

# 운동 습관에 의한 질병 발생과 사회 경제적 영향

## Morbidities from Lack of Exercise and the Socioeconomic Effects

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### Abstract

Lack of exercise may be one of the main causes of obesity in the recent modernized society. With the rapid increase of obese population worldwide, the economic costs of overweight have become a great burden in many countries. The costs of obesity may be divided into the direct costs to the health system and the indirect or social costs to the individuals and the community (for example, sick days and individuals' expenditure on weight loss). The direct costs depend on the main part of the diseases caused by obesity and the cost of these diseases. Some diseases that have been included in the calculation are Type 2 diabetes, heart disease, hypertension, endometrial cancer, arthritis and colorectal cancer. One of the problems in this assessment is the relative risk of the diseases in different communities and ethnic groups. Several methods have been used to calculate these costs and produced a wide range of results from different countries. One of the latest estimates of costs of obesity is from the United States and was 10.2% of the total health care cost. Little data is yet available in Asian countries; however, the Korean Obesity Society reported a total cost of obesity estimated at about 0.11% of GDP or about 2.13% of the total health care cost. It is now necessary to develop a strategy for life style modifications at the nationwide level.

**Keywords :** Exercise habit; Lifestyle disease; Obesity; Health cost; Energy expenditure

가

120%

1998

(body mass index,

BMI)

BMI 25

BMI

25

2001

20

30.6% (

32.4%,

29.4%)가



### 3.

1	20	,	2	,	(	, 1997)
			50%			
1		140	180			
				1	10	,
	2~3					
		30				(Pate, Pratt, et al. Centers for Disease Control and American College of Sport Medicine. United States, 1995)
		50%	,		80	100 m, 1.6 km 15 20

가 . HDL

1980

가

가

6

50~80%

1

50%

가

( ),

가

1960

( ).

(VO<sub>2</sub>max) 50%

( ).

( )

50~85%

VO<sub>2</sub>max , 20

3 ,

4.

2, 1 20

, 1 140 180 .가

• 가

•

•

•

•

•

•

30

•

6

•

•

6

( 50%

VO<sub>2</sub>max)

가

(anaerobic threshold, AT :

가가

)

AT

가

Despres

13

14

(55%

VO<sub>2</sub>max, 90 / , 4~5 / )

, LDL

B , HDL

가

HDL2 가

Nicklas

( - 350 ~ - 250 kcal/ ) 50 ~ 70% heart rate range

( : HRR) 가

1 45 ~ 60 , 3 , 6 , ,

가, ,

(HDL 가, ,

Shinkai ), 가

( - 270 ~ - 250 kcal/ ) 50 ~ 60% ,

VO<sub>2</sub>max ( , ,

, 40 ~ 60 / , 3 ~ 4 / )

12 , , 가

, .

AT VO<sub>2</sub>max 50 ~ 70% ( , 2

) ,

, 가 .

1) 84,941

2 16

. 3,300

가 .

50% VO<sub>2</sub>max , ( ) 2

AT , ( , ).

2) 3

. BMI (Oslo .

20 ~ 30 , ) .

3) ,

## 가

가

(IGT)

3.2

58%

가

가

가

(

).

5)

IGT

3,234

(

150

7%

$$),$$

2.8

58%,

31%

(

Colditz

BMI 29

2

, ).

1986

3,930

5.5%

2~7%가

5

- 5% 1,199 ,  
899 ,  
7% 1,115 ,  
가 881 .  
5%  
2,099 , 7% 1,996  
.  
가 .  
5% 3,891  
7% 3,789  
가 .  
5% 4,777 , 7%  
가 4,675 .  
1998 .  
20 가 1998  
BMI 23 26 GDP 0.087% 0.031% .  
가 2003 GDP 5% 가  
1.73% 0.63%  
GDP  
1998 0.11 ~ 0.04% 가 ,  
6 2.13 ~ 0.8% 가 .  
892  
901 , 1,792  
2,678  
6  
1998  
5% 7% .  
1. . , 2001  
2. . 2003. , 2003  
3. . , 2004  
4. . , 2003  
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