HOW HAPPY BUG MAY EASE DEPRESSION

Could soil cure depression?

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By Adrian Lee

A "HAPPY BUG" found in soil could hold the key to treating depression and other ailments, scientists stated yesterday.
Mycobacterium vaccae, which occurs naturally in earth, was found to improve the quality of life of cancer patients. The discovery, by researchers at Bristol University, could also explain why people who live in the countryside are happier.
In rural areas, the "friendly" bacteria is breathed in through dust. It is also found on homegrown vegetables, which are not subject to the same strict hygiene rules as supermarket produce. The Bristol scientists harvested the bug from soil before injecting it into mice, and it has also been used in another trial to treat cancer patients. It is hoped that eventually a pill containing M.vaccae will be developed to combat depression. It is believed that the bug helps to create the feelgood brain chemical, serotonin, which is a mood enhancer. This chemical is often absent or low in patients suffering depression.

Dr Chris Lowry, a neuroscientist, said: "We believe that prolonged exposure to this bacteria from childhood can have a beneficial effect. It's something that should certainly be looked at for treating depression. This research also leaves us wondering if we shouldn't all spend more time playing in the dirt."

Depression, which afflicts 2.6 million adults, costs the UK about £9billion a year in treatment and lost work time. A fifth of all depression cases are people aged between 35 and 44 years old.
The World Health Organisation estimates that depression and depression-related illness will become the greatest source of ill-health by 2020.

Another study, published in the British Journal of Psychiatry last year, found mental health problems were lower in rural areas. Before large towns and cities grew up and society became ultra-clean, most people would have inhaled the bacteria naturally, or swallowed it through contact with soil or animals. In some Third World countries, the happy bug is found in muddy drinking water. Absence of the bacteria from the everyday lives of many people may also help explain why conditions such as asthma and allergies are much more common now.

Dr Lowry said: "Exposure to bacteria is not always bad. Our ancestors were exposed to these bugs for millions of years. We can be too obsessed with cleanliness." What the scientists don't know is exactly how much of the bacteria is needed to make us happier, and also boost our auto-immune systems. Writing in the latest edition of the journal, Neuroscience, the Bristol team explained how treatment of mice with the bacteria altered their behaviour in a way similar to that produced by antidepressant drugs. When the team looked closely at the brains of the mice, they found that treatment with Mycobacterium vaccae activated a group of neurons that produce the brain chemical serotonin.

Cancer patients being treated with M. vaccae unexpectedly reported improvements in their quality of life. But Dr Lowry did sound a note of caution, warning that we shouldn't rush out and eat handfuls of soil from the garden. "There are harmful bugs in there, too," he said. When used medicinally, M. vaccae is first heat-treated to eliminate any harmful effects.