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LEPTIN HORMONE AND RELATIONSHIP BETWEEN OBESITY

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Leptin, the product of the ob gene, is a small peptide molecule synthesized by white adipocytes with an important role in the regulation of body fat and food intake. Leptin is a cytokine-like hormone that acts on the brain to regulate food intake and body weight. Leptin interacts with areas of the brain that control hunger and behavior that the body has had enough to eat. Leptin is also produced by primary cultured human amnion cells and is secreted into the amniotic fluid and primarily in fat cells, as well as the stomach, heart, placenta, and skeletal muscle. In addition leptin receptors were found in most tissues, particularly in central nervous system, pancreas, kidney, liver, skeletal muscles, andrenal marrow and cortex, endothelium, reproduction organs and hematopoetic structures. Leptin also signals nutritional status to several other physiological systems and modulates their function. Leptin has functions as a type of anti-obesity factor by regulating the balance between energy uptake and consumption via the receptors in the hypothalamus. Leptin decreases hunger. A small number of people have genetic mutations in the leptin gene, leading to a greater demand for food, resulting in obesity. Leptin deficiency or resistance can result in profound obesity, diabetes, and infertility in humans. In this review, the general characteristics, functions of leptin, its effects on immune system and on obesity will be discussed in the light of literature.

Keywords: Leptin, obesity, hypothalamus

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