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Vitamin D better than vaccines at preventing flu, report claims

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The risk of children suffering from flu can be halved if they take vitamin D, doctors in Japan have found. The finding has implications for flu epidemics since vitamin D, which is naturally produced by the human body when exposed to direct sunlight, has no significant side effects, costs little and can be several times more effective than anti-viral drugs or vaccine.

(Richard Cannon/The Times)

Vitamin D could cut the risk of flu infection in children by half, the report claims

Only one in ten children, aged six to 15 years, taking the sunshine vitamin in a clinical trial came down with flu compared with one in five given a dummy tablet. Mitsuyoshi Urashima, the Japanese doctor who led the trial, told *The Times* that vitamin D was more effective than vaccines in preventing flu.

Vitamin D was found to be even more effective when the comparison left out children who were already given extra vitamin D by their parents, outside the trial. Taking the sunshine vitamin was then shown to reduce the risk of flu to a third of what it would otherwise be.

Altogether 354 children took part in the trial, which took place during the winter of 2008-09, before the swine flu epidemic. Vitamin D was found to protect against influenza A, which caused last year's epidemic, but not against the less common influenza B.

The trial, which was double blind, randomised, and fully controlled scientifically, was conducted by doctors and scientists from Jikei University School of Medicine in Tokyo, Japan.

The children were given a daily dose of 1200 IUs (international units) of vitamin D over a period of three months. In the first month children in the group taking the vitamin became ill just as often as those taking the dummy tablet. But by the second month, when the vitamin level in the children's blood was higher, the advantage of the vitamin was clear.

The Japanese scientists, writing in the *American Journal of Clinical Nutrition*, say that the anti-viral drugs zanamivir and oseltamivir reduce risk of flu infection by 8 per cent in children who have been exposed to infection, compared with a 50 per cent or greater reduction with vitamin D.

Anti-virals are also too expensive, and possibly too toxic, to be given to the population as a whole whereas vitamin D has additional benefits. The sunshine vitamin not only prevents bone fractures but is also believed to reduce risks of cancer, heart disease, diabetes and other illness, including various bacterial as well as viral infections.

The Japanese finding supports a theory that low blood levels of the sunshine vitamin occurring in winter explain why flu epidemics generally peak between December and March.

Vitamin D activates the innate immune system, enabling the body to produce several proteins such as defensin and cathelicidin which trigger cell activity and disable viruses.

Dr Urashima said: "Vitamin D and vaccine work by quite different mechanisms. Vitamin D enhances innate immunity while vaccine enhances acquired immunity. So we do not have to select only one way of prevention, rather we should do both ways, I think."

Dr John Oxford, professor of virology at Queen Mary School of Medicine, London, said: "This is a timely study. It will be noticed by scientists. It fits in with the seasonal pattern of flu. There is an increasing background of solid science that makes the vitamin D story credible. But this study needs to be replicated. If it is confirmed we might think of giving vitamin D at the same time as we vaccinate."

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