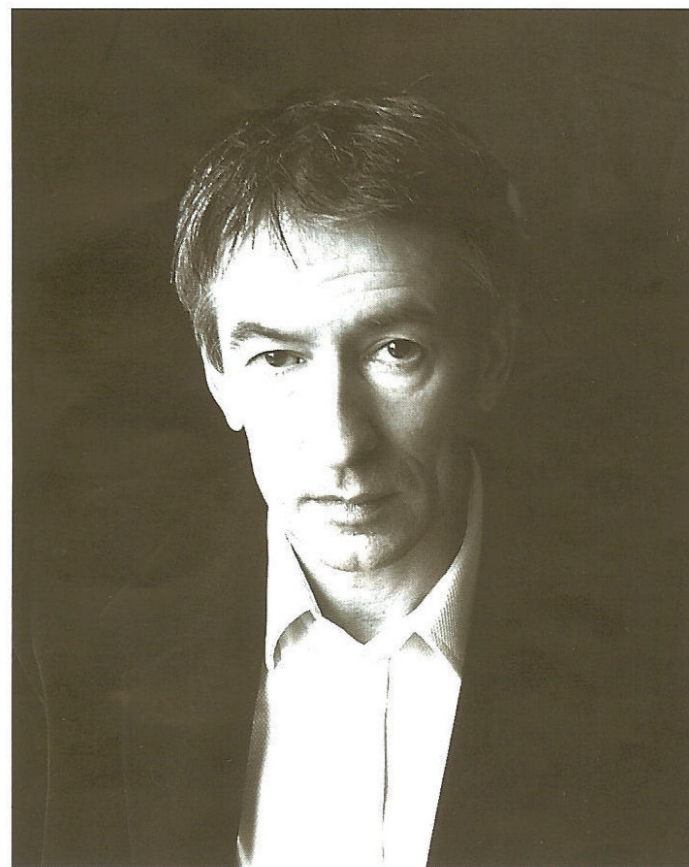


Beta glucans keep the immune system 'fighting fit'



Dr Paul Clayton: Mid-Victorians were healthier and lived for longer

Dr Paul Clayton is a medical pharmacologist who describes himself as a 'gamekeeper turned poacher', an academic who commutes between the world of research and commerce. He is a visiting fellow at Oxford Brookes University and a Fellow of the Szechenyi Society, but also works with national regulatory agencies and leading multinational companies. He has unique and radical views on the state of people's health and diet today, some of which were published in a recent series of papers in the *Journal of the Royal Society of Medicine*.

"The mid-Victorian generation lived healthier for longer than we do today because of their superior diet and lifestyle; they were physically far more active than we are and as a result ate around twice as much as we do, and far more fruits and vegetables. Eating the historically low amounts of food that we do today provides enough calories for our low-energy lifestyles, but not enough micro- and phytonutrients to keep us healthy. We're overweight but in terms of micronutrients we are starving," says Dr Clayton, 'and one group of

phytonutrients that we have become dangerously depleted in are the 1-3, 1-6 beta-glucans, compounds that occur in yeast.'

Fungicides used in modern agriculture have removed the beta-glucans we used to consume in trace amounts in almost all foods, via the naturally occurring yeasts on fruits and grains. Wines and beers which used to contain significant amounts of beta-glucans (from the fermentation process) are now ultra-filtered, and their beta-glucans removed. As for that other fermented food, bread, modern bread-making technology has removed most of the beta-glucans here too.

As a result, the body's innate immune system – the most important element in our defence against infection – has been lulled into a state of low activity by our over-sanitised environment. Ironically, by over-sanitising our environment, we have weakened our immune systems and have become more vulnerable to infection and to allergy.

The body's immune system needs to be kept in peak performance to deal with pathogens (such



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as viruses and bacteria) effectively. However, today's stressful lifestyles, over-sanitised environments and depleted diets mean that our immune systems are increasingly likely to be dysfunctional.

Supplements containing 1-3, 1-6 beta-glucans have recently been developed which normalise immune functions, and can be taken by everybody with the exception of those who have received transplants. Derived from yeast, the beta-glucans work on the immune system in two complementary ways. Firstly, they improve resistance to infection. They stimulate an immune response by 'tricking' the body into thinking it is under attack, thereby keeping the immune system primed and ready to defend its 'owner'. Secondly, they reduce the likelihood of an over-reaction to normally innocuous

substances such as pollen. In essence, the beta-glucans keep the immune system primed to 'fight the bad' and 'ignore the harmless'.

Dr Clayton says: "The principles of immunology are being re-appraised, and it has become apparent that the innate immune system is, in many ways, more important in maintaining health than the adaptive, or acquired immune system. Equally, it has become clear that our innate immune systems are too often damaged and dysfunctional, due to our over-sanitised environment and our poor diets. To bring it back up to par you need the beta-glucans, and a range of micronutrients including vitamin D, selenium and a host of others that many people are depleted in today."

According to Dr Clayton, the available evidence shows that boosting



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the immune system with beta glucans is a more effective way of warding off 'flu than other strategies favoured by the Government. In the event of a 'flu pandemic, the general public are offered the anti-viral tamiflu or 'flu vaccination immunisation.

"Both strategies are desperately flawed," says Dr Clayton, "and neither provide an effective defence. Vaccinations, for example, reduce mortality in controlled trials but not, it appears, the real world. As for the supplements currently sold as immunity enhancers, they too are a busted flush. The data to support vitamin C, Echinacea or zinc, for example, are simply not there. The beta-glucans are, at this time, the best hope we have."

So who should be taking beta-glucans to boost their immune system? Dr Clayton says: "People who are

run down and stressed. Anyone going into hospital, as hospitals are now hotbeds of resistant bacteria such as MRSA. Long distance air travellers could also benefit, and those prone to 'flu such as the young and the elderly and anyone wishing to maintain the best of health.'

How seriously beta-glucans are being taken, says Dr Clayton, is underlined by the fact that they are currently being researched and tested by the Mayo Clinics and the National Institutes of Health in the US, the Canadian Department of Defence and the US Armed Forces Radiation Research Institute.

For those who wish to know more about beta-glucans, go to:
www.vitalizehealth.co.uk
www.biothera.com/healthcare
www.beta-glucan.co.uk