2.5 Non-communicable Diseases

2.5.1 Cancer

1) Cervical and Breast Cancers

Cervical and breast cancers are fatal diseases that affect Thai women resulting in their premature death; and the trend is rising each year (Table 5.17) especially in Bangkok Metropolis (Figure 5.31). According to the cancer registry in five member provinces, the highest rate of cervical cancer was recorded in Chiang Mai Province, while the highest rate of breast cancer was recorded in Bangkok (Table 5.18). Classified by age, females aged 35 and older have a greater incidence rate of cervical and breast cancers than those aged under 35. In comparison with those in the U.S., most American females (77%) had breast cancer when they were over 50 years of age, while it is only 40-45% among Thai females in the same age group (Tables 5.19 and 5.20). Besides, it was found that 80% of Thai female breast cancer patients were in the invasive stage.[10]

According to the 2004 health examination survey and the 2006 reproduction health survey among females aged 15-59 years across the country, it was found that 49% of respondents had ever undergone a cervical cancer screening test, the highest proportion was noted in the age group 30-44, and the lowest in the age group 15-29 (Table 5.21).

Regarding breast self-examination, it was found in 2004 that approximately 50% of respondents had ever done a breast self-examination, while the 2006 survey, revealed that only 25% had ever done so. concerning breast examination conducted by health personnel, in 2004 and 2006, about 23-24% of females had ever received such service, the highest proportion was noted among those aged 30 and over and lowest among the 15-29 age group (Table 5.21). However, only 4% of females aged 40-59 nationwide had ever taken a mammogram (Table 5.21).

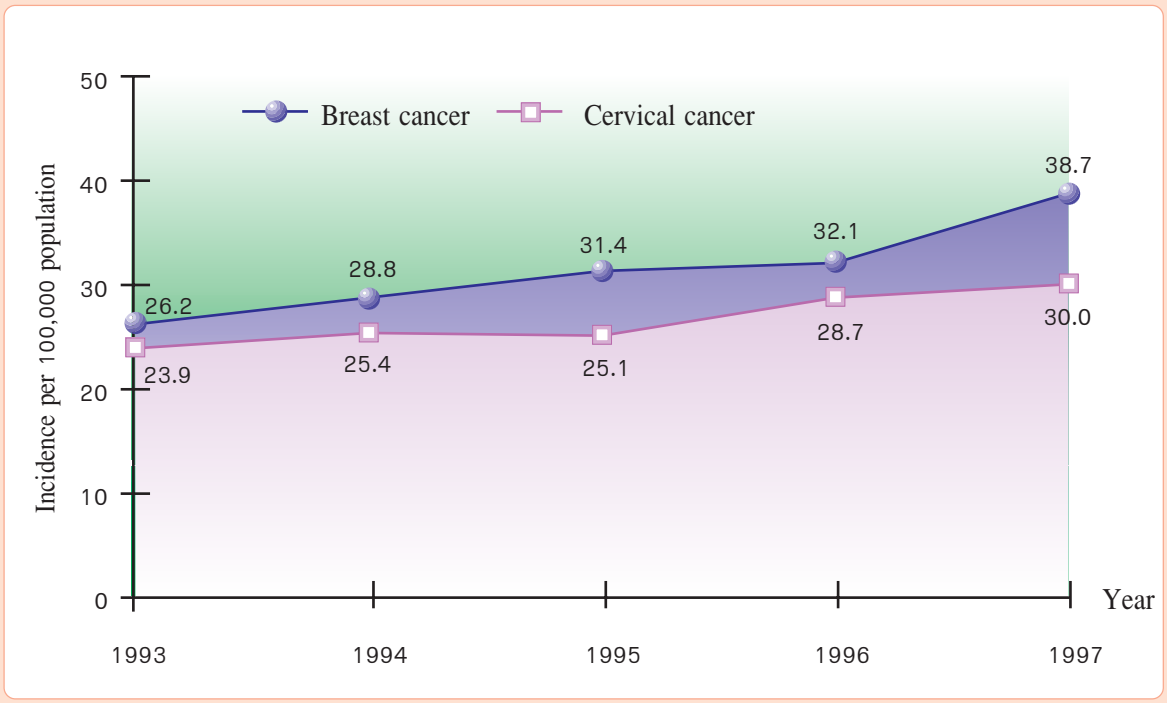
[10] Thammanit Angsusingh. Screening Mammography. Breast Cancer Treatment Centre, Siriraj Hospital.

Table 5.17 Incidence of cancers commonly found among Thai females, 1990, 1993, 1996, 1999 and 2000

Number	Type of cancer	Incidence rate per 100,000 population				
		1990	1993	1996	1999	2000
1	Cervical cancer	23.4	20.9	19.5	19.8	24.7
2	Breast cancer	13.5	16.3	17.2	19.9	20.5
3	Liver cancer	16.3	15.5	16.0	14.3	12.3
4	Lung cancer	12.1	11.1	10.0	9.9	9.3
5	Ovarian cancer	4.5	4.7	5.2	6.2	6.0

Source: National Cancer Institute, Ministry of Public Health.

Figure 5.31 Incidence of cervical and breast cancers among females in Bangkok, 1993-1997



Source: National Cancer Institute, Ministry of Public Health.

Table 5.18 Percentage of cancers of the reproductive organs recorded at provincial cancer registries, 1993, and 1995-1997 and 1998-2000

Province	Cervical cancer, %			Breast cancer, %			Ovarian cancer, %		
	1993	1995-1997	1998-2000	1993	1995-1997	1998-2000	1993	1995-1997	1998-2000
Chiang Mai	25.7	25.6	29.4	15.2	17.6	20.7	6.0	4.7	6.9
Lampang	23.1	23.6	22.3	15.0	16.4	20.8	4.4	3.7	4.6
Khon Kaen	18.0	15.0	15.9	8.6	11.6	13.7	4.5	5.6	6.2
Bangkok	18.5	20.7	19.3	20.6	25.4	24.3	4.2	5.9	6.1
Songkhla	15.8	16.1	20.6	11.5	12.1	17.2	3.1	4.6	5.7

Source: National Cancer Institute, Ministry of Public Health.

Table 5.19 Estimates of the number of breast cancer patients in American females by age group, 1997

Age (years)	Estimated number	Percent
< 30	600	0.3
30-39	8,600	4.8
40-49	32,600	18.1
50-59	33,000	18.3
60-69	36,600	20.3
70-79	43,500	24.2
80+	25,300	14.0
Total	**180,200**	**100.0**

Source: American Cancer Society. Surveillance Research. 1997.

Table 5.20 Ages of Thai women with breast cancer, 1983-2006

Siriraj Hospital's Surgery Department 1,353 cases (1983-1994)			Thanyarak Centre 5,994 cases (1995-2004)		Thanyarak Centre 219 cases (2005)		Thanyarak Centre 499 cases (2006)	
Age (yrs)	Case	percent	Case	percent	Case	percent	Case	percent
< 40	311	23.0	996	16.6	39	13.4	53	11.8
40-49	437	32.3	2,487	41.5	97	33.4	158	32.2
50-59	353	26.1	1,721	28.7	92	31.6	139	31.0
60-69	162	12.0	597	10.0	37	12.7	68	15.1
70 and over	90	6.6	193	3.2	26	8.9	31	6.9
Total	**1,353**	**100**	**5,994**	**100**	**291**	**100**	**449**	**100**

Source: Thammanit Angsusing. Screening Mammography, Thanyarak Breast Cancer Centre.

Table 5.21 Percentage of Thai women who have ever taken screening tests for cervical and breast cancer by age group, 2004 and 2006

Screening	Percentage by age group, 2004 (1)				2006 (2)
	15-29	30-44	45-59	Total	
- Pap smear for cervical cancer	29.0	62.2	55.0	48.5	49.8
- Breast self-examination	35.0	58.3	53.5	48.7	24.6
- Breast examination by health personnel	13.2	28.1	27.9	22.7	24.5
- Mammogram (40-59 yrs)	-	-	-	4.0	-

Source: 1. Report on Health Examination Survey, Third Round, 2003-2004. Health Systems Research Institute, MoPH.

2. Report in Reproduction Health Survey, 2006. National Statistical Office.

2) Liver Cancer

People's food consumption patterns have changed to eating out or eating readily-cooked food bought from restaurants or food stalls where the food might have been contaminated with pathogens or toxic substances due to unhygienic practices of the food handlers. Consumers, then, are likely to be vulnerable to food-borne diseases. Eating improperly heated food, especially fresh-water fish, might cause opisthorchiasis or liver fluke disease (Table 5.12) which is a major cause of liver cancer (Table 5.22). It has been noted that Thailand has the highest incidence of liver cancer in the world.[11]

Table 5.22 Incidence of liver cancer Thailand, 1993, 1996, 1999 and 2000

Year	Incidence per 100,000 population	
	Males	Females
1993	37.4	15.5
1996	40.5	16.0
1999	38.6	14.3
2000	31.2	11.5

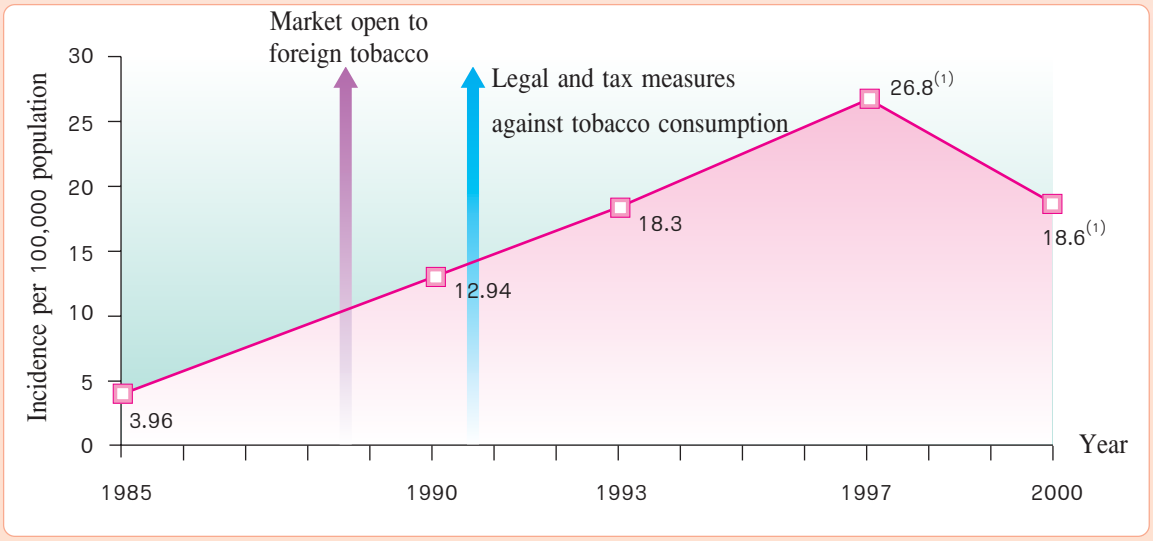
Source: Cancer in Thailand, 1995-2000.

3) Lung Cancer

The incidence of lung cancer increased sevenfold from 3.96 per 100,000 population in 1985 to 26.8 per 100,000 population in 1997, but dropped to 18.6 per 100,000 population in 2000, which was probably associated with tobacco consumption and air pollution (Figure 5.32).

[11] Vatanasapt, V., Sriamporn, S. (1999). Cancer in Thailand 1992-1994. (IARC Technical Report No. 34), Lyon, IARC.

Figure 5.32 Incidence of lung cancer in Thailand, 1985-2000

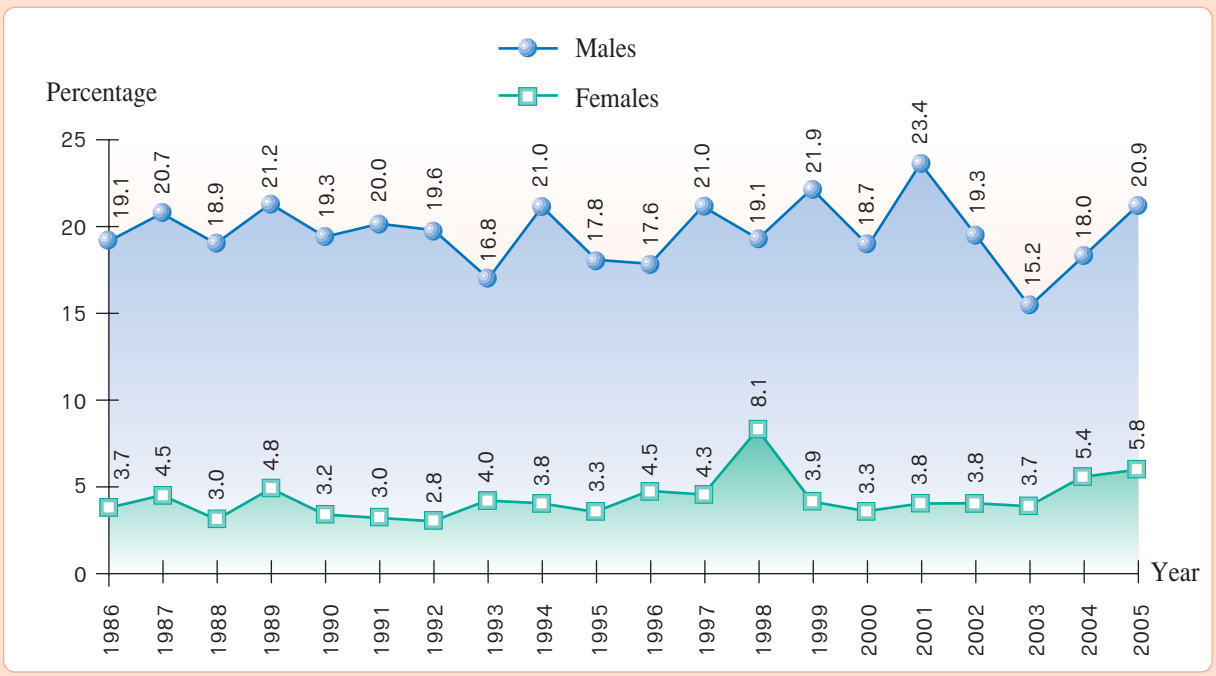


Source: National Cancer Institute, Department of Medical Services, MoPH.

Note: (1) Incidence of lung cancer in males.

Besides, according to the report on inpatient services at the National Cancer Institute between 1986 and 2005, 15% to 23% of inpatients were males, 3 to 8 times higher than in females (Figure 5.33).

Figure 5.33 Percentage of lung cancer patients registered for treatment at the National Cancer Institute, 1986-2005



Source: National Cancer Institute, Department of Medical Services.

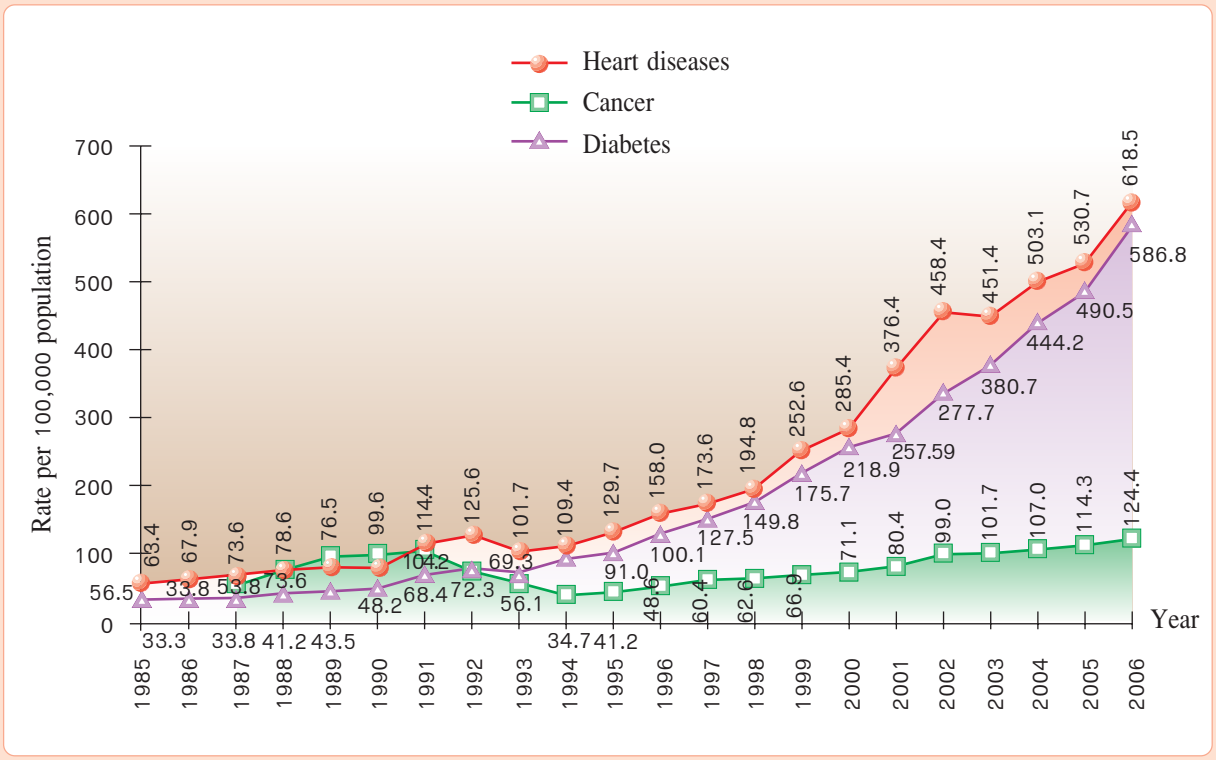
Note: As percentage of all cancer cases.

2.5.2 Heart Diseases, Diabetes and Hypertension

Currently, non-communicable diseases, such as heart diseases and cancer, have become the leading causes of morbidity and mortality among Thai people. Such an increasing trend results from unhealthy consumption behaviours and physical inactivity, as evidently demonstrated by the following hospital admission rates.

- Heart Diseases. The admission rate per 100,000 population has risen from 56.5 in 1985 to 109.4 in 1994 and to 618.5 in 2006.
- Cancer. The admission rate per 100,000 population has risen from 34.7 in 1994 to 124.4 in 2006.
- Diabetes. The admission rate has also risen from 33.3 per 100,000 population in 1985 to 91.0 in 1994 and 586.8 in 2006 (Figure 5.34).

Figure 5.34 Rate of hospitalizations of patients with heart diseases, cancers and diabetes, 1985-2006

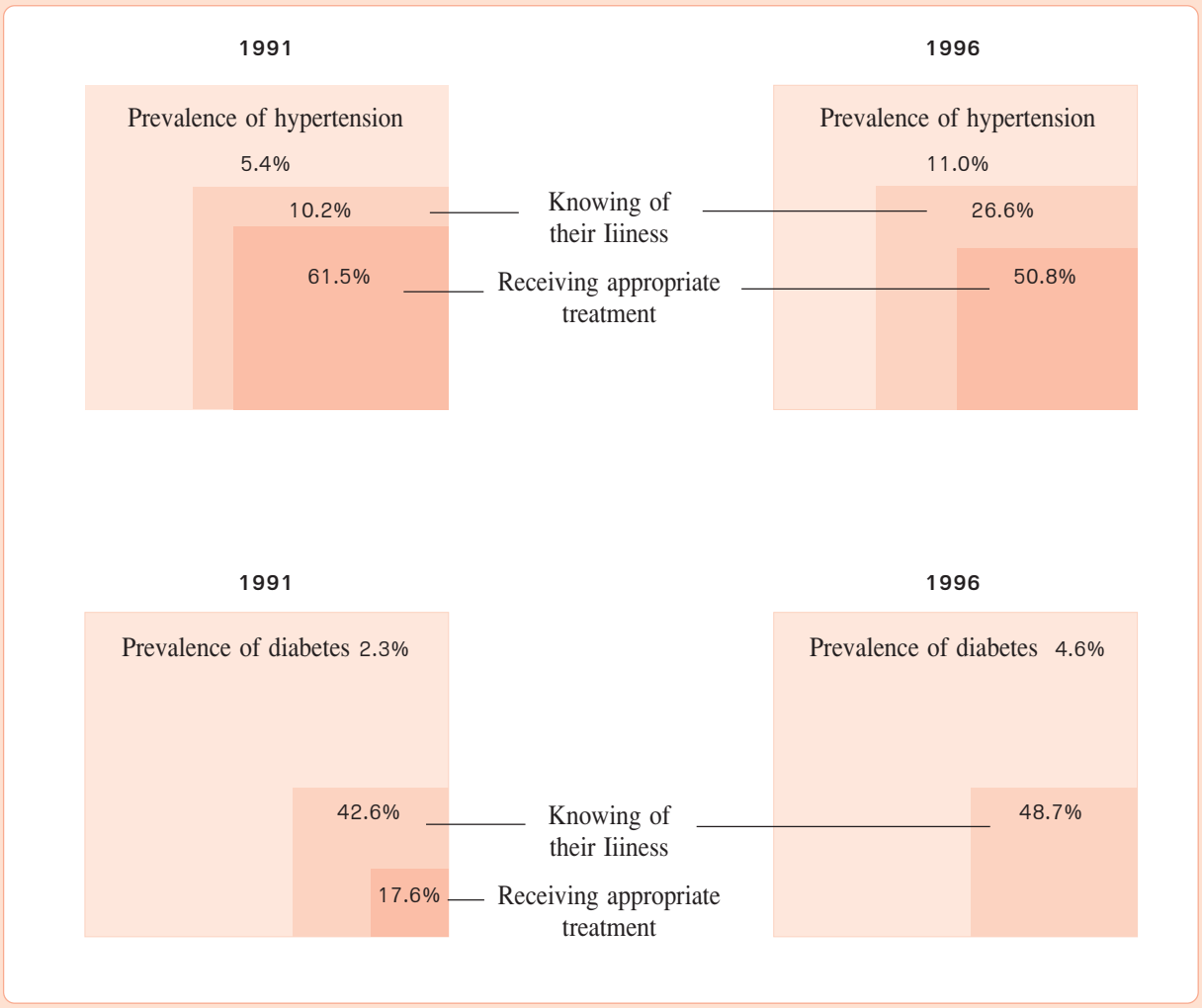


Source: Inpatients Report. Bureau of Policy and Strategy, Ministry of Public Health.

Note: The rate for cancers, since 1994, covers only liver, lung, cervical, and breast cancers.

Besides, the 2003-2004 health examination survey on Thai people revealed that the prevalence of hypertension had a tendency to rise from 5.4% in 1991 to 11.0% in 1996 and to 22% or 10.1 million individuals in 2004. Similarly, the diabetes prevalence had risen from 2.3% in 1991 to 4.6% in 1996 and 6.9% or 3.2 million individuals in 2004. This is evident that the prevalence of non-communicable diseases has a rising trend; and more importantly, the proportion of patients who has never had any diagnosis is also higher, resulting in a lower rate of patients receiving medical treatment. Thus, the people in this group do not have a chance to receive preventive care for their complications that might occur after getting ill with the disease (Figure 5.34 and Table 5.23).

Figure 5.35 Prevalence of diabetes and hypertension as well as appropriate treatment among Thai people, 1991-1996



Source: National Health Foundation, 1998.

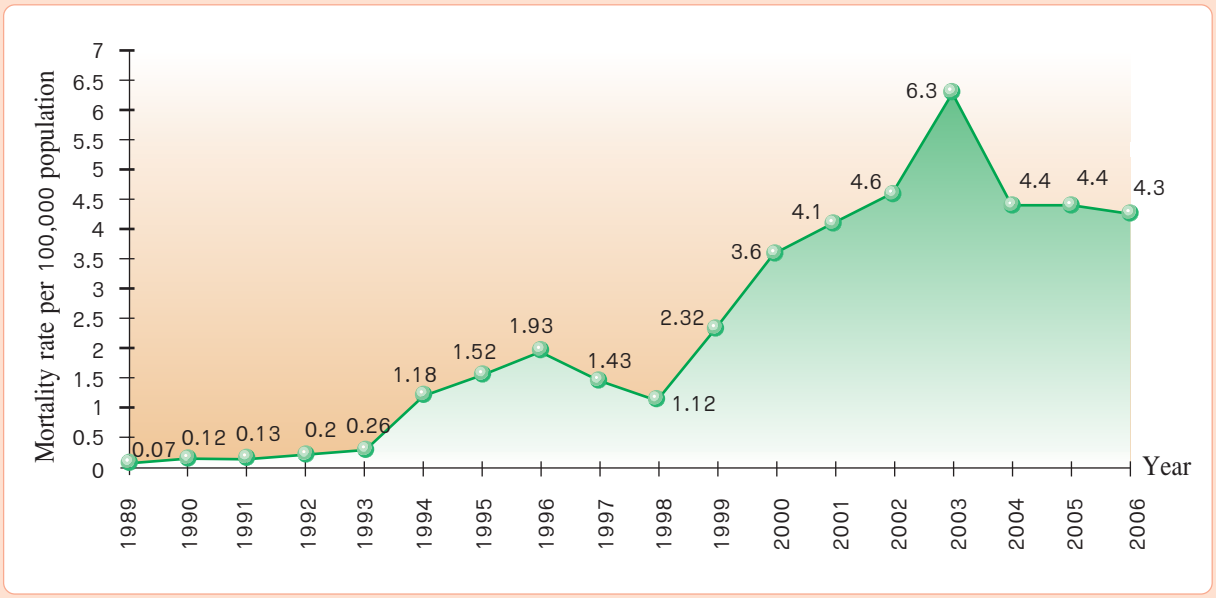
Table 5.23 Prevalence, diagnosis and treatment of chronic diseases among Thai people, 2004

Prevalence and care	Hypentension, %		Hyperlipidemia, %		Diabetes, %	
	Males	Females	Males	Females	Males	Females
Prevalence	**23.3**	**20.9**	**13.7**	**17.1**	**6.4**	**7.3**
- Never had diagnosis	78.6	63.8	87.6	86.8	65.5	49.2
- Diagnosed but not treated	4.5	5.4	3.1	4.1	1.9	1.7
- Treatment received but could not control	11.2	19.0	2.7	3.3	24.1	33.9
- Treatment received and symptoms controlled	5.7	11.7	6.7	5.9	8.5	15.2

Source: Report on Health Examination Survey, Third Round, 2003-2004. Health Systems Research Institute, MoPH.

2.5.3 Emphysema. The prevalence of emphysema has risen from 0.07% in 1989 to 4.3% in 2006 (Figure 5.36).

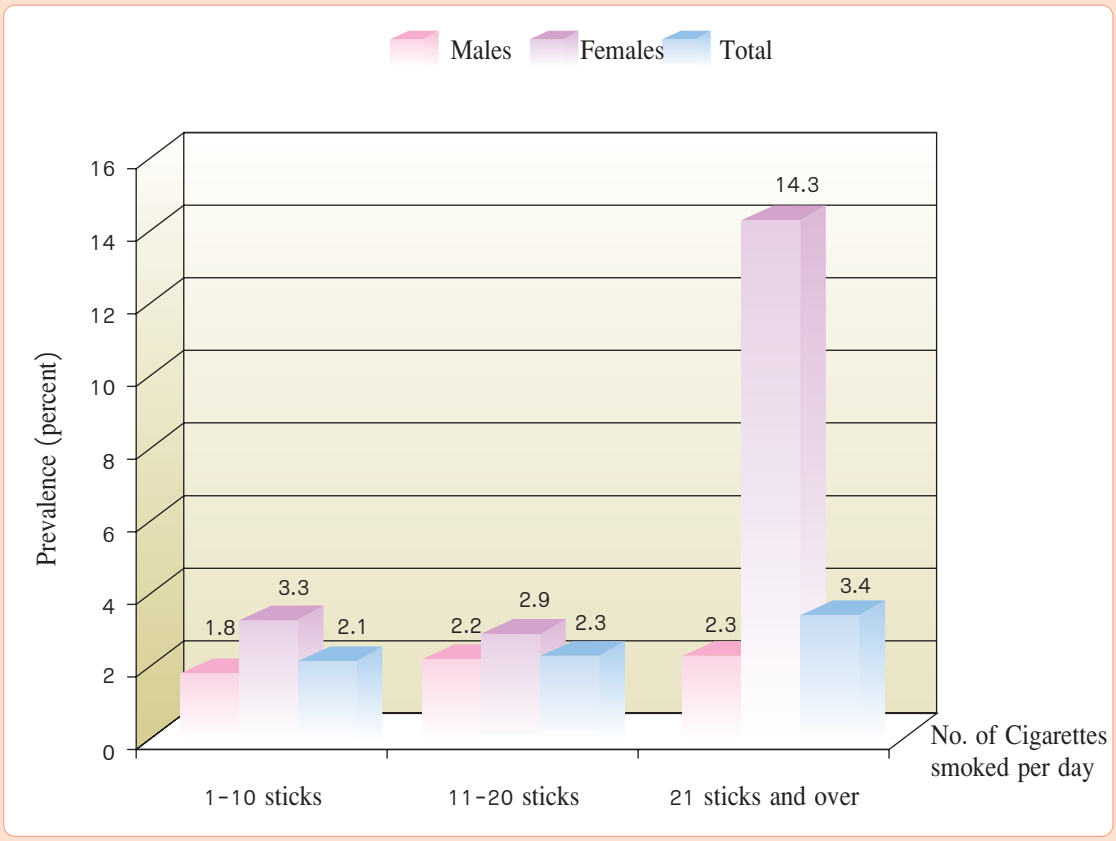
Figure 5.36 Mortality rate due to emphysema, 1989-2006



Source: Bureau of Policy and Strategy, Ministry of Public Health.

2.5.4 Chronic Obstructive Pulmonary Disease (COPD). A major cause of COPD is cigarette smoking for a long period of time. According to the 1991 Health Examination Survey, 1.5% of the people aged 15 had COPD, and that the more they smoked, the more they would come down with COPD (Figure 5.37). By 2010, it has been estimated that the prevalence of COPD would be 7,035 per 100,000 population[12] (Figure 5.38).

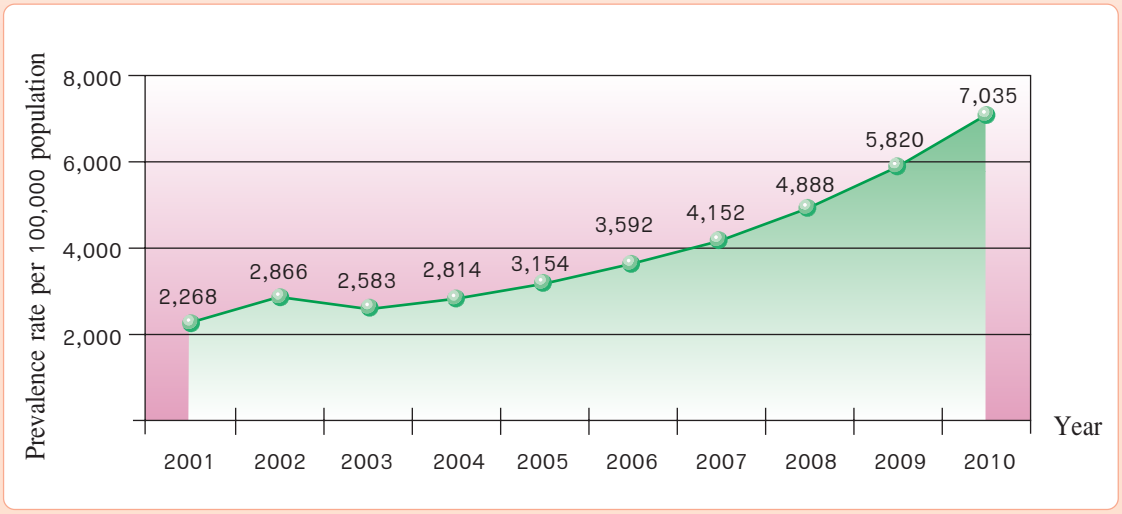
Figure 5.37 Prevalence rate of chronic obstructive pulmonary disease among Thai people aged 15 and over by the number of cigarettes smoked and sex



Source: Thai Health Research Institute and Health Systems Research Institute. Health Examination Surveys, 1st round in 1991, 1996.

[12] The projection was based on the assumption that in the next 10 years the smoking rate will decrease each year by 0.42% among males and 0.16% among females.

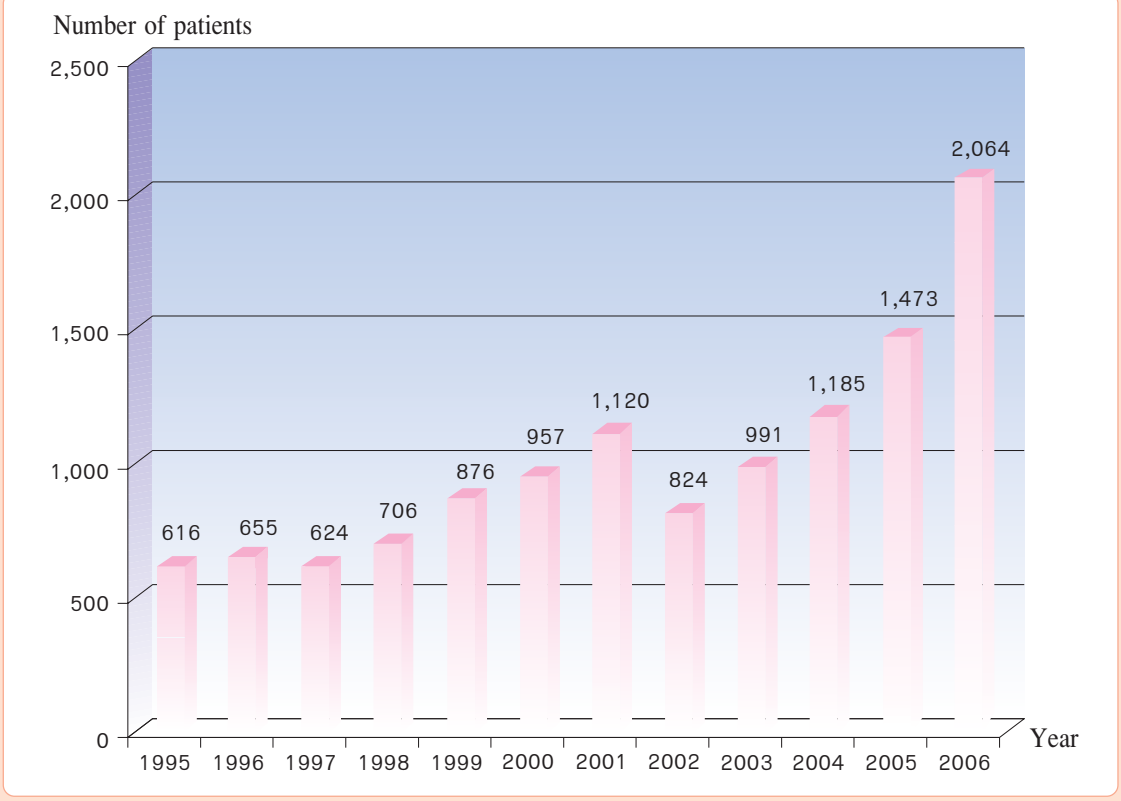
Figure 5.38 Projection of chronic obstructive pulmonary disease prevalence, Thailand, 2001-2010



Source: Sawang Saenghiranwattana. Chronic Obstructive Pulmonary Disease: Current Situation and Trends, 1999.

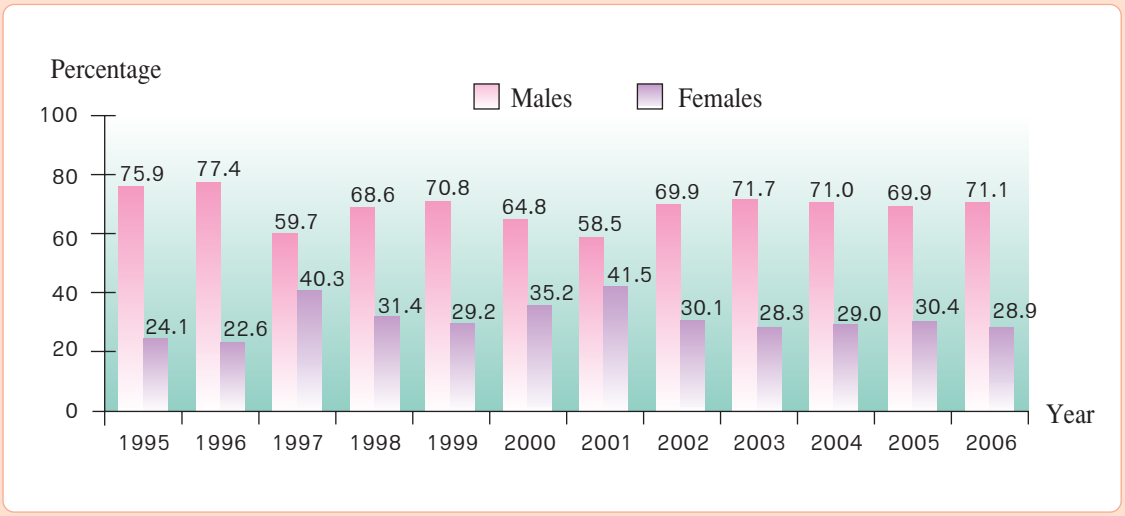
2.5.5 Coronary Atherosclerosis. This disease has a rising trend, especially among females (Figures 5.39 and 5.40), due to tobacco use, physical inactivity, hyperlipidaemia and overweight.

Figure 5.39 Number of patients with coronary atherosclerosis treated at the Cardiology Institute, 1995-2006



Source: Institute of Cardiology, Department of Medical Services, MoPH.

Figure 5.40 Proportion of patients with coronary atherosclerosis undergoing surgery at the Cardiology Institute by sex, 1995-2006

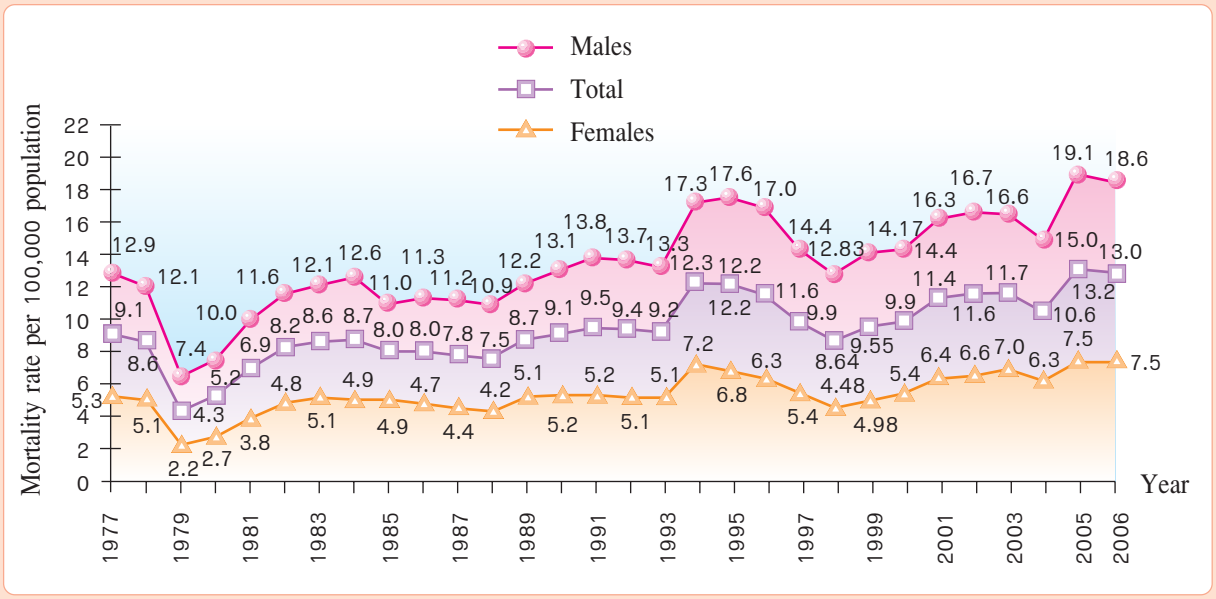


Source: Institute of Cardiology, Department of Medical Services, MoPH.

2.5.6 Cirrhosis

Consumption of alcohol for a long time negatively affects the liver as it has been found that, between 1977 and 2006, the mortality rates of liver disease and chronic cirrhosis were reported at 4.3-13.2 per 100,000 population, the rates being 6-19 in males and 2-7 in females, i.e. 2-4 times higher in males than in females (Figure 5.41). However, the trend in cirrhosis resulting from hepatitis B virus is declining.

Figure 5.41 Mortality rate of liver disease and cirrhosis, Thailand, 1977-2006



Source: Bureau of Policy and Strategy, Ministry of Public Health.