

# Be on the alert: Mainstream and alternative medicines mixed together on the store shelves, not clearly distinguished

 [devblogs.microsoft.com/oldnewthing/20100831-00](http://devblogs.microsoft.com/oldnewthing/20100831-00)

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I was in the supermarket looking for cold medicine, and as is my wont, I like to read the fine print before choosing a product. Most of the products listed their active ingredients in the form *Active Ingredient: XYZ 150mg*. But there were a few that said *Active Ingredient: XYZ 6X*. What is this 6X? How much is 6X? Six times what? A closer look at the box reveals the word *Homeopathic* unobtrusively written towards the bottom of the box. The 6X notation means that the active ingredient's concentration is one part in  $10^6$ , or one part in a million. Suppose the dosage is one teaspoon. That's about five milliliters, or about five grams of medicine. One millionth of that is  $5 \times 10^{-6}$  of a gram or 0.005 milligrams. By comparison, non-homeopathic medicines contain 13mg of the same medicine per dose. But that's okay, because practitioners of homeopathy believe that a medicine becomes more powerful the more heavily it is diluted. The Food and Drug Administration does not regulate homeopathic medicines very much at all because they contain little or no active ingredients. Do practitioners of homeopathy not wash their hands? After all, diluting the germs with water makes them stronger, right? The more you wash, the more powerful they become! **Bonus homeopathy video:** Homeopathic A&E as performed by British comedy show *That Mitchell and Webb Look*. (A&E = Accidents and Emergencies, what in the United States is commonly called the Emergency Room.) **Bonus homeopathy satire:** New Age terrorists develop homeopathic bomb.

**Obligatory XKCD link.**