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Review: inflammation's role in obesity-colorectal cancer link

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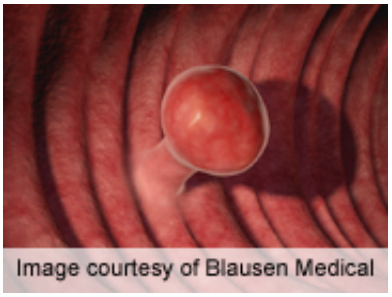
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(HealthDay)—A new review summarizes the ways in which inflammation and altered metabolism are associated with colorectal cancer in obese individuals; the review was published online Sept. 3 in *Obesity Reviews*.

Einav Yehuda-Shnaidman, Ph.D., R.D., and Bertha Schwartz, Ph.D., from the Hebrew University of Jerusalem, reviewed the interactions between adipocytes and immune cells that may alter the metabolism towards promotion of colorectal cancer.

The researchers found that obese and lean adipose tissue had distinct immunogenic profiles, body fat distribution, and metabolic profiles.

Free fatty acids, adipokines, and pro-inflammatory cytokines were released by obese adipose tissue and played a role in regulating malignant transformations and cancer progression. Two different phenotypes of macrophages were identified in adipose tissue: M1 macrophages, which were found in obese adipose tissue, produced pro-inflammatory cytokines, while M2 macrophages, which were the main type found in lean adipose tissue, produced anti-inflammatory cytokines such as interleukin-10.

"Despite establishing unequivocal epidemiological evidence of links between obesity and colorectal cancer, at least some of the mechanisms linking the two remain elusive," the authors write. "To identify these mechanisms, it is necessary to understand how obesity interacts with colorectal cancer at the molecular and cellular levels."

More information: Abstract
Full Text (subscription or payment may be required)