



제 2세미나실

여성건강에 좋은 운동

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생애 주기

- * **신생아** 생후 3주
- * **영아기** 생후 3주에서 1년
- * **어린이**(초기:1-6세, 중기7-10세, 후기: 사춘기전)
- * **사춘기**(소녀:9-15세, 소년:12-15세 : 월 경, 성 호르몬)
- * **청년기** 사춘기 부터 6년
- * **성인기** (초기:20-29세, 중기30-44세, 후기: 45-64세 임신과 출산, 생활습관병, 체력저하)
- * **노인기**(초기:65-74세, 중기75-84세, 후기: 85세이상 골다공증, 암, 노화속진)

여성과 운동

- * 체격,체력, 심리적,생리적면의 현저한 차이
“남성에 비하여 강도와 수준을 낮게 한다든가 응용한다든가 하는 신체활동의 일부 수 정만으로는 효과를 거둘 수 없다”.
- * 건강한 아이를 낳아 잘 기르는 능력
- * 가정생활을 명랑하게 개선하여 나갈 능력
- * 지역사회에 대한 봉사정신을 배양

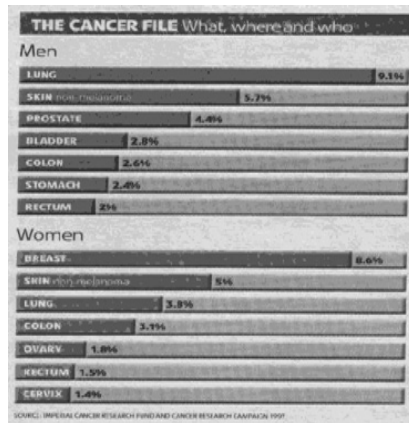
여성 운동

- * 심신이 건전한 국민의 양성
- * 전 가족이 가정운동 참여
- * 아름다움과 생활능력의 향상
- * 여가시간을 계획적으로 실천할 능력
- * 보건위생에 관심과 주의
- * 여성운동의 지도 및 보급

Gender and Health

- * Men have a lower life expectancy than women(75.1 yrs. 80.0 yrs. (DOH, 2001 b).
- * More likely to die from
: cancer, heart disease, HIV, accidents & suicide than women (DOH, 1998).
- * **Risks with their health On average :**
 Drink more alcohol, Smoke more cigarettes
 Take more drugs , Use less sun cream
 More accidents (DOH, 2001 a).

Cancer



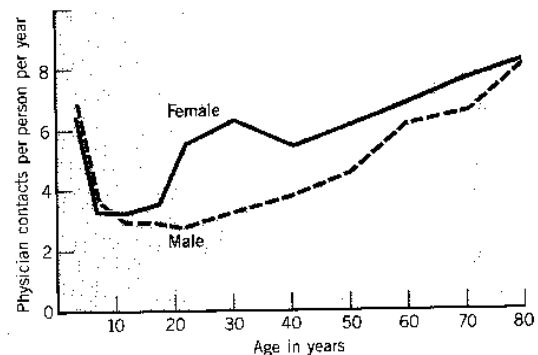
Gender and Health

- * Men also have less contact with the health services than women
 - * Have you consulted your Family Physician in the last two weeks?
 - * 19 per cent of women
 - * 13 per cent of men
- Under the age of 45
(10% men, 20% women) (ONS, 1998).

Gender and Health

- * Women have higher morbidity rates but lower mortality rates.
- * Women suffer more non-fatal chronic illnesses and more acute illnesses.
- * They also make more visits to their family physicians and spend more time in hospital.
- * Women suffer more from hypertension, kidney disease and auto immune diseases such as rheumatoid arthritis and lupus (Litt, 1993).

Use of health services



Gender and Health

- * Interestingly, other issues of inequality are more pronounced in men than women.
- In men
- social class based on employment is the most important influence on early death. To put it brutally, the less you earn, the sooner you die. For women however, although there is still an effect of income on early death, it is much weaker (Sacker et al., 2000).

Gender and Health

- * Women, also suffer twice the rate of depression.
- * Men, on the other hand, have a shorter life expectancy, suffer more injuries, suicides, homicides and heart disease.



Gender and Health

- * Estrogen reduces blood clotting and cholesterol levels.
- * Testosterone increases blood clotting (McGill and Stern 1979).
- * Men respond to stresses in a way that is biologically more dangerous than it is for women.

Health counselling

- * Quit smoking
- * Nutrition
- * Exercise
- * Stress
- * Traffic accident
- * Prevention of family and office
- * Sexual problem
- * Preventive of Dental disease
- * Pregnancy and sexual education

Smoking

- * Graham (1996)
- * The sex differences in the prevalence of smoking across Europe between 1950 and 1990.
- * Prevalence of smoking among men from about 70-90% to about 30-50%.
- * Women the same period rise in the prevalence of smoking followed by a slow decline reaching 20-40% in 1990.

Smoking



- * One 11years old girl said:
To avoid this image she would wear her short skirt, jewellery and makeup and would smoke.

Exercise

- * Survey : Oygard and Anderssen
- * Level of education was positively associated with extent of participation in physical activity among females but not among males.

Female Body composition

- * Height : 92.8%
 - * Body Weights : 84.9%
 - * Chest width : 93.3%
 - * Arm length : 92.0%
 - * Leg length : 82.7%
 - * Upper arm girth : 87.0%
 - * Skin fold thickness : 129.4%
- < 20yrs. Old man 100. 20yrs. old female %>



Female Work Capacity

- * Muscle strength : Grip strength : 63.3%
Back muscle strength : 58.1%
- * Flexibility : Sit and reach : 107.6%
- * Cardiopulmonary endurance : $\dot{V}O_{2max}$: 73.0%
- * Muscular endurance : sit up : 64.5%
- * Power : Sargent jump : 65.4%
- * Agility : Side step : 87.2%
- * Balance : Closed eyes one foot stand 75%
< 20yrs. Old man 100. 20yrs. old female %>

Female Work Capacity

- * Vital Capacity : 69.8%
- * Max. Ventilation volume : 68.7%
- * Max. heart rate : 98.9%
- * Resting heart rate : 110.0%
- * Maximal cardiac output : 73.1%
- * Systolic blood pressure : 94.4%
- * Diastolic blood pressure : 95.9%
- * Erythrocyte : 89.7%
- * Eye sight : 91.3%
< 20yrs. Old man 100. 20yrs. old female %>

Biological response of Body by Exercise

- * Neuromuscular system
 - Hypertrophy
 - Testosterone : Total muscle mass
Absolute muscle strength
 - Upper Extremity muscle strength : 43~63% ↓
 - Lower Extremity muscle strength : 25~30% ↓
 - Relative muscle strength : 5~15% ↓
- * Classification of muscle type
 - STF (Type I, slow, Red)
 - FTF (Type IIa, IIb, fast, white) : Same

Biological response of Body by Exercise

- * Submaximal exercise
 - Male : HR ↓ Peak HR => Same
- * Maximal exercise
 - Pre-Adolescent : $\dot{V}O_{2max}$ => Same
 - Adolescent : $\dot{V}O_{2max}$ 70~75% ,
a- $\dot{V}O_{2max}$ diff. ↓ (low Hb. conc.)
 - Female : 13~15yrs. $\dot{V}O_{2max}$ peak
 - Male : 18~22yrs. $\dot{V}O_{2max}$ peak

Consideration of exercise prescription

- * Decrease of physical work capacity
- * Increase of % body fat (Low LBM)
- * Menstruation
- * Pregnancy (Heart sound, Heart rate, Core temp.)
- * Deliverly
- * Post menopausal period (Osteoporosis)
- * Athletes (Eating disorder, Amenorrhea ,
Osteoporosis)

Graded exercise Test

- * Lean Body Mass decrease : low endurance
- * Graded exercise test
- * False positive
- * Protocol : Balke, Mod. Bruce
- * Ergometer : Astrand ramp test
- * Exercise prescription (Intensity)
 - $\dot{V}O_2 = (\dot{V}O_{2max} - \dot{V}O_{2rest})(\%) + \dot{V}O_{2rest}$
 - MHR = $220 - \text{Age}$ or $208 - 0.7 \times \text{age}$
 - THR = $(\text{MHR} - \text{RHR}) \times (\%) + \text{RHR}$
 - Rate of Perceived Exertion



Female and exercise

- * **Med – A : Uncontrolled exercise**
(Group, 20, 30, 40, 50, 60D)
- * **Med – B : Supervised Instructor**
(HTN, NIDDM, Obesity,
Osteopenia, Hyperlipidemia)
- * **Med – C : Supervised Physician**
(Pregnancy DM, COPD, CAD,
Transplantation, Osteoporosis,
Depression, Stroke)

Menstruation

- * 자궁에 충격, 격렬한 운동은 삼가
 - 도약, 다이빙, 투척, 승마 등
 - 전신 피로를 초래
- * 세균 침입의 우려 : 수영은 선택적
- * 냉한 환경 운동 : 스키, 스케이트
- * 운동방법 :
 - 가벼운 운동, 짧은 시간
 - 원활한 혈액순환

Preganncy

- * **Stretching exercise** (pregnant gymnastics)
- * **Tubing, Pilates, Callsthenics exercise**
- * **Ergometer, Swimming, Walking,**
Yoga & Tai chi
- * **Competitive sports – avoid**
- * **Closely monitored**
; 25 – 45mins (Intermittently ex.5 x 5-9rs.)
; Low to moderate
; 3-5ds/wk



Delivery

- * 아이를 돌봐줄 사람 필요
- * 복부근 운동 : 복부근의 회복, 요통 예방
- * 회음부 근육 수축 : 케겔 운동 - 골반 근육 강화
운동하기 전에 아이에게 수유
- * 점차적으로 운동 : 피로와 탈수 현상에 유의
모유가 줄어드는 것을 예방
- * 운동용 브라지어 착용
- * 8잔/ 일 이상의 물
- * 아기의 수면시 동반 수면
- * 충격적 운동 : 6 - 16주 이후 시작(관절, 혈문
분비 이상)

Osteoporosis

- * **Brisk walking**
- * **Ergometer**
- * **Dance**
- * **Aquarobic**
- * **Two foot jump on the mat**
- * **Complex of spine fracture and severe
osteoporosis, low back pain – Pool
walking, aqua gym**



Avoid other activities

- * **Sit-up and toe touches**
- * **Trampolines**
- * **Step aerobic**
- * **Skating**
- * **Exercise on slippery floors**
- * **Jerky**
- * **Rapid movement**

Effects of regular exercise

- * Reduce risk factor for exercise
- * Inhibition disease by osteoporosis
- * Provide a stimulus to bone
- * Promotion physical ability
- * Stabilization in mental
- * Promotion the quality of life

