Research alerts dangers of health hazards in gymnastic pit foam.

The British Gymnastics National training centre at Lilleshall have just invested in new pit foam covered in lycra socks, supplied by PG Foam. This investment and upgrade was driven by recent concerns highlighted in American research that shows increased flame retardant products in blood samples of teenage gymnasts and the poor gym air quality. The investment funded by UK Sport and British Gymnastics will provide a safe and clean world class environment for the wide range of coaching courses, local clubs and GB's best gymnasts that train there.

The research led by Dr Courtney Carigan found potentially hazardous flame retardant concentrations, on average 4-6 times higher than average for Americans. The research focused on the gym dust that is present in most gyms from loose foam pits. This foam is infused with flame retardant products by manufacturers following fire safety requirements.

Analysts were particularly concerned about residues of three products in the gymnasts bodies including pentabromodiphenyl ether (PentaBDE). Animal studies have shown that this chemical can permanently alter brain development and behavior. This product was banned in the EU and USA 10 years ago but is still found in much foam in gym clubs. The replacement flame retardant, Chlorinated tris and Firemaster 550 are also both associated with a disturbing list of health dangers. Dr Carigan was very surprised that gymnasts' blood contained more of one chemical than workers in foam recycling factories or carpet fitters.

Some gym clubs have such dirty and degraded foam pits, environmental health authorities will instruct closure within the next year, it is predicted, as this health hazard gains public awareness.

With pit socks and upgraded foam, the close cell structure of lycra keeps at least 95% of the flame retardant product locked within the sock covering. British forensic scientist Dr. Trevor Wilson who has examined the debris from foam pits commented "Pit detritus is a potential haven for microorganisms, as well as the flame retardant dust, which is released through everyday use and found during cleaning. This detritus mix can gather in substantial amounts not only at the pit base, but all over the gymnastics centre. The lycra/nylon cover of pit socks is resistant, not only to microorganisms, but also bacteria, mould and mildew. This undoubtedly makes a sound health and hygiene investment for gym clubs"

Leading UK gymnastic clubs including Huntingdon Gym Club home of Louis Smith, The Academy, home of Ruby Harold and Bristol Hawkes where another GB Commonwealth gold medallist trains, Claudia Fragapani of "Strictly" fame, have all bought pit socks for their gyms. Full selection of colours also adds to the aesthetic appeal.

