

國立體育學院九十三年學年度研究所博士班入學考試試題  
體育運動論文評論（運動保健組）（本試題共 2 頁）

注意：答案一律寫在答案卷上，否則不予計分，請以中文橫寫回答下列之問題。

一、請針對下列最近很流行之話題，提出個人對運動保健的看法或建議(40%)

### **Is Exercise Safe?**

Many people have raised the question of the safety to exercise largely because of several well-publicized reports of sudden death during exercise. In actuality, sudden death rates during exercise have declined over the past 20 years even though there has been an overall increase in exercise participation. In one report of cardiovascular episodes during a little more than 5 years, 2,935 exercise recorded 374,798 hours of exercise that included 2,726,272 km (1.7million miles) of running and walking there were no death during this time and only 2 nonfatal cardiovascular complications. By gender, there were 3 complications per 100,000 hours of exercise for men and 2 for women. Certainly, there is a small increased risk of a cardiovascular episode during exercise compare to resting. However, the total reduction in heart disease risk to be derived from engaging in regular physical active (compared to leading a sedentary life)far outweighs any sight increase in risk during actual active period.

Perhaps not surprisingly, the most prevalent exercise complications are musculoskeletal in nature. In a study of aerobic dance injuries for 351 participants and 60 instructors at six dance facilities, 327medical complaints were reported during nearly 30,000 hours of activity. Only 84 of the injuries resulted in disability (2.8 per 1,000 person-hours of participation), and just 2.1%of the injuries required medical attention. For jogging and running activities, the orthopedic injury potential is greatest among those who exercise for extended periods of time. In this sense, more is certainly not better!

二、請敘述下列之問題(30%)，並提出運動保健對其之效益(30%)

### **Risk Factor for Coronary Heart Disease**

Various personal characteristics and environmental factors have been identified over the past 40 years that indicate a person's susceptibility to CHD. The relative importance of each of these factors has been established. In general, the greater the risk factor, the more likely it is that the coronary arteries are diseased or will become diseased in the near

future. This is not to say that a specific risk factor is the cause of the disease, as numerous factors may be acting and interacting in a cause-and-effect manner. However, based on the total evidence presently available, it is prudent to assess these factors on a personal basis and make efforts to modify each within reasonable limits.

The heart disease risk factors, including those that can and cannot be modified are:

#### Modifiable

- Diet
- Elevated blood lipids
- Hypertension
- Personality and behavior patterns
- Cigarette smoking
- High uric acid levels
- Physical inactivity
- Pulmonary function abnormalities
- Obesity
- Diabetes mellitus
- ECG abnormalities
- Tension and stress

#### Non-Modifiable

- Age and gender
- Heredity
- Race
- Male pattern baldness

It is difficult to determine quantitatively the importance of a single CHD risk factor in comparison to any other, because many of the factors are interrelated. For example, blood lipid abnormalities, diabetes, heredity, and obesity often go hand-in-hand. Compounding such observations is the finding that physical training generally lowers body weight, body fat, blood lipid, and risk of developing diabetes. Also, certain groups independent of other risk factors, are generally exposed to less psychological stress because of the nature of their occupation or cultural setting.

The risk of age, race, gender, and heredity are predetermined and cannot be controlled or remedied. However, four "treatable" factors-serum lipids, blood pressure, physical inactivity, and cigarette smoking-stand out potent CHD risk factors. Of somewhat less predictive value than these primary risk factors are the risk factors of obesity and personality type. Although risk factors are closely associated with CHD, the associations do not necessarily infer causality. In many instances it remains to be shown that risk factor modification offers effective protection from the disease. Until definite proof is demonstrated, however, it is prudent to assume that eliminating or reducing one or more risk factors will contribute to a decrease in the probability of contracting CHD.