

# Gynoid fat resists metabolic risks of obesity

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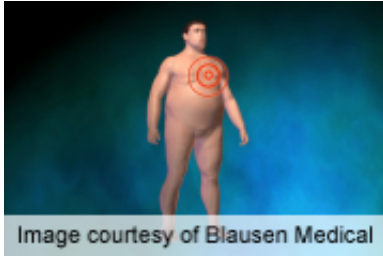


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expression of developmental genes in regional adipocytes provide a mechanistic basis for diversity in adipose tissue function," the authors write. "The less inflammatory nature of lower-body [adipose tissue](#) offers insight into the opposing metabolic disease risk associations between upper- and lower-body obesity."

**More information:** [Abstract](#)

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(HealthDay)—The differences in the developmental profiles of upper-body and lower-body fat depots may explain their opposing associations with obesity-related metabolic disease, according to research published in the November issue of *Diabetes*.

Katherine E. Pinnick, D.Phil., of the University of Oxford in the United Kingdom, and colleagues defined the relationship between DEXA-quantified fat depots and [metabolic risk factors](#) in a cohort of 3,399 healthy individuals. The transcriptional profiles of 49 paired samples of gluteal [subcutaneous adipose tissue](#) (GSAT) and abdominal subcutaneous adipose tissue (ASAT) were compared across the [body mass index](#) spectrum.

The researchers observed a negative correlation between gynoid fat mass and insulin resistance after total fat mass adjustment; a positive correlation was found for abdominal fat. For both depots, energy-generating metabolic genes were negatively linked and inflammatory genes were positively linked with obesity, but these associations were significantly weaker in GSAT. Systemic arteriovenous release of interleukin-6, a pro-inflammatory cytokine, was lower from GSAT than ASAT. Developmental differences were observed in preadipocytes from GSAT versus ASAT.

"In conclusion, intrinsic differences in the

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