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PRESS RELEASE

Probiotics – are "healthy" bacteria always healthy?

Effects on the gastrointestinal tract are practically unresearched by science – they may even be fatal for pancreatitis patients

(Vienna, 20th October 2008) Probiotics are used not only as a dietary supplement to strengthen the immune system, but also to reduce the severity and duration of gastrointestinal diseases. However there is practically no scientific basis for the popularity of probiotics, as Professor Reinhold Stockbrugger of the university hospital in Maastricht/Netherlands explained at the 16th United Gastroenterology Week in Vienna. While positive experience is reported in conditions such as diarrhoea, there are also cases of pancreatitis (inflammation of the pancreas) where the use of probiotics provoked fatal complications.

Probiotics are present in yoghurt, milk, fruit juice and even in cheese, sausage and chocolate bars. Foods containing lactic acid bacteria such as Lactobacillae and Bifidobacteria and certain yeasts are reputed to be good for the intestinal flora and to support them in combating diseases of the gastrointestinal tract. "Probiotic cultures are also widely used in treatment of many diseases of the digestive tract and the liver," said Professor Stockbrugger, "but their popularity has not yet been sufficiently backed by scientific knowledge, so we have analysed in-depth studies of the effects of probiotics on gastrointestinal and liver diseases."

Effective against diarrhoea and IBS

The analysis showed that there are signs of positive therapeutic or preventive effect of certain probiotic strains in some diarrhoea diseases. The findings are also promising for irritable bowel syndrome (IBS), ulcerative colitis (Colitis ulcerosa) and chronic diseases of the liver. It seems that probiotics also reduce the side effects in combating *Helicobacter pylori* infection of the gastric mucosa. "What is not so clear is the effect on Crohn's disease, lactose intolerance and constipation," said Professor Stockbrugger at the UEGW. "For most diseases it will be necessary to conduct placebo-controlled studies with careful methodological design before we can make really well founded statements."

Fatal consequences in acute pancreatitis

There is no room for blind confidence, as shown in a study by Professor Hein G. Gooszen and co-workers from the University Medical Centre Utrecht (UMCU), Netherlands. He showed that probiotic cultures can even have fatal consequences in connection with pancreatitis (inflammation of the pancreas). In acute pancreatitis, they cause the digestive juices secreted by the pancreas to be activated within the organ itself, with the result that the pancreas practically starts to digest itself. The resulting morbid tissue is often attacked by bacteria. Such secondary infections mean that 10 to 30 per cent of such patients die of acute pancreatitis. In order to prevent harmful bacteria from attacking the inflamed organ, patients were given probiotic cultures via nasal tube to the upper part of the small intestine.

Bowel ischemia can be fatal

The study involved 15 large hospitals in the Netherlands. 152 patients received probiotics, 144 a placebo (tube-feeding without probiotics). The results were disturbing – 9 patients in the placebo group died of the disease, while 24 died in the probiotics group. In nine of these, bowel ischemia as a manifestation of undersupply of the bowel with oxygen was observed and may have attributed to the fatal outcome in eight of this subgroup of patients. This complication was not observed in any of the patients in the placebo group. The oxygen demand of the ten billion or so probiotic bacteria was probably so high that there was no longer enough oxygen to meet the needs of the blood vessels of the already damaged bowel wall.

Differentiated view of probiotics is needed

“The findings of this study were against all expectations,” said Professor Gooszen in summary. “They show that a differentiated view of probiotics is needed. Probiotics certainly have positive effects in many gastroenterological disorders, but that is not a blank cheque for general prophylactic use in the severely ill patients on intensive care units, in need of enteral tube feeding.”

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