



Particles of plastic 'damage our livers'

By Stephen Beech

Tiny bits of plastic and polyethylene in food may damage the liver and alter our metabolism. Scientists say their findings “raise concerns” about health risks and urged more research. When plastic breaks down it forms microparticles (less than five millimetres) and nanoparticles (less than 100 nanometres), which can end up in fish and other foods we eat. Studies estimate a person may ingest 40,000 to 50,000 microparticle particles a year, with some estimating 10 million. Researchers gave 12-week-old male mice a standard rodent diet with a daily oral dose of polystyrene nanoparticles. Polystyrene is often found in food packaging and products.

Exposure: Study leader Amy Parkhurst, a doctoral candidate at the University of California, Davis, said: “*We can’t control for all the plastics the mice are exposed to. However, our study design allowed us to see dose-correlated changes since the nanoplastics- dosed group would have a higher exposure*”. The mice consuming nanoplastics exhibited glucose intolerance and signs of liver injury. In the dosed group there was also increased gut permeability and higher endotoxin levels, which contributes to liver problems. Ms Parkhurst added: “*Our findings warrant further studies to help inform policy around micro and nanoplastics*”. The findings were presented at the annual meeting of the American Society for Nutrition in Orlando, Florida.