GM carrot may help treat osteoporosis

By Roger Highfield, Science Editor
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A GM carrot has been produced to help people absorb more calcium to help treat the brittle bone disease osteoporosis.

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The carrot that has been genetically altered to make higher amounts of a calcium transporting protein was developed by researchers at Texas A&M University, College Station, Texas. Today, they report the results of trials of the carrot on 15 men and 15 women.

In people who ate the fortified "sCAX1" carrot, urine measurements revealed a net increase in calcium absorption, say the researchers, who did the study in conjunction with Baylor College of Medicine to see if the supercarrot can help prevent such diseases as osteoporosis.

"If you eat a serving of the modified carrot, you'd absorb 41 percent more calcium than from a regular carrot," says Dr Jay Morris, lead author of the study in the Proceedings of the National Academy of Sciences.

"Fruit and vegetables are good for you for many reasons, but they have not been a good source of calcium in the past."

Both men and women absorbed higher amounts of calcium from the modified carrots on a per serving basis. But the technology needs to be available in a wide range of fruits and vegetables so that people can get the calcium benefit.

"We believe that if this technology is applied to a large number of different fruits and vegetables, that would have an even greater impact on preventing osteoporosis," he adds.

"The daily requirement for calcium is 1,000 milligrams, and a 100 gram serving of these carrots provides only 60 milligrams, about 42 per cent of which is absorbable," he notes. "A person could not eat enough of them to get the daily requirement solely from these carrots."

But if vegetables and fruits could be bred to contain more calcium, then a diet that includes a variety of these produce might come closer to providing necessary calcium.

As for when the modified carrot could be on the shelves, at least in America, he says: "There are still some safety issues to address. The carrots have been grown in very specific, controlled environments, so how they grow and perform in real world field trials needs to be studied.

"We are currently working on answering those safety issues and once answered then a better time line will be known."

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