How Many Pills is a Vegetable Worth?

We've all been told, hundreds of time, that vegetables are good for us and that we should eat more of them. You can probably guess that we don't eat as many as the experts think we should, otherwise they wouldn't keep telling us to eat more. And I'm sure you know that many people would prefer to pop a pill rather than eat their veggies. But at a recent nutrition conference I just heard a pretty amazing number. The doctor said that to get the same amount of active ingredient floating through our blood stream, compared to eating the vegetables we would have to take 10,000 times as much in pills!

Isn't that amazing?! Ten thousand times as much in a pill, to equal a serving of vegetables or fruits! Where can such a number come from? He was talking about some of the more common plant chemicals, some that we recognize as antioxidants. However, it turns out that these chemicals, the flavonoids, do a lot more in us than be antioxidants. That was one of his points. They can affect which cells keep growing and which ones die. That's good if they're cancer cells! They change which enzymes work, how much energy we produce and use, and many other things.

The other part of his talk however was about which things in the fruits and vegetables have these effects. There are about a dozen basic flavonoids in fruits and vegetables. But when we eat them, our bodies change them into other chemicals. What actually kills the cancer cells, or protects our arteries, or makes our insulin more effective, are the new chemicals our bodies made.

How well we can make these effective ones depends on what else we eat at the same time. Which ones we make and how fast we make them depends on what else is in that food. How long they stay in our blood, or how fast we get rid of them, also depends on what came with them. So eating flavonoids in an apple will have a very different effect on our blood than popping a pill that has flavonoids. That's what the doctor meant when he said we'd have to eat 10,000 times as much from a pill to get the same amount into our blood.

And even if we did eat that many pills, there's no guarantee we would get all the same
protection. The pills would only have one or two flavonoids, and our bodies would only make a few new ones. When we eat the apple, drink grape juice, or even eat onions, we get many more kinds to start with. Along with the fiber, sugars, vitamins and minerals of the fruit or vegetables, our bodies can make many more, in just the right amounts.

It's is amazing what we're learning about what affects our bodies. For example, how hot the water is that you use to make tea will change which chemicals your body can get from the tea. That changes how much good protection you get from the tea. So far there are no guidelines to say we should use this temperature for this tea or a different temperature for a different tea. And how many of us want to stick a thermometer in the cup along with the tea bag? But maybe someday we'll do just that!

The researchers are just beginning to figure out exactly what the new chemicals are that our bodies make. They're still working to understand just how they work. Maybe these new things will become new cancer drugs, or protect us from diabetes or heart disease. But why should we wait for a doctor to prescribe a new pill for us, when we can eat an apple today? Add some onions to the stew or salad tonight! Make fruit salad with pears and grapes! Sip some tea, have a cup of coffee, and enjoy a bite of dark chocolate for dessert! They all have flavonoids for your health!

Here's a surprisingly cool and delicious way to get some extra veggies into the children (no matter what their age) on these hot summer days. If you don't tell them these are made from squash they'll never know. Use regular syrup, not sugar-free, or they'll be too icy hard. Make plenty and keep some in the freezer for a quick treat.

### Pumpkin Pie-sicles

1 medium butternut squash
2/3 cup evaporated milk

Wash squash, cut in half and remove seeds. Put cut sides down on dish and microwave on high for 8-10 minutes, until you can poke a fork into it easily. Let cool until you can handle it, then scrape out the pulp. Combine pulp and other ingredients in bowl and mash until smooth. Spoon into paper cups (or ice cube trays). Stick plastic spoons or wooden sticks into cups and freeze. Warm slightly to remove from cups for serving. Makes 8 popsicles.
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