	0.0	0.3	100.0	259
Education											
Primary/middle	6.2	61.0	27.8	4.2	0.0	6.1	0.2	0.0	0.8	100.0	188
Secondary	6.9	50.2	35.8	7.1	0.9	4.8	1.1	0.0	0.0	100.0	1,311
Secondary special	9.9	47.1	34.2	8.6	1.3	6.8	1.2	0.6	0.2	100.0	470
Higher	12.1	36.5	38.9	12.0	1.4	9.2	0.7	0.7	0.6	100.0	364
Ethnic group											
Uzbek	7.6	50.0	34.9	7.3	0.9	5.7	0.8	0.2	0.2	100.0	2,011
Other	12.3	37.8	38.1	11.8	1.8	8.0	2.1	0.3	0.0	100.0	322
BMI											
<18.5	2.5	76.3	17.8	3.4	0.3	2.2	0.0	0.0	0.0	100.0	82
18.5-24.9	5.8	54.1	34.0	6.2	0.7	4.3	0.7	0.1	0.0	100.0	1,482
≥25	14.4	33.0	40.4	11.9	1.8	10.2	1.7	0.7	0.3	100.0	725
Missing	1.9	53.2	30.4	9.1	0.0	1.9	0.0	0.0	5.4	100.0	44
Total	8.3	48.3	35.3	7.9	1.0	6.0	1.0	0.3	0.2	100.0	2,333

Note: When systolic and diastolic blood pressures fall into different categories, the higher category determines the individual's status.
[1] Blood pressure ≥140/90 mmHg or currently taking antihypertensive medication

Among men, 8 percent were also classified as hypertensive. One percent of these men were classified with hypertension controlled by medication, 6 percent were stage 1 hypertensive, 1 percent stage 2, and 0.3 percent stage 3.

The Uzbekistan statistics can be placed in context by reference to strictly comparable international statistics.[2] A literature review found comparable statistics for the age range 35-44 for the United States (NCHS, 2002) and China (Gu et al., 2002). Uzbekistan hypertensive rates over this age range are 14 percent for women and 11 percent for men. The rates for the United States (19 percent for both women and men) substantially exceed those for Uzbekistan. In the case of China, the rate for women (11 percent) is not greatly different from that for Uzbekistan, but the rate for men is substantially higher (17 percent).

12.1.3 Differentials

Comparison of gender-specific rates of hypertension, which are restricted to the same age interval (age 15-49), indicates little difference between women (8 percent) and men (7 percent) (Tables 12.1.1 and 12.1.2). However, differences exist in the distributions between women and men across the three categories of optimal, normal, and high-normal blood pressure categories. Seventy-four percent of women recorded optimal blood pressure levels, while 18 percent were in the normal or high-normal range. The distribution for men is less favorable, with 51 percent in the optimal range and 42 percent in the normal or high-normal range.

Epidemiological studies have shown that hypertension is positively associated with age, a finding confirmed by the 2002 UHES. For women, rates of hypertension increased from about 2 percent (women under age 25) to 29 percent (age 45-49). Similarly for men, the rates increased about tenfold from 2 percent (age 15-19) to 20 percent and higher (age 45-59). The age-specific rates of hypertension were lower for women than for men below age 35 and higher at older ages. This switch in the gender differential was also found in a recent survey in Pakistan (Pakistan Medical Research Council, 1998).

There were notable differences in the prevalence of hypertension by level of education; rates were higher among women with higher education (12 percent) than among those with less education (7 or 8 percent). The same pattern was found among men.

Differentials in hypertension rates by urban-rural residence were modest for both men and women. However, there was a notable difference in the distributions of urban and rural men between the optimal and high-normal categories. There were relatively fewer urban than rural men in the optimal category (45 versus 51 percent) and relatively more urban than rural men in the high-normal category (10 versus 6 percent). One puzzling finding is the relatively low rate of hypertension among women in Tashkent City (3 percent) compared with the rate for men (12 percent).

Significant differences in the prevalence of hypertension were found among respondents classified by their body mass index (BMI). As expected, hypertension levels were higher among overweight/obese subjects compared with those of normal weight. The hypertensive rate among overweight/obese women (BMI $\geq$ 25) was 16 percent as compared with 3 and 4 percent, respectively, among women who were thin (BMI < 18.5) or normal weight (BMI 18.5-24.9). The same pattern was found in men.

### 12.1.4 Awareness and Control of Hypertension

Figure 12.1 shows awareness of hypertension and treatment status among hypertensive women and men age 15-49. The majority of hypertensive women reported that they were aware of their condition (62 percent). A substantial proportion was taking medication and had controlled their blood pressure (37 percent), and another group was being treated but still had elevated blood pressure (18 percent). Seven percent were aware of their condition but were not being treated, and 38 percent were unaware of their condition.

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[2] General population statistics, pertaining to a specific age range, which classify persons as hypertensive if they were taking antihypertensive medication or if their blood pressure was $\geq$ 140/90 mmHg.

Compared with women, hypertensive men were much less aware of their condition. Relatively few hypertensive men had brought their blood pressure under control through treatment (10 percent) and another 8 percent were being treated for hypertension but still had elevated blood pressure. Nineteen percent were aware that they had elevated blood pressure but were not being treated. Most significant was the finding that the majority of hypertensive men (63 percent) were unaware of their condition.

Figure 12.1 Awareness of Hypertension and Treatment Status among Hypertensive Women and Men Age 15-49

UHES 2002
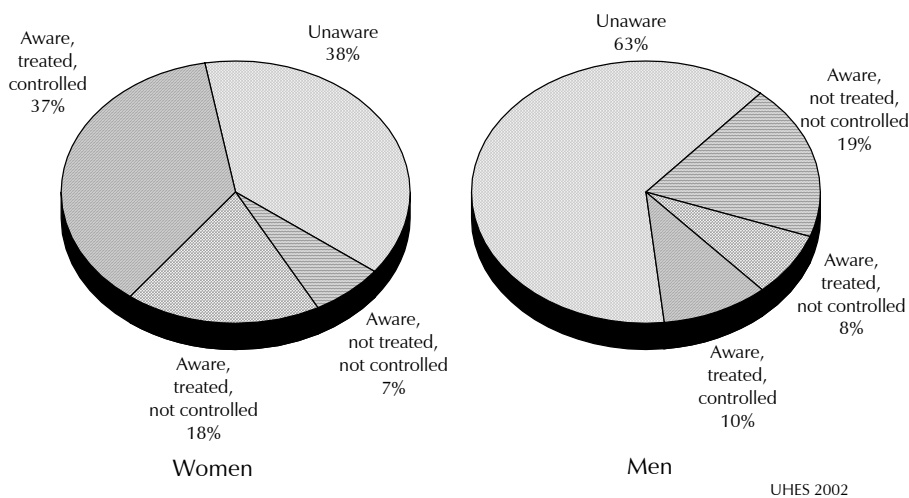
12.1.5 Summary

Prevalence rates of hypertension in Uzbekistan, among women age 15-49 and men age 15-59 were 7 to 8 percent. However, a significantly greater proportion of women (74 percent) than men (48 percent) had a blood pressure reading in the optimal range (< 120/80 mmHg), indicating a clear female health advantage.

In general, rates of hypertension were positively associated with age, education, urban residence, and being overweight/obese.

Relatively more hypertensive women than men were aware of their condition (62 versus 37 percent) and relatively more women than men had controlled their condition with medication (37 versus 10 percent). A first step toward bringing hypertension under control is awareness by individuals of their condition and its implications in terms of premature disability and death. Population education concerning the adverse consequences of hypertension and promotion of blood pressure measurement, particularly targeted at older individuals and men, is an area in which health programs that could be strengthened.

12.2 TOBACCO USAGE

Smoking is a known risk factor for cardiovascular disease, causes lung and other forms of cancer, and contributes to the severity of pneumonia, emphysema, and chronic bronchitis. According to the World Health Organization (WHO), as many as 20 percent of all deaths among middle-aged men in Uzbekistan in the early 1990s were attributable to tobacco use (Peto et al., 1994). Because smoking is an acquired behavior, which is chosen by an individual, all morbidity and mortality due to the smoking are preventable.

Since the mid-1990s, a number of tobacco control measures have been put into effect in Uzbekistan. Each cigarette pack must carry a health warning. The sale of cigarettes to minors under 18 years old is prohibited. The sale of cigarettes without filters and cigarettes containing more than 1 milligram of nicotine and 15 milligrams of tar are prohibited. Advertising of tobacco products is banned in cinemas and in the mass media.

12.2.1 Use of Tobacco Products

In the 2002 UHES, respondents were asked a series of questions about use of cigarettes. They were asked if they had ever used cigarettes (smoked at least 100 cigarettes), if they had ever smoked regularly, if they currently smoked and, if so, approximately how many cigarettes they smoke per day. Respondents were also asked if they ever used naswhy (a homemade chewing tobacco) and if they ever used a pipe or smoked cigars.

Table 12.2.1 indicates that, among women, the use of tobacco products is not common. A little more than 1 percent of women reported ever use of cigarettes or ever smoking regularly. Less than 1 percent of women reported that they were current smokers. Although, current smoker rates were low, there were notable differentials. Current use rates exceeded the national rates in urban areas (2 percent), in Tashkent city (3 percent), and among non-Uzbek women (5 percent). Less than 0.5 percent of women reported ever use of naswhy or pipe/cigars.

Table 12.2.1 Tobacco use: women

Percentage of women who have ever used tobacco products, by type of tobacco, pattern of use, and background characteristics, Uzbekistan HES 2002

Bcckground characteristic	Cigarettes			Ever used pipes or cigars	Ever used naswhy[1]	Number
	Ever used	Ever smoked regularly	Current smoker			
Age						
15-19	0.7	0.4	0.0	0.2	0.4	1,091
20-24	1.0	0.7	0.6	0.5	0.0	1,049
25-29	2.0	1.7	1.2	0.5	0.3	809
30-34	1.2	1.1	0.9	0.0	0.0	734
35-39	1.3	1.3	1.1	0.3	0.3	687
40-44	1.8	1.8	1.6	0.2	0.7	626
45-49	2.3	2.3	1.3	0.9	2.0	466
Residence						
Urban	2.9	2.6	2.1	0.3	0.4	2,175
Rural	0.3	0.2	0.0	0.3	0.4	3,288
Region						
Western	1.0	0.9	0.4	0.2	0.5	699
Central	1.6	1.5	1.2	0.3	0.8	1,311
East-Central	1.8	1.3	0.9	0.4	0.6	1,431
Eastern	0.2	0.2	0.1	0.3	0.0	1,518
Tashkent City	3.5	3.5	3.1	0.2	0.0	503
Oversampled areas						
Karakalpakstan	0.8	0.7	0.4	0.1	0.2	387
Ferghana Oblast	0.0	0.0	0.0	0.3	0.1	632
Education						
Primary/middle	1.0	1.0	1.0	0.3	1.5	578
Secondary	1.1	1.0	0.6	0.2	0.3	3,189
Secondary special	2.0	1.7	1.5	0.5	0.4	1,122
Higher	1.6	1.2	1.1	0.5	0.3	574
Ethnic group						
Uzbek	0.6	0.5	0.3	0.3	0.4	4,669
Other	5.7	5.0	4.5	0.5	0.4	794
Total	1.3	1.2	0.9	0.3	0.4	5,463

Notes:
Ever used cigarettes: smoked at least 100 cigarettes in lifetime
Ever smoked regularly: smoked at least 100 cigarettes in lifetime and self-reported smoked regularly at any time
Current smoker: ever smoked regularly and self-reported smoking at the time of the survey
Ever used naswhy: any reported use of naswhy
Ever used cigars/pipes: smoked at least 20 cigars or pipes of tobacco
[1] Naswhy is a homemade mix of tobacco, butter, and chalk (slaked lime).

The use of tobacco products is much higher among men (Table 12.2.2). Forty-one percent of men reported ever smoking cigarettes and 32 percent reported ever smoking regularly. Approximately one in every five men (21 percent) reported that they currently smoked. A significant proportion of men also reported having ever used naswhy (38 percent), while only 1 percent reported ever use of pipe/cigars.

Table 12.2.2 Tobacco use: men

Percentage of men who have ever used tobacco products, by type of tobacco, pattern of use, and background characteristics, Uzbekistan HES 2002

Bcckground characteristic	Cigarettes			Ever used pipes or cigars	Ever used naswhy[1]	Number
	Ever used	Ever smoked regularly	Current smoker			
Age						
15-19	7.0	4.3	3.4	0.5	13.8	380
20-24	30.4	21.5	16.2	0.3	35.3	388
25-29	43.4	30.5	21.5	1.1	46.9	399
30-34	52.1	42.8	24.5	1.9	52.0	293
35-39	59.1	49.7	28.6	0.7	51.9	256
40-44	54.5	45.8	33.6	0.5	42.4	227
45-49	55.3	44.0	29.5	3.1	32.2	196
50-54	49.0	43.4	21.0	2.7	33.9	140
55-59	59.4	56.0	32.0	6.8	28.3	54
Residence						
Urban	46.9	38.3	27.9	2.2	26.7	916
Rural	37.0	28.6	16.4	0.7	45.2	1,417
Region						
Western	33.3	28.2	14.1	0.8	48.4	314
Central	40.2	25.7	14.7	1.4	42.7	510
East-Central	45.7	36.5	19.0	1.2	35.0	646
Eastern	38.6	32.2	25.4	0.4	40.8	665
Tashkent City	46.9	43.7	38.8	4.7	8.5	198
Oversampled areas						
Karakalpakstan	41.4	34.8	13.8	0.5	54.7	185
Ferghana Oblast	32.6	32.6	29.1	0.0	33.3	259
Education						
Primary/middle	30.0	25.5	16.1	2.5	26.9	188
Secondary	40.2	30.9	19.9	1.0	42.7	1,311
Secondary special	42.8	36.7	22.7	1.2	36.7	470
Higher	46.4	36.0	24.5	1.7	27.7	364
Ethnic group						
Uzbek	39.2	30.6	19.4	1.1	38.3	2,011
Other	51.3	43.4	30.2	2.3	35.3	322
Total	40.9	32.4	20.9	1.3	37.9	2,333

Notes:
Ever used cigarettes: smoked at least 100 cigarettes in lifetime
Ever smoked regularly: smoked at least 100 cigarettes in lifetime and self-reported smoked regularly at any time
Current smoker: ever smoked regularly and self-reported smoking at the time of the survey
Ever used naswhy: any reported use of naswhy
Ever used cigars/pipes: smoked at least 20 cigars or pipes of tobacco
[1] Naswhy is a homemade mix of tobacco, butter, and chalk (slaked lime).

There are substantial differences by background characteristics in current use of cigarettes by men. Current use is lowest among men age 15-19 (3 percent), higher among men age 20-24 (16 percent), and remains relatively stable from age 25-29 to 55-59 (between 22 and 34 percent). Rates of current use are relatively high in urban areas (28 percent), in Tashkent City (39 percent), and among men of non-Uzbek ethnicity (30 percent).

Table 12.3 shows the percent distribution of men who currently smoke cigarettes by three categories of daily usage (light, less than 5 cigarettes per day; moderate, between 5 and 20 per day; and heavy, more than 20 per day).[3] About one-quarter of men who smoke reported light daily usage (22 percent), about half reported moderate usage (53 percent), and somewhat less than one-quarter reported heavy usage (17 percent). There are substantial differences in the incidence of heavy smoking by background characteristics. Among current smokers, heavy smoking is particularly prevalent among older men (30 to 40 percent), men residing in Tashkent City (32 percent), and non-Uzbek men (26 percent).

Among current smokers, the habit of smoking was initiated at about 20 years of age (median 19.8 years). The median age of initiating smoking does not differ greatly by background characteristics.

Table 12.3 Daily cigarette use among men

Among men who currently smoke cigarettes,, the percent distribution by the number of cigarettes smoked daily and the median age of first regular use of cigarettes, according to background characteristics, Uzbekistan HES 2002

Background characteristic	Daily use of cigarettes				Total	Number of current smokers	Median age at first regular use of cigarettes
	Light (<5)	Moderate (5-19)	Heavy (20+)	Not stated			
Age							
15-19	45.9	33.7	1.9	18.4	100.0	13	17.3
20-24	33.1	46.6	3.2	17.1	100.0	63	18.4
25-29	30.0	53.4	7.9	8.6	100.0	86	20.1
30-34	25.6	52.6	14.0	7.8	100.0	72	20.0
35-39	14.9	68.4	9.7	7.0	100.0	73	20.4
40-44	16.6	50.8	31.2	1.4	100.0	76	20.1
45-49	13.5	53.9	28.0	4.6	100.0	58	21.1
50-54	13.0	41.5	33.4	12.1	100.0	29	19.6
55-59	15.1	44.5	40.4	0.0	100.0	17	18.2
Residence							
Urban	18.3	52.7	23.1	5.8	100.0	256	19.0
Rural	26.6	52.9	10.3	10.2	100.0	232	20.2
Region							
Western	42.9	39.0	12.3	5.8	100.0	44	19.0
Central	26.6	58.3	12.9	2.2	100.0	75	20.1
East-Central	24.4	52.4	14.5	8.7	100.0	123	19.9
Eastern	18.2	53.5	15.0	13.4	100.0	169	19.9
Tashkent City	11.8	54.5	32.2	1.4	100.0	77.0	18.9
Oversampled areas							
Karakalpakstan	38.1	47.3	11.1	3.4	100.0	26	18.8
Ferghana Oblast	35.6	39.4	15.5	9.5	100.0	75	20.3
Education							
Primary/middle	11.5	80.6	7.0	0.8	100.0	30	19.3
Secondary	26.1	49.6	16.1	8.2	100.0	261	19.7
Secondary special	17.9	54.9	18.6	8.6	100.0	107	19.8
Higher	20.0	50.1	21.4	8.6	100.0	89	20.2
Ethnic group							
Uzbek	23.3	52.3	14.9	9.4	100.0	390	20.0
Other	18.1	54.7	25.5	1.8	100.0	97	18.7
Total	22.3	52.8	17.0	7.9	100.0	488	19.8

Notes:
Current smoker: self-reported ever smoked regularly and self-reported smoking at the time of the survey

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[3] Comparable statistics are not shown for women because of the relatively small number of women in the survey that reported that they were current smokers.

12.2.2 Cessation of Smoking

As indicated in Table 12.2.2, 32 percent of men reported that they were regular smokers at some point in their lives. Table 12.4 presents information on the cessation of smoking among these 756 men. Among these men, approximately one-third (36 percent) had quit smoking at the time of the survey. Smoking cessation rates tended to be higher among men over age 30 (more than 40 percent in several age groups) and men residing in rural areas (43 percent). The lowest rates of smoking cessation were among men residing in Tashkent City (11 percent) and those residing in the Eastern region (21 percent). The relative high cessation rates among older men is no doubt related to the long period of time since starting smoking during which they could have quit, but it may also be due to health problems arising from extended use of cigarettes.

The duration of time that a former smoker has refrained from smoking is an indication of his success in permanently quitting. Among men who ever smoked regularly, at the time of the survey, 22 percent had abstained from smoking for a year or longer.

12.2.3 Summary

A positive finding from the 2002 UHES is that among women age 15-49 the proportion of current smokers is small (less than 1 percent). Although smoking among women does not appear to be a pressing public health issue at this time, efforts should be made to discourage women from smoking and to encourage smoking women to quit. It is highly desirable for health reasons that cigarette smoking does not become popular among the women of Uzbekistan. The possibility of an increasing use of cigarettes by women should be closely monitored so that appropriately targeted health education programs can be initiated in a timely manner, should that become necessary.

Smoking rates among men age 15-59 are substantially higher than among women. One-fifth of men (21 percent) reported that they are current smokers. Men in urban areas, in Tashkent City, and men of non-Uzbek ethnicity have the highest current smoker rates and are more likely than other groups to report heavy use of cigarettes (more than 20 cigarettes per day). Most current smokers began regular use of cigarettes at about age 20.

Table 12.4 Smoking cessation among men

Among men who have ever smoked regularly, the percentage who have quit smoking, and the percentage who have quit for a year or longer, by background characteristics, Uzbekistan HES 2002

Background characteristic	Percentage that have quit smoking	Percentage that have quit for a year or longer	Number of men who have ever smoked regularly
Age			
15-19	*	*	17
20-24	24.9	17.3	84
25-29	29.6	17.9	122
30-34	42.7	29.1	126
35-39	42.4	21.5	127
40-44	26.5	19.8	104
45-49	33.0	19.2	86
50-54	51.6	28.0	61
55-59	(42.8)	(34.7)	30
Residence			
Urban	27.1	20.1	351
Rural	42.8	23.9	405
Region			
Western	50.1	45.9	89
Central	42.7	15.9	131
East-Central	48.0	27.0	236
Eastern	21.1	15.5	214
Tashkent City	11.2	10.3	86
Oversampled areas			
Karakalpakstan	60.4	56.4	65
Ferghana Oblast	10.7	8.7	85
Education			
Primary/middle	(37.1)	(14.4)	48
Secondary	35.4	24.3	404
Secondary special	38.2	18.6	172
Higher	31.8	23.0	131
Ethnic group			
Uzbek	36.7	21.4	616
Other	30.3	25.5	140
Total	35.5	22.2	756

Notes:
Ever smoked regularly: smoked at least 100 cigarettes during lifetime and self-reported smoked regularly at anytime
Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Comparison of international statistics on prevalence of smoking is difficult because of differences in definitions and age groups in the published results. Nevertheless, the current smoker rate for men in the 2002 UHES (21 percent) is not high relative to rates from other studies in Eastern and Western Europe (WHO, 2003b).

Health education programs that promote the benefits of not starting smoking as well as those of stopping should be targeted toward men. The life expectancy of individuals who quit smoking before age 35 does not differ significantly from that of lifelong nonsmokers (Doll et al., 1994).

12.3   SELF-REPORTED CHRONIC CONDITIONS

The 2002 UHES asked all adult respondents about their lifetime experience with chronic illnesses. Respondents were asked separate questions to determine if they had ever suffered from five illnesses: asthma, diabetes, chronic bronchitis or emphysema, chronic depression, and goiter. Respondents were also asked if during their lifetime they had any other conditions or illnesses that had persisted for three months or longer. For each reported illness, respondents were asked whether a doctor had diagnosed the illness, if the condition had persisting during the past 12 months, and if medication or treatment was received during the past 12 months.

Self-reported data on illness are highly susceptible to respondent error. Various cultural, gender, and community factors can affect the accuracy of such data. Faulty respondent recall could result in underreporting of illnesses—a problem most apt to occur in the case of the spontaneously reported illnesses. Additionally, a respondent may have been unaware of an illness that presented only mild symptoms—again resulting in underreporting of the illnesses. There is also the possibility that in communities that have the reputation of being unhealthy, such as the Aral Sea Environmental Disaster Area, respondents may attribute minor symptoms to chronic illness and overreport illness. Thus, self-reported illness data must be interpreted cautiously and reported rates should not be considered as prevalence estimates for specific illnesses.

12.3.1 Self-reporting of Illness at the National Level

Table 12.5 shows the rates of self-reporting of illness at the national level. Among the five prompted conditions, goiter was by far the most frequently reported by women (14 percent), although not by men (2 percent). No other prompted illness was reported by more than 3 percent of respondents.

Goiter is a disease characterized by enlarged thyroid gland to compensate insufficient production of thyroid hormone. In endemic areas, this deficiency is usually brought about by insufficient iodine in the soil and in the foods consumed by the population. This is a situation characteristic of some regions of Central Asia (Gerasimov, 2002). The principal manifestation of goiter is an enlarged thyroid gland, which can frequently be detected by palpation. Women are particularly susceptible to goiter, so that the gender differential in the reported rates of goiter is consistent with findings elsewhere (Vanderpump et al., 1995).

Among women, no health problem was spontaneously reported by more than 4 percent of respondents except anemia (11 percent) and kidney disease (6 percent). The 11 percent self-reported rate of anemia might be considered consistent with the 15 percent of women measured as moderately/severely anemic in the 1996 Uzbekistan Demographic and Health Survey (UDHS).[4]

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[4] Determination of anemia among female respondents in the 1996 UDHS involved measurement of the hemoglobin content of blood samples using the Hemocue system (Institute of Obstetrics and Gynecology and Macro International, 1997). In this interpretation, the fact that the self-reported rate of anemia is substantially lower than the any anemia rate found in the 1996 UDHS (60 percent, inclusive of mild, moderate, and severe anemia) might be due to failure of respondents with mild anemia to report the illness.

Table 12.5 Self-reporting of chronic illnesses

Percentage of women and men self-reporting chronic illnesses, by type of illness, whether diagnosed by a doctor, and whether treated in the past 12 months, Uzbekistan HES 2002

| Condition or illness | Percentage reporting condition or illness | Number | Percentage of reported cases of illness: | | | Number of reported cases |
			Diagnosed by doctor	Had condition in the past 12 months	Under treatment in the past 12 months	
WOMEN						
Prompted illnesses						
Asthma	0.6	5,463	93.7	61.4	76.6	35
Diabetes	0.3	5,463	79.9	54.6	42.0	16
Chronic bronchitis/emphysema	2.4	5,463	94.5	64.7	61.1	133
Chronic depression	1.2	5,463	60.6	78.3	49.2	67
Goiter	13.6	5,463	87.6	66.5	46.8	741
Spontaneously reported						
Anemia	11.2	5,463	96.4	88.2	54.8	609
Gastritis	3.0	5,463	81.0	79.9	59.7	162
Kidney diseases	6.3	5,463	88.3	82.1	58.9	343
Arthritis	3.7	5,463	77.7	87.1	59.5	201
Liver diseases	2.3	5,463	93.0	67.1	59.6	124
Reproductive organs	1.3	5,463	92.9	72.4	60.5	70
Cardio-vascular diseases	2.6	5,463	82.5	84.3	70.1	140
Other	2.0	5,463	72.2	84.9	55.5	109
MEN						
Prompted illnesses						
Asthma	0.8	2,333	91.2	74.9	53.5	18
Diabetes	0.4	2,333	94.0	82.0	75.2	9
Chronic bronchitis/emphysema	3.3	2,333	88.4	69.3	61.8	78
Chronic depression	0.9	2,333	52.7	79.2	45.2	20
Goiter	1.5	2,333	79.2	45.4	47.3	35
Spontaneously reported						
Anemia	0.5	2,333	80.1	84.1	58.5	11
Gastritis	3.9	2,333	89.8	73.4	62.4	90
Kidney diseases	3.7	2,333	89.4	78.8	61.6	87
Arthritis	4.0	2,333	81.2	72.4	44.5	93
Liver diseases	2.4	2,333	100.0	45.1	40.8	57
Reproductive organs	0.7	2,333	100.0	84.9	56.1	16
Cardio-vascular diseases	2.2	2,333	92.1	83.5	65.3	51
Other	3.0	2,333	84.8	74.2	54.5	70

Among men, spontaneous reporting of health problems was less frequent than among women. The three conditions reported most were arthritis, gastritis, and kidney disease (all 4 percent).

Among all reported illnesses, a doctor had diagnosed the majority of cases—frequently in excess of 80 percent. Additionally, for most reported illnesses, the respondents indicated that the condition had persisted during the 12 months preceding the survey and that they had received treatment during that period.

12.3.2 Self-reporting of Illness by Region

Table 12.6 shows self-reported illnesses rates by region. The rates of self-reported illness are far greater in the Western region than in any other region—typically several times greater than the next highest region.

Table 12.6 Self-reporting of chronic illnesses by region

Percentage of women and men self-reporting chronic illnesses by type of illness and region, Uzbekistan HES 2002

| Condition or illness | Region | | | | | Western region | | |
	Western	Central	East-Central	Eastern	Tashkent City	Karakal-pakstan	Khorezm Oblast	Total
WOMEN								
Prompted illnesses								
Asthma	1.7	0.6	0.6	0.4	0.2	0.9	2.7	0.6
Diabetes	0.3	0.4	0.3	0.1	0.7	0.6	0.0	0.3
Chronic ronchitis/emphysema	6.0	1.7	2.7	1.3	2.1	7.1	4.6	2.4
Chronic depression	4.8	0.9	0.6	0.2	1.6	3.2	6.7	1.2
Goiter	40.2	14.2	6.4	7.8	12.8	39.9	40.4	13.6
Spontaneously reported								
Anemia	52.3	5.7	3.6	5.0	8.4	53.4	51.0	11.2
Gastritis	9.5	3.0	1.9	1.0	2.7	8.9	10.2	3.0
Kidney diseases	21.8	7.9	2.7	2.0	3.6	23.8	19.2	6.3
Arthritis	9.3	5.1	2.0	2.0	1.9	4.5	15.4	3.7
Liver diseases	3.7	2.7	2.8	1.0	1.4	3.6	3.8	2.3
Reproductive organs diseases	3.1	1.8	1.0	0.4	0.8	1.8	4.7	1.3
Cardio-vascular diseases	6.1	4.8	1.2	0.6	1.7	5.5	6.9	2.6
Other	3.8	3.1	1.6	0.7	1.5	2.5	5.4	2.0
Number of women	699	1,311	1,431	1,518	503	387	313	5,463
MEN								
Prompted illnesses								
Asthma	2.8	0.0	1.1	0.4	0.1	3.7	1.5	0.8
Diabetes	1.2	0.4	0.0	0.3	0.7	0.5	2.2	0.4
Chronic bronchitis/emphysema	8.1	2.8	3.9	1.1	2.7	10.5	4.5	3.3
Chronic depression	1.2	0.3	0.3	1.2	3.0	0.6	2.0	0.9
Goiter	2.2	2.0	0.6	1.2	3.0	1.9	2.7	1.5
Spontaneously reported								
Anemia	3.3	0.0	0.0	0.0	0.2	1.2	6.2	0.5
Gastritis	6.1	2.5	5.9	2.7	1.2	7.1	4.8	3.9
Kidney diseases	7.6	4.1	4.8	1.5	0.6	5.2	11.2	3.7
Arthritis	10.9	3.3	4.7	1.5	0.8	8.3	14.8	4.0
Liver diseases	1.2	4.1	4.1	0.5	0.7	1.6	0.7	2.4
Reproductive organs diseases	0.3	1.0	1.1	0.5	0.0	0.0	0.6	0.7
Cardio-vascular diseases	4.5	0.7	3.1	1.5	1.6	5.0	3.8	2.2
Other	4.3	2.3	4.8	1.8	0.8	5.0	3.2	3.0
Number of men	314	510	646	665	198	185	129	2,333

The Western region consists of the Autonomous Republic of Karakalpakstan and Khorezm Oblast, which are adjacent to the Aral Sea Environmental Disaster Area.[5] The region is known to have a level of morbidity about twice as high as the country as a whole (WHO, 1999a), so the high self-reported rates of illness are not surprising. However, the region has also been the recipient of considerable attention from the Ministry of Health and from international agencies in the health field and those efforts may have left both medical practitioners and the population of the region highly sensitized to health issues.

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[5] A stark depiction of the environmental problems of the area is the fact that since the 1990s, the surface area of the Aral Sea has shrunk by half, leaving salt deposits on newly exposed land. The arid unproductive land has contributed to dust storms and other ecological problems in the area.

This may have resulted in more complete reporting of illness levels in the Western region than elsewhere or overreporting of illnesses in that region.

Among women in the Western region, the self-reported rates were especially high for goiter (40 percent), anemia (52 percent), and kidney disease (22 percent). These rates are far higher than those of the next highest region, 14 percent for goiter and 8 percent for both anemia and kidney disease. Other illnesses frequently reported by females in the Western region were kidney disease (22 percent), gastritis (10 percent), arthritis (9 percent), and chronic bronchitis/emphysema and cardiovascular diseases (both 6 percent). These were also the five most frequently reported illnesses by men in the region: arthritis (11 percent), chronic bronchitis/emphysema (8 percent), kidney disease (8 percent), gastritis (6 percent), and cardiovascular diseases (5 percent).

Table 12.6 also shows self-reported illness rates for the Autonomous Republic of Karakalpakstan and Khorezm Oblast, the two administrative areas comprising the Western region. In these areas, the reported illness rates of women for goiter, anemia, and kidney disease were similar.

12.3.3 Summary

Self-reporting of illnesses was more common among female than male respondents. At the national level, the most commonly reported illnesses were goiter and anemia among women (14 and 11 percent of women, respectively). These illnesses primarily affect women and were each reported by less than 2 percent of men. Both goiter and anemia are illnesses that can be greatly reduced by programs of nutritional intervention (supplementation and food fortification with iodine and iron).

Self-reporting of illnesses was substantially higher in the Western region than in other regions of Uzbekistan. The extent to which this reflects actual adverse health conditions in the region or more complete reporting of illness by a sensitized population or some combination of these factors cannot be determined from the survey data. However, evidence of adverse health conditions in the Western region is available from other sources, so that the region merits special attention in terms of health programs and in terms of efforts to resolve its environmental problems.