The Anatomy Of Orange Juice

By Craig Burton - 3D PTS, Munich, Germany www.3dpts.com

Orange juice is often perceived as one of those universal 'good things', a bit like Santa Claus, the tooth fairy and sunny afternoons in the park.

Of course, orange juice is *very* big business, and the specialist ad agencies behind advertisements for orange juice are very clever at subliminally reinforcing that message. Orange juice has come to be seen as a natural, wholesome part of our daily life.

If that's true though, why do women who drink a glass of fruit juice daily become 18% more likely to develop type II diabetes?(1)

What's orange juice made of?

Most brands listing their ingredients as 'pure orange juice' have a natural sugar content of between 18g and 22g per 200ml. There's also a negligible amount of protein and fibre, plus vitamin c, potassium and folic acid. A litre of orange juice contains between 12 and 16 oranges.

From tree to table…

We all know that orange juice starts life as an orange on a sun-bathed tree, an image which represents the embodiment of a healthy lifestyle for many of us. So what happens to it between being picked and ending up in your refrigerator?

Well first it gets squeezed, and that's the point at which things start to go wrong. The juice contains almost no fibre, without which the huge amount of sugar (fructose) in oranges is released into your bloodstream very quickly indeed.

That sends your body into crisis (especially if not consumed with food) and provokes an insulin response, which in turn stores the sugar as fat. So not only can orange juice make you fat, it can also help to fatigue your pancreas (which secretes insulin) to the point where you get type II diabetes.

High blood sugar levels are also directly and indirectly linked to health issues such as fungal infections, tooth decay, osteoporosis, ADHD, heart disease and chronic inflammation.

How juice is processed

After it's been squeezed, the juice is pasteurised (cooked) to increase its shelf life, and 'from concentrate' juice then has the water evaporated from it under vacuum and heat processing techniques before it's frozen and shipped. On the other side it gets reconstituted through the addition of water.

This pasteurisation process destroys most of the vitamins and minerals, and denatures all of the vital enzymes, making your juice nutritionally degraded, leaving you with just the sugar and water.

'Not from concentrate' juice is also commonly pasteurised, as is organic juice. Freshly squeezed, unpasteurised juice is nutritionally richer, but still lacks the fibre needed to control your blood sugar levels appropriately.

Orange juice and your teeth

Most people know about acid erosion and tooth enamel, but the hidden cost to your teeth from uncontrolled sugar levels is paid with the amount of calcium and other minerals required to help control blood glucose levels. When these minerals are controlling your blood glucose they aren't helping your teeth, leading to decay from the inside out.

But is orange juice really so bad?

You'll find some people who say that fruit juice is still a good way of getting vitamins and fluids into your body, but to us this is just absolute nonsense.

Those people are just patronising you, assuming in advance that if you don't drink juice you won't have the brains to figure out how else to get your vitamins and fluids. Because of this they end up giving out half-baked and confusing advice.

If you want fluid, drink water (your own body weight in kg x 0.033 to get the amount in litres per day). If you want vitamins eat lots of varied and raw vegetables, or vegetable juice (red peppers, for instance are much higher in vitamin c than oranges).

It's not just orange juice…

Apple juice, grape juice, and many commercial smoothies and fruit juices are also guilty of the same crimes, despite the advertising urging you to believe they're healthy (another trick is to include, say, 3% acai or acerola cherry juice and then brand it in large, colourful letters as a 'super-juice' or 'high in anti-oxidants' because they're high in vitamin c).

So be aware that just because the ad shows a healthy, fit, happy young couple drinking juice in a stylish kitchen, morning sun pouring through the window, it doesn't mean the juice is responsible for it.

In fact, to discover exactly what orange juice *is* responsible for, the evidence suggests you'd be better off spending time in your local dental surgery or diabetic clinic.

Wishing you all the very best in health and fitness,

Craig, Matt and the 3D PTS team.

References:

1. Intake of Fruit, Vegetables, and Fruit Juices and Risk of Diabetes in Women
Bazzano et al. Diabetes Care.2008; 31: 1311-1317