IL-32 has inflammatory properties in human obesity

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(HealthDay)—Interleukin (IL)-32 has inflammatory and remodeling properties in human obesity, according to a study published online Sept. 14 in *Diabetes*.

Victoria Catalán, Ph.D., from the Clínica Universidad de Navarra in Pamplona, Spain, and colleagues examined whether IL-32 could function as an inflammatory and angiogenic factor in human obesity and obesity-associated type 2 diabetes. Samples were obtained from 90 subjects.

The researchers found that increased circulating IL-32 levels in obese patients decreased after Roux-en-Y gastric bypass-induced weight loss, but not following a conventional hypocaloric diet. For obese patients, expression levels of IL-32 were higher in visceral adipose tissue as well as in subcutaneous adipose tissue and peripheral mononuclear blood cells. Expression of *IL32* was mainly by stromovascular fraction cells, and expression was enhanced by inflammatory stimuli and hypoxia; no changes were seen after incubation with anti-inflammatory cytokines. In human adipocyte cultures, the addition of exogenous IL-32 induced the expression of inflammation and extracellular matrix-related genes; downregulation of inflammatory genes was seen in *IL32*-silenced adipocytes. Adipocyte-conditioned media from obese patients, but not from lean volunteers, increased *IL32* gene expression in human monocyte cultures.

"These findings provide evidence, for the first time, about the inflammatory and remodeling properties of IL-32 in adipose tissue implicating this cytokine in obesity-associated comorbidities," the authors write.

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