



Chew Your Own Food

Could there be a connection between having to chew food and health? Is “chew your own food” a dictum that will improve your health and life expectancy? Let’s take a look.

The concept that fruit juice is not as healthy as whole fruit, or even not healthy at all, is not a new one, but the more general notion that you should “chew your own food” was suggested to me over on Twitter by Allan Folz, a frequent commenter on this site.

Fruit juice is associated with the metabolic syndrome

It’s well-known that sodas and other sugar-sweetened beverages – SSBs, the term of art used in nutritional science – [lead to weight gain and disruption of metabolism](#). Frequent consumption of fruit juice is also: consumption of more than 5 servings a week of fruit juice, whether natural or bottled, is, along with other SSBs, [associated with increased risk of the metabolic syndrome](#).

The authors of the study speculate that lesser amounts of fruit juice, at less than 5 servings a week, may not be as harmful because of polyphenols in the fruit that may counteract harmful effects of sugar.

Since this study is observational, it can’t show causation. But we know that sugar and SSBs spike blood sugar and insulin, so there’s reason to think that the association could be causal, at least in part.

Matthew Dalby has looked at the science on the metabolic reactions to whole fruit as opposed to fruit juice. [Orange juice caused a greater rise in insulin than whole oranges](#), and the juice caused a reactive hypoglycemia. [Results were similar when comparing apples to apple juice](#).

So, eating whole fruit doesn't appear to cause the same glucose and insulin responses as does consuming fruit juice.

Dense, acellular carbohydrates

Many people believe that carbohydrates cause obesity, or that they're a large contributing factor, but a few facts get in the way of that thesis.

Notably, many populations have eaten high amounts of carbohydrates throughout history, and in the present, without suffering high rates of obesity. For example, the Kitavans, so often held up as an example of excellent health, eat a diet that contains about 75% of calories as carbohydrates, and they have no cardiovascular disease, cancer, or obesity.

Mass obesity is a recent phenomenon.

The answer to this question could be that it's not carbohydrates that cause obesity, but a particular type: dense, acellular carbohydrates.

[Comparison with ancestral diets suggests dense acellular carbohydrates promote an inflammatory microbiota, and may be the primary dietary cause of leptin resistance and obesity](#)

The author, Ian Spreadbury, writes that neither glycemic index, fat, or carbohydrates can be causes of obesity, but that flour, sugar, and refined fats alter the gut microbiota, causing inflammation and obesity. Similar to the effects of sugar on dental health, the dense, acellular carbohydrates – flour, sugar, and processed food – cause inflammatory reactions and changes in the gut microbiome that tubers, leaves, and fruit do not.

Processed grains and sugar offer a greater density of food and affect the body differently from whole, unprocessed foods. Adding fat to the mix, especially in the form of seed oils, produces a “double hit”, with the result being mass obesity.

Mechanical disruption of food

It seems likely that mechanically disrupting food, and especially when fiber is removed, changes the way the body handles it. Mechanical disruption, such as grinding of flour and juicing of fruit, creates a calorie-dense food that humans are not adapted to by evolution. Our genes are not meant to handle it.

Nut butters are another example of mechanically disrupted food. I've read, but can't currently find the answer, that nut butters provide more calories than the nuts themselves, simply because the butters have more surface area and the gut therefore digests it more, whereas a good proportion of actual nuts pass through the digestive tract without being digested.

Don't drink your calories

The adage “don't drink your calories” comes from [a study](#) that found that

drinking caloric beverages with a meal, whether the beverage was milk, cola, or orange juice, led to the consumption of more calories while the subjects reported no difference in satiety.

There's something about liquid calories that doesn't register with the normal appetite control system, so if you drink calories, that could put you on the road to weight gain, or stall weight loss.

The same principle might apply to seed oils or even olive oil. Or milk or cream.

In fact, using this principle, we may not even need to invoke the ideas above about how the gut microbiome is affected by process foods. It could be that they merely provide more calories with less satiety.

Don't eat processed food

The big lesson here is: don't eat processed food.

Almost by definition, it's been refined and mechanically disrupted. Processed food is likely a big factor in obesity, either because of its refining, including added refined sugar, or because most of it contains seed oils.

Whole, unprocessed foods are not mechanically refined, and don't appear to upset appetite regulatory systems or the gut microbiome, and do not cause inflammation.

Another point is that carbohydrates may not be so bad as long as they're in a more natural state, such as vegetables, tubers, fruits, and greens. Although if I were overweight I would certainly be careful even with those. Physically active people may, however, have little problem with them.

PS: My most recent book is [Best Supplements for Men](#).



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