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Leptin acts as a biomarker that predisposes children and adolescents to adult obesity and metabolic syndrome

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Leptin is an adipokine secreted by adipose tissue and regulates both food intake and energy balance in normal weight subjects. Its discovery has been received with great expectation as a potential anti-obesity therapy, due to its ability to reverse excess adiposity in animal models characterized by a hormone deficiency; leptin dramatically reduces body fat, suppresses appetitive behaviors and improves other endocrine-sensitive and metabolic leptin abnormalities in children and adults with congenital hormone deficiency. On the other hand, in 2007, the International Diabetes Federation (IDF) proposed the latest definition of MS for children over the age of 10 years, based on the presence of increased waist circumference plus two of the following elements: hypertriglyceridemia; low HDL cholesterol; hypertension and impaired fasting glucose or T2DM. Therefore, in this work leptin is presented as a potential biomarker that predisposes children and adolescents to adult obesity, since it is usual for obese individuals to have higher levels of circulating leptin and more adipose tissue, consequently developing resistance to the effects of satiety of the hormone or hyperleptinemia. Likewise leptin's role as a biomarker for metabolic syndrome has been researched in different populations. Regardless of which demographic studied, elevated leptin levels are associated with metabolic syndrome. There are multiple factors, which include high levels of endogenous leptin or the intake of certain dietary components, such as fructose and saturated fats. What you should do is make people more sensitive to the hormone. To do this, a diet based on foods rich in leptin should be implemented to allow it to pass through the blood and later into the hypothalamus to function as a signal that induces an inhibition of appetite or employing physical activity that is an adjuvant for hormonal functionalization and regulation of body weight.

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