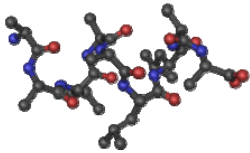


Irisin

From Wikipedia, the free encyclopedia



PGC1-alpha

Irisin is a hormone being researched by scientists at the [Harvard Medical School](#) which can replicate some of the positive effects of exercise and diet.^[1]

Research Team

The research was done at Harvard Medical School by Dr. Bruce Spiegelman PhD, who is a cell biologist at the Dana Farber Cancer Institute and a professor at Harvard Medical School. The research has been licensed to Ember Therapeutics Inc., a company co-founded by Spiegelman.^[2]

Mechanism

Exercise causes production of the chemical [PGC1-alpha](#) in muscles. The presence of that chemical causes production of the protein Fndc5, which the researchers named Irisin, after the [Greek](#) goddess [Iris](#).^[3]

Effect on Fat

The scientists have reported that the hormone helps convert 'white fat' to '[brown fat](#)'. Brown fat has typically been found only in small amounts in adults, but is common in babies and children. Brown fat burns calories.^{[4][5]}

Effect on Diabetes

Dr. Spiegelman injected irisin into obese, pre-diabetic laboratory mice and the animals displayed improved glucose intolerance when fed a high-fat diet while maintaining a no exercise regime.^[6]

Effect on Weight Loss

After 10 days of treatment with the irisin injections, the mice lost a small amount of weight.