

IN BRIEF

OBESITY

“Antiobesity effects of probiotics have been demonstrated in a randomized, controlled trial in humans,” reports Yukio Kadooka, lead investigator of a Japanese study. The researchers randomly assigned 87 overweight patients (BMI 24.2–30.7 kg/m²) to receive either 200 g per day of fermented milk containing the probiotic *Lactobacillus gasseri* SBT2055 or 200 g per day of fermented milk without the probiotic for 12 weeks. Participants in the treatment group experienced significant reductions in BMI, abdominal visceral fat and subcutaneous fat. By contrast, individuals in the control group did not experience similar reductions. The researchers conclude that this probiotic might have a “beneficial influence” on metabolic disorders.

Original article Kadooka, Y. *et al.* Regulation of abdominal adiposity by probiotics (*Lactobacillus gasseri* SBT2055) in adults with obese tendencies in a randomized controlled trial. *Eur. J. Clin. Nutr.* **64**, 636–643 (2010)

HEPATITIS

Inhibition of AMP-activated protein kinase (AMPK) seems to be required for efficient replication of HCV in liver cells. As Mark Harris of the University of Leeds, UK, explains, “We ... demonstrated that by treating cells with compounds known to act as AMPK agonists ... we could inhibit viral replication.” The investigators speculate that restoration of AMPK activity might be a new target for HCV therapy. AMPK inhibition in HCV-infected cells might also promote progression to hepatocellular carcinoma: little is known about the link between viral infection and tumor development. Harris and colleagues next plan to investigate whether the AMPK agonist metformin has any clinical benefit in patients with hepatitis C.

Original article Mankouro, J. *et al.* Enhanced hepatitis C virus genome replication and lipid accumulation mediated by inhibition of AMP-activated protein kinase. *Proc. Natl Acad. Sci. USA* **107**, 11549–11554 (2010)

CANCER

Smoking has now been identified as a risk factor for flat adenomas of all sizes, which might explain why colorectal cancer occurs earlier in smokers than in nonsmokers. Investigators collected demographic data on 600 patients, who were screened using a high-definition colonoscope. “Smoking was correlated with flat adenomas in patients who did not have protruding adenomas,” notes researcher Joseph Anderson. The authors suggest that smoking might induce molecular changes that increase the risk of flat adenomas, and speculate that effective colorectal cancer screening in smokers might necessitate use of special imaging techniques, such as the high-definition colonoscope used in this study.

Original article Anderson, J. C. *et al.* Association of smoking and flat adenomas: results from an asymptomatic population screened with a high-definition colonoscope. *Gastrointest. Endosc.* **71**, 1234–1240 (2010)