Atherosclerosis: Open Access

Editorial Note Open Access

Leptin: A Hormonal Function on Food Intake

Ivey Kerry*

Department of Cardiac and Cardiovascular Diseases, Harvard University, Cambridge, United States

***Corresponding author:** Ivey Kerry, Department of Cardiac and Cardiovascular Diseases, Harvard University, Cambridge, United States, E-mail: kerryiveym@hsph.harvard.edu

Received date: September 08, 2021; **Accepted date:** September 22, 2021; **Published date:** September 29, 2021

Citation: Kerry I (2021) Leptin: A Hormonal Function on Food Intake. Atheroscler Open Access. 6: e162.

About the Study

The field of atherosclerosis has grown tremendously in the past two decades, not only in terms of interest and area research, but also in terms of understanding the concept and nature of the process. We recognize today that atherosclerosis is the hub of the arteriosclerosis problems. Once we understand the different aspects of the atherosclerosis problem through different fields, we can control morbidity and mortality rates, and the average life span of an individual can be lengthened through this process. The rejectable factor in this concept is age, in the view of atherosclerosis which is inevitable and irreversible and, more important, but it can be preventable by considering some of the factors like healthier diet, physical activity, metabolism, etc. Basically, atherosclerosis is a metabolic disorder. Leptin is a hormone, which is released from fat cells in adipose tissue. The amount of leptin released from the fat cells is directly proportional to the amount of body fat. The normal range of leptin levels 2.5-21.8 ng/mL which can be measured using a Radio Immune Assay (RIA). In obese individual the leptin range 28.2-77.4 ng/mL. The individual with more fat mass will produce high amount of leptin from the fat cells of adipose tissue into the circulatory system. If the individual with less fat mass, they produce the low amount of leptin hormone. Leptin sends the signals to the brain, mainly to the hypothalamus region of the brain. Usually leptin does not affect the food intake from meal to meal but acts to alter food intake and control energy expenditure. When we lose weight the hormonal level falls, which stimulates appetite and increases food intake. The hormone helps us to maintain normal weight, but for the overweight individuals it is harder to lose extra weight because of 'leptin resistance'. Leptin levels are usually high in obese individuals. The high amount of leptin levels, in obese individuals resists the leptin action, which can be termed as 'leptin resistance'. This causes the fat cells to produce even more leptin levels. This is similar to the insulin levels in people with type 2 diabetes have unusually high levels of insulin, as their body is resistant to the effects of insulin function. Congenital leptin deficiency is a genetic condition in which the body cannot produce leptin. Absence of leptin makes the body think which results in uncontrolled food intake and severe childhood obesity. In addition, leptin deficiency may cause delayed puberty and poor function of the immune system. This condition is treated by administration leptin injections, which may cause dramatic weight loss. In normal healthier individuals, excess fat cells produce leptin, which trigger the hypothalamus to lower the appetite, and allow the body to store the fat for functional purpose. In obese individuals due to lack of sensitivity to the hormone, in this condition individual keeps eating continuously to make the individual feel satiety the leptin hormone releases continuously in the blood. Therefore, leptin levels are high in obese individuals. Maintaining body weight, healthier diet and physical activity normalizes the leptin action. Essential fat is necessary for a healthy, functional body. Essential fat storing may be utilized for the later use.