A biomedical company announces that it's conducted research on a chemical that improves memory in rats. Those rats that were fed this dietary supplement made fewer errors when running in a maze that they'd learned a month earlier.

The company says that if people take this dietary supplement, which does not need approval from the FDA because it's not classified as a drug, it could help prevent Alzheimer's disease and other forms of dementia.

Spot the crap.

. . .

It's true that nutritional or dietary supplements don't have to undergo the rigorous clinical trials and other tests that drugs do to get FDA approval in the United States. However, there are several problems with this claim—even if the rats did show significantly improved memory and the studies were well-designed and carried out under rigorous conditions.

The first is that improving normal memory is quite different from preventing a degenerative disease like dementia. You can't generalize from one to the other.

The second is that we don't know if the human brain will respond the same way as the rat's brain to the chemical. That will take additional research, including clinical trials with people, not rats. The rats are a good starting point, but they're not enough.

Third, one should always be suspicious of self-serving results from individuals and corporations. This is nothing new, of course. But the fact that the company stands to make a lot of money from a claim that's very difficult to verify should make you look much more closely at what's being said.