

Nice for mice

Danisco's proprietary probiotic strain *Bifidobacterium lactis* B420 can have positive effects on metabolic syndrome (MetS), according to a study presented at the Keystone Symposium on Diabetes in Whistler, Canada, in April. The research was carried out by a team from the National Institute of Health and Medical Research in Toulouse, France, in conjunction with Danisco's Health and Nutrition Research Centre in Kantvik, Finland. The probiotic was found to reduce tissue inflammation and reduce metabolic endotoxaemia in diabetic mice fed a high-fat diet.



'Natural' selection

Researchers from Adelaide CSIRO and AgroParisTech in France have investigated what consumers perceived by the term 'natural'. The study tested eight hypotheses on food ingredients and processes used for manufactured foods. The 190 participants were asked to rank 50 food product examples on the basis of how 'natural' they thought them to be. The findings supported three hypotheses: chemical changes were considered more potent than physical changes, describing preservatives by common or chemical names instead of 'E' numbers improved their acceptability, and less processing was considered to be more 'natural'.



doi: 10.1016/j.appet.2010.02.014

More muscle, less fat

Drinking skimmed milk after exercise may be a good way for women to gain lean muscle mass and lose fat, according to a Canadian study. Researchers from McMaster University studied two groups of women who were given either fat-free milk or carbohydrate sports drinks after resistance training. The participants exercised five days a week for 12 weeks. The group who drank milk showed evidence of greater muscle mass accretion, strength gains and fat mass loss as compared to the women consuming sports drinks. The results are similar to an earlier McMaster study that looked at the effects of milk consumption on male athletes. The study was published in *Medicine and Science in Sports and Exercise*.

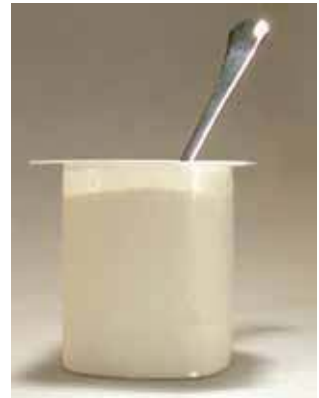
doi: 10.1249/MSS.0b013e3181c854f6



How sweet?

Norwegian researchers aimed to study the acceptance of yogurt with two sensory attributes – sweetness and richness – when information about sugar and fat content was provided simultaneously with tasting.

The study, published in *Food Quality and Preference* (volume 21, issue 1), involved 153 participants in a conjoint study with blind testing. It found that the sweetness of yogurt, when combined with information about sugar content, affected consumers' preference and purchase probability.



Striking gold

Researchers at the University of Miami have developed a new method of detecting melamine in milk using gold nanoparticles.

Their study, published in *Applied Physics Letters*, described the new method as quick, economical and easy.

The process involves removing the casein-based milk component, which can hinder melamine detection, before adding gold nanoparticles, which show a dramatic colour change in the presence of melamine. The colour change is evident within seconds and can be assessed both visually and by spectrophotometry.

The researchers hope to develop a simple kit that could be used at home or in the field to detect melamine contamination.

Weighty potential

A review of the science into changes in gut microbiota caused by obesity and related metabolic disorders has been published in the *International Dairy Journal* (volume 20, issue 4). Belgian-based researchers looked at data from animal studies that suggested nutrients that made changes to gut microbiota, such as prebiotics, had the potential to aid weight management and metabolic disease management. The review discussed the relevance of the research to human nutrition and health.



Bacteria biofilm

A research team from the Institute of Food Research in the UK examined how the human pathogen *Campylobacter jejuni*, a leading cause of food-borne bacterial gastroenteritis, survived stressful environmental conditions. The study found that under aerobic or stressful conditions the bacteria formed a biofilm – a sticky, protective layer of cells – and could shed cells into food. The researchers said that their discovery, with further investigation, could lead to new ways of protecting food from bacteria.

doi: 10.1128/AEM.01878-09

Highly irregular

Fat-free milk might be an antidote to chronic constipation, according to a Turkish study published in *Nutrition*. The study examined subjects of comparable age and body mass index who had mild, moderate or severe constipation against a healthy control group. Blood samples for hormone analyses were collected before and after the subjects' diets were supplemented with fat-free milk. Results showed an increase in the peptide hormones that stimulate intestinal mobility after the milk supplementation, and an increase in regularity among the chronic constipation group.

doi: 10.1016/j.nut.2009.11.023

Omega-3 dairy

A German study published in *Clinical Nutrition* has found that the consumption of dairy products fortified with omega-3 fatty acids could decrease cardiovascular risk factors.

Fifty-one participants were randomly divided into two groups and received either fortified dairy products or control dairy products for 15 weeks. After a 10-week wash-out phase, the participants were crossed over to the other group. Blood and urine tests showed that the dairy enriched with omega-3 led to a significant improvement in cardiovascular risk factors such as cholesterol and triacylglycerides.

doi: 10.1016/j.clnu.2010.02.008

Probiotic cheese

A Finnish study published in *FEMS Immunology & Medical Microbiology* has found that cheese was an effective carrier for the study of probiotics, and that daily consumption of the probiotics *Lactobacillus rhamnosus* HN001 and *Lactobacillus acidophilus* NCFM enhanced the innate immunity in the elderly.

The study evaluated the potential of commercial probiotic cheese as probiotic food. The study involved 31 healthy elderly volunteers (median age of 86). Consumption of probiotic cheese over four weeks resulted in a significant increase in the cytotoxicity of NK cells.

doi: 10.1111/j.1574-695X.2010.00658.x

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