

The Key Role of Exercise Trainings in Decreasing Diseases Related to Lack of Mobility

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Due to the change of Life-style and the industrialization of societies, diseases caused by reduced mobility have increased. One of these diseases is obesity, which itself can be the origin of many other diseases. In general, adults who have a body mass index (BMI) between 25 and 29.9 are classified as overweight; Adults who have a body mass index of 30 or higher are considered obese. The number of overweight and obese people has increased dramatically in the last two decades. It has been observed that a high percentage of urban residents are overweight. In the research conducted in connection with obesity, it has been observed that obesity not only makes a person susceptible to insulin resistance and diabetes, but also by creating lipid disorders such as high levels of LDL, VLDL, cholesterol and triglycerides, makes a person vulnerable to cardiovascular diseases. The high level of free fatty acids is transferred to the liver through blood circulation and stimulates the synthesis of VLDL; Increasing the amount of VLDL can also reduce the level of HDL by increasing the transfer of cholesterol esters with protein. Also, specifically, the expression of inflammatory genes in the early stages of obesity is carried out in adipose tissue. Therefore, in obesity the first tissue that starts the inflammatory process in response to a high-fat diet is fat tissue. In studies, it has been determined that in overweight people, in addition to inappropriate levels of lipids, in general, also the levels of inflammatory indicators are higher than the normal levels, which can be effective in the getting cardiovascular diseases. Cardiovascular diseases are one of the main causes of death in the world. Since we always say that prevention is better than treatment, it should be noted that the use of appropriate strategies that prevent getting overweight or obesity and as a

result, diseases caused by lack of mobility such as cardiovascular diseases can be very effective in improving the health level of societies and a healthier world. In addition to following a healthy and appropriate diet, one of the best solutions in this field is doing exercise trainings. Exercise trainings change the levels of lipid and inflammatory cytokines in fat tissues. Part of the effectiveness of exercise training in the field of preventing cardiovascular diseases is related to the fact that exercise trainings increase the negative energy balance, as a result, it changes the distribution of fat and also reduces the levels of LDL, VLDL, cholesterol and triglycerides and increase the levels of HDL. On the other hand, the increase in muscular tissue mass that occurs after exercises, especially resistance training exercises, is an important factor in improving the metabolic status of people. Another part of the effectiveness of exercise trainings in the field of preventing cardiovascular diseases is related to the decreasing the effects of inflammatory factors due to the increase of some substances, including adiponectin levels. Adiponectin is an anti-inflammatory adipokine that reduces the expression of inflammatory factors such as CRP and TNF- α in fat tissues, and exercise trainings play an important role in decreasing the risk of cardiovascular diseases by increasing adiponectin levels. In the research conducted in this field, it is observed that exercise trainings increase the level of adiponectin even in the elderly. According to these cases, it can be stated that exercise trainings have a key role in preventing diseases due to lack of mobility such as cardiovascular diseases or diabetes.