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SSEH2290

Lecture 2 – History of Physical Activity

We were made to be Active

- We can adapt to a wide range of metabolic demands imposed by work or exercise
- Low level physical activity has a negative effect on the body
- Low survival in life threatening situations
- Good genetic qualities means greater reproductive success

Traits with Selective Advantage

- Upright posture
- Bipedal locomotion
- Articulated thumbs
- Vertical head position
- Refined language

Ancient Greece - 5 Laws of Health

- Breathe fresh air
- Eat good food
- Drink proper beverage
- Participate in exercise
- Get adequate sleep
- Herodicus: first man to prescribe therapeutic exercise
- Hippocrates: father of preventative medicine
- Claudius Galenus: systematically described the human body
 - Believed that exercise could be used to cure almost every type of disease

Burden of Chronic Disease

- It's the most serious health problem and its increasing
- Cardiovascular and cancer the most dominant/important
- 60% of 56 million deaths in the world are caused by chronic disease
 - Almost half are attributed to cardiovascular disease
- By 2020, will account for almost 75% of all deaths worldwide

Public Health Implications

- In 1995 there were 84 million cases of diabetes, in 2025 there is predicted to be 228 million cases
- Over 1 billion adults worldwide are either overweight or obese
- This will cause massive economic strain on the tax payer

Evolution of Physical Activity Guidelines

- There is longstanding belief that regular physical activity is good for your health
- Recommendations have been around for a long time
- Guidelines have been publically advertised since the 1950's

The Point System

- Dr Kenneth Cooper (1968)
- Adults need to accumulate 60 points per week
- Sedentary adults begin at a level compatible with their current fitness

ACTIVITY	POINTS
Run 1 mile in <8 min	5
Walk 3 miles in <43 min	6
Cycle 5 miles in <20 min	5
Swim 600 yards in <15 min	5

The Running Boom

- Dr Michael Pollock and colleagues
- More structured research for exercise prescription
- Important from a public perspective
- American College of Sports Medicine (ACSM) position statement in 1978

QUALITY	QUANTITY
Frequency	3-5 days per week
Intensity	50-85% VO ₂ max (60-90% maximum heart rate)
Duration	15-60 min

1996 Surgeon General's Report on Physical Activity

- Everyone benefits from regular physical activity
- Moderate physical activity can provide significant health benefits
- The more physical activity you do the more benefits you reap
- Physical activity reduces risk of premature mortality and of coronary heart disease, hypertension, colon cancer and diabetes
- More than 60% of American adults are not active enough
- 25% of Americans are not active at all
- 50% of American youth (12-21) are not active on a regular basis
- Physical activity declines significantly during adolescence

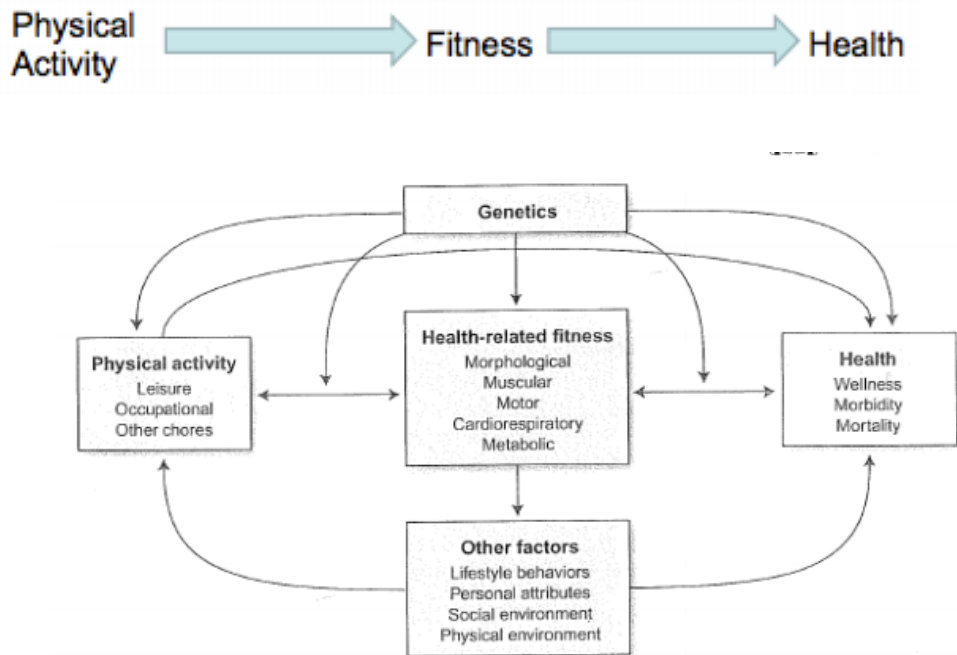
Guidelines in Australia

1. Think of movement as an opportunity, not an inconvenience
2. Be active everyday in as many ways as possible
3. Put together at least 30 min of moderate intensity physical activity on most, preferably all days
4. If you can, also enjoy some regular vigorous exercise for extra health and fitness

Key Terms in Physical Activity

- Fitness: ability to perform muscular work satisfactorily
- Performance-related: components of fitness that are necessary for maximal sport performance

- Health-related: components of fitness that benefit from a physically active lifestyle and relate to health



Minimum Amount of Physical Activity to Achieve Health Benefits

- American College of Sports Medicine
- Burn a minimum of 150 kcal/day, 7 days per week or a total of 1000 kcal/week (Jones et al. 1998)