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The organic industry is hot, and it's the fastest growing sector of the supermarket. From 1997 to 2013, organic food sales in the United States have increased nearly 800%, from \$3.6 billion to a \$32.3 billion in 2013. It's estimated that organic food sales will top \$42 billion in the U.S. in 2014. What's more, folks are willing to pay 30 – 60% more for organic food items. But what does it truly mean to be organic?

While most people recognize that organic foods are those produced using methods that do not involve modern synthetic inputs (e.g., pesticides and chemical fertilizers), the U.S. Department of Agriculture's National Organic Program sets forth strict guidelines for the agriculture of organic foods. For instance, the organic designation means that irradiation, sewage sludge, synthetic fertilizers, prohibited pesticides, and genetically modified organisms (GMOs) cannot be used in the production of crops.

As an example, in 2004, there were over 400 synthetic pesticides routinely used in conventional farming for weed and pest control. However, none of these chemicals were allowed under organic guidelines.

When it comes to organic livestock, producers have to meet animal health and welfare standards, cannot use antibiotics or growth hormones, use only 100% organic feed, and provide animals with access to the outdoors. (Note: However, this does not necessarily mean that animals are “grass-fed,” humanely treated, or free to roam pastures at all times.)

Presently, the USDA has identified three categories for labeling to help consumers identify organic products:

- **100% Organic:** Made with 100% organic ingredients
- **Organic:** Made with at least 95% organic ingredients

- **Made with Organic Ingredients:** Made with a minimum of 70% organic ingredients with strict restrictions on the remaining 30% including no GMOs

Thus, organic food production offers many bonuses to both people and the environment, such as lowering human exposure to synthetic agents (e.g., pesticides, fertilizers, growth hormones), as well as promoting healthy soil, ecosystems, and water supplies. However, these organic standards have nothing to do with regulating a food product's nutritional attributes.

“Some supporters of organic food production promote it as being ‘better’ without any supporting science,” said Penny Kris-Etherton, Ph.D., a registered dietitian and Distinguished Professor of Nutrition at the Pennsylvania State University's College of Health and Human Development. “In terms of both nutrition and safety, organic food is no different than foods produced by other contemporary food production practices.”

In a 2010 study in the *American Journal of Clinical Nutrition*, researchers reviewed 12 major studies on organic food from the past 50 years and found “evidence lacking for nutrition-related health effects that result from the consumption of organically produced foodstuffs.” ¹

Research on the nutritive advantages, or lack thereof, of organic foods dates back to 1924, including some of the following highlights:

- In 1997, after examining about 150 publications, researchers from Germany concluded “with regard to all other desirable nutritional values...no major differences were observed” between organically and conventionally grown vegetables. ²
- However, in 2001, Dr. Virginia Worthington reviewed 41 publications and noted increased vitamin C, magnesium, iron, and phosphorus, as well as lower nitrate content in organic vegetables. She concluded, “There appear to be genuine differences in the nutrient content of organic and conventional crops.” ³
- In 2002, researchers from the University of Otago in New Zealand looked at 49 publications and found, “With the possible exception of nitrate content, there is no strong evidence that organic and conventional foods differ in concentrations of various nutrients.” They also reported that organic food did not consistently taste

better than conventional food in objective taste tests. ⁴

- In a 2003 review of the literature that appeared in the *International Journal of Food Sciences and Nutrition*, researchers from Harokopio University in Athens, Greece, found a trend toward higher vitamin C concentrations—but lower protein content—in some organic crops. They concluded that “a balanced diet rich in fruits and vegetables, and adequate in foods from the other groups, is unequivocally able to maintain and improve health, regardless of its organic or conventional origin.” ⁵
- In 2008, researchers from Denmark concluded, “This study does not support the belief that organically grown foodstuffs generally contain more major and trace elements than conventionally grown foodstuffs.” ⁶
- Most recently, in a study published in the *British Journal of Nutrition* in September 2014, a team of 18 researchers scattered across Europe and North America scoured 343 studies and found significant and meaningful differences in composition between organic and conventional crops and foods. Most importantly, the concentrations of a range of antioxidants (e.g., polyphenolics, phenolic acids, flavanones, stilbenes, flavones, flavonols, and anthocyanins) were found to be substantially higher in organic foods. Along these lines, in various dietary intervention and epidemiological studies, many of these antioxidant compounds have been linked to a reduced risk of chronic diseases, including cardiovascular disease, neurodegenerative diseases, and certain cancers. ⁷



As the authors of the aforementioned study highlighted, “It is important to point out that there is still a lack of knowledge about the potential human health impacts of increasing antioxidant/polyphenolic intake levels and switching to organic food consumption.” This caveat hinges on both sides of the equation, as the research has yet to examine the potential health benefits of long-term consumption of organic foods and the potential subsequent decrease in pesticide load. (Note: Up to 25% of organic crops contain pesticide residues because of contamination during packaging or from trace amounts in drifting soils or tainted irrigation water, some researchers have said.)

Despite the lack of conclusive evidence, consumers generally believe that organic food is both safer and healthier than conventional food. Researchers from Ghent University in Belgium polled over 500 adult consumers of both organic and conventional produce, and the subjects were asked to complete a survey concerning their perception of the nutritional and toxicological value of organic relative to conventional vegetables.⁸

The researchers found “that organic vegetables are perceived as containing less contaminants and more nutrients, and as such, being healthier and safer compared to conventional vegetables. However, not enough evidence is currently available in the literature to support or refute such a perception, indicating a certain mismatch between consumer perception and scientific evidence.”

Unfortunately, there seems to be a nutritional “halo” over all foods labeled “organic,” a word that makes the vast majority of folks think that a food is intrinsically healthy. What’s most concerning is that this perception seems to extend well beyond vegetables, fruits, meat, poultry, eggs, dairy, and other unprocessed foods.

In fact, in a study recently published in the journal *Judgment and Decision Making*, researchers from the University of Michigan found that people make inferences about the nutritional qualities of foods based simply on the labeling of said food as “organic.”⁹ Specifically, the researchers reported that subjects surveyed believed that cookies labeled as “organic” are lower



in calories and can be eaten more frequently than conventional cookies—just because of the labeling.

Interestingly, the University of Michigan researchers found that the organic labeling can transcend to physical activity patterns as well. When the researchers evaluated folks with weight-loss goals, they found that skipping out on exercise was deemed more acceptable when a person opts for an organic dessert rather than a conventional one. In essence, folks believe that eating organics is a suitable substitute for other health and weight-loss promoting behaviors, such as physical activity.

The researchers were so stricken by the results of their studies that they titled their paper *“The ‘organic’ path to obesity?”*

“Organic is on so many food packages of highly processed foods,” says Andrea Giancoli, M.P.H., R.D., dietitian and spokesperson for the Academy of Nutrition and Dietetics. “I find that people see ‘organic’ on a food label and it doesn’t seem to matter what the actual food is; they think it is healthful. Organic means that the food is farmed in a different way, which is great for the planet, but that doesn’t mean it’s always better for you,” says Giancoli. ¹⁰

You see, the designation “organic” refers to how a food or the ingredients in a food are farmed. It does not tell you, however, about the nutritional profile of the foods. As you’ll see, there are many organic products that line supermarket shelves that are (appallingly) comparable to their conventional counterparts in terms of calories, fat, sugar, and sodium.

In fact, there are just as many heavily processed organic foods, rife with refined flours, added sugars, inflammatory oils, and salt. Simply put, it’s important to make your organic food choices count and to not use the organic labeling as an excuse to make poor food choices. Ultimately, organic junk food is still junk food, and with that in mind, we share with you *9 Organic Foods to Never Eat*.

Fruits with a Thick Skin

When it comes to produce, the benefit of buying organic is to avoid ingesting pesticides and chemicals that are generally used on conventional fruits and vegetables. As

mentioned above, some recent research also suggests that some organic produce may contain higher concentrations of health-conferring antioxidants.

That said, fruits like avocados, kiwis, papayas, mangoes, cantaloupes, melons, grapefruits, bananas, and oranges have a thick skin barrier, which is typically discarded before eating, between the outside world and the fruit itself. As a result, the edible flesh of these fruits generally contains very few, if any, pesticides.

Contrast that with apples, tomatoes, pears, and other fruits and vegetables that you eat with the skin, and you'll see why it's important to choose organic for some but not necessarily for others.

Each year, the Environmental Working Group (EWG) produces the *Shopper's Guide to Pesticides* in an effort to reduce consumers' exposure to pesticides as much as possible. ¹¹

The EWG produces a list called the *Dirty Dozen*, which contains the fruits and vegetables with the most pesticide residues. Their recommendation is to purchase organic versions of these fruits and vegetables. In 2014, the EWG's *Dirty Dozen* includes:

- Apples
- Strawberries
- Grapes
- Celery
- Peaches
- Spinach
- Bell peppers
- Imported nectarines
- Cucumbers
- Cherry tomatoes
- Imported snap peas
- Potatoes

[Note: The EWG also adds domestic blueberries and hot peppers to the "PLUS" section of the *Dirty Dozen* list to designate that these may also be of concern and may be best purchased organic.]

As you can see, the following thick-skinned fruits are not included on that list:

- Avocados
- Pineapples
- Papayas
- Kiwifruits
- Grapefruit
- Mangoes
- Cantaloupes
- Bananas
- Oranges

In fact, the majority of these thick-skinned fruits appear on the *Clean Fifteen*, a separate list created by the EWG that includes the fruits and vegetables with the lowest pesticide residue. The EWG suggests that these are the safest conventionally grown crops to consume. Even those that don't appear on the *Clean Fifteen* (e.g., bananas, oranges) can be found near that list, well away from the *Dirty Dozen*.

While these lists and recommendations are made in an effort to help consumers shop smart for produce, the EWG does remind us that “the health benefits of a diet rich in fruits and vegetables outweigh the risks of pesticide exposure.”

Trail Mix

Pardon the pun, but most store-bought trail mixes—yep, even the organic, “super healthy” versions—can take a hike! In addition to nuts (mostly, if not all, peanuts), the vast majority of trail mix contains dried fruit (frequently covered in “yogurt”) and typically some type of chocolate (but not the healthy, cocoa-rich kind), which means added sugar and often plenty of it.



For instance, it's not uncommon for a mere ½ cup of trail mix to contain upwards of 30 grams of sugar. And yes, that includes organic trail mix, and when it comes to your body, organic sugar is still sugar.

What's more, trail mix is a very calorie-dense snack due to the concentrated sources of

fat (e.g., nuts) and sugar (e.g., dried fruit, chocolate). For instance, that same ½ cup of trail mix packs over 300 calories, which adds up to more fat, sugar, and calories than ice cream. What's more, most people have trouble controlling portion sizes when it comes to this “healthy snack.”

That being said, some of the foods, like nuts and dark chocolate, can indeed be very healthy snack options that help you fight fat. You may consider making your own homemade trail mix with the following raw, organic nuts, which are loaded with nutrients like healthy fats, fiber, protein, vitamins, and minerals:

- Walnuts
- Cashews
- Pistachios
- Almonds

If you'd like to add something unique to the mix, you may consider adding some organic cacao nibs, which are considered to be “nature's chocolate chips.” Cacao nibs are an antioxidant powerhouse, and they're loaded with fiber and minerals, like magnesium and iron. What's more, they are a rich source of theobromine, which has been shown to have some unique fat loss attributes including appetite suppression and the ability to mobilize fatty acids for fuel. Now that's a winning combination!

Sodas, Teas, and Juices

Organic sodas, teas, and juices are typically not any better for your waistline than their conventional counterparts competing for the same shelf space.

In fact, a can of one popular brand of organic soda packs more sugar (43 grams) and calories (170) than one of the leading conventional brands, which contains 41 grams of sugar and 150 calories. Granted, the organic soda is void of high fructose corn syrup and artificial flavors and colors; however, that's still a *lot* of sugar—nearly 11 teaspoons worth—that will do very little for your health and body composition goals.



Bottled organic teas and juices can also be sneaky sources of sugar. For instance, one popular brand of organic tea contains 16 grams of added sugar per bottle, which is equivalent to 4 teaspoons.

Likewise, bottled fruit juices are much like their conventional counterparts in terms of sugar content and lack of fiber (unlike whole fruits). For instance, a single 8-ounce glass of one popular brand of apple juice contains 30 grams of sugar (the equivalent of 7 ½ teaspoons), slightly more than its conventional counterpart (28 grams of sugar per cup).

If you'd like something other than water, your best option to hydrate, then you might consider making a homemade flavored water with fresh herbs, fruits, and/or vegetables, brewing yourself some fresh green tea or organic coffee (sweetened with an all-natural sweetener like stevia), adding some freshly squeezed lemon to your water, or opting for a zero-calorie, naturally-sweetened soda like Zevia.

Pretzels and Crackers

Pretzels—and other crunchy snacks like crackers—also qualify for our list of the **7 WORST Snacks for a Flat Belly**. Touted as “low fat” (like that’s a good thing), pretzels are also low in important nutrients like protein, fiber, vitamins, minerals, and phytonutrients. What do they contain? For the most part, they are a carbohydrate-dense food made from refined flour, and as a result, they rank “high” on the glycemic index scale (i.e., 83).

Believe it or not, when you compare Nutrition Facts, organic pretzels are no different than their conventional counterparts. Take a look for yourself with this side-by-side comparison:

Pretzel #1 (Serving Size: 1 ounce):

- Calories: 110
 - o Calories from fat: 10
- Total Fat: 1 gram
- Sodium: 400mg
- Total Carbohydrates: 24 grams
 - o Dietary Fiber: less than 1 gram
 - o Sugar: 1 gram
- Protein: 2 grams



Pretzel #2 (Serving Size: 1 ounce):

- Calories: 110
 - o Calories from Fat: 10
- Total Fat: 1 gram
- Sodium: 450mg
- Total Carbohydrates: 23 grams
 - o Dietary Fiber: 1 gram
 - o Sugar: less than 1 gram
- Protein: 2 grams

Based on that information, can you guess which pretzel is organic (and supposedly “healthier”)? (If you really want to know, Pretzel #1 is the organic version.) Furthermore, when you look at the ingredients lists, you’ll see that both are essentially a combination of refined flour, salt, added sugar, and vegetable oil. Crackers are more of the same: refined flour, vegetable oils, added sugar, and salt.

Breakfast Cereals

Just like their conventional counterparts, the overwhelming majority of organic breakfast cereals are rife with high glycemic carbohydrates in the form of heavily processed flours and refined sugar, two ingredients that are closely linked to obesity.¹²



Consumption of higher GI, fast-digesting, processed carbohydrates and refined sugars—like those found in most pre-packaged store-bought breakfast cereals—results in elevations in blood sugar and insulin concentrations, blood triglyceride levels, and LDL (i.e., “bad”) cholesterol.

Furthermore, the resultant “crash” in blood sugar and insulin after consuming a highly refined source of carbohydrates is very likely to leave you hungry in just a couple short hours and leave your body to come calling once again for a quick “sugar fix” of high GI carbohydrates.¹³

Instead, you’d be better off starting your day with a high-protein breakfast (e.g., organic eggs). In a recent study, researchers from the University of Missouri found that people

who ate a high-protein breakfast (e.g., eggs and lean beef) felt more full, had fewer cravings, and were less likely to snack on high-fat and high-sugar foods at night, compared with a group who ate a calorically equivalent bowl of cereal. ¹⁴

Multiple other studies comparing a high-protein breakfast (e.g., 30+ grams of protein) to a breakfast of ready-to-eat cereal have also shown similar benefits in satiety, appetite, hormonal responses, and subsequent food choices. ^{15–18} If you do feel the need to opt for cereal, then a good option would be an organic cereal made from sprouted grains (e.g., Food for Life), which contain more vitamins, minerals, antioxidants, fiber, and protein than refined grains.

Granola and Granola Bars

While granola, which at its very base is nuts and oats, *can* be quite a healthy and tasty treat, most commercial preparations (including organic versions) are rife with refined grains, sugary ingredients, and inflammatory oils. What's more, granola can be a very calorie-dense option, and the serving size is often much smaller than what most folks consume.



For instance, one popular organic brand contains 5 different sugary ingredients contributing 14 grams of sugar per ½ cup serving. On top of that, it also contains sunflower oil, which is rich in inflammatory omega-6 fatty acids.

As mentioned, the typical serving size for granola is ½ cup, and if you have trouble stopping, it's probably because sugar and fat are usually the second and third ingredients on the list. These two highly palatable energy-rich ingredients are common amongst “binge foods” ¹⁹, and food manufacturers seem to have these addictive combinations down to a science. ²⁰ With regard to granola, most people are likely to consume double or triple the recommended serving size, which will only compound the calorie density and added sugar issues.

Although commonly thought of as a healthy snack, granola bars are a microcosm

of granola. Granola bars are nearly always packed with processed ingredients, including unhealthy oils and various sources of refined sugar. Due to the high glycemic carbohydrates and lack of protein and fiber, these will often leave you reaching for another high-carb snack in no time at all.

Energy Bars

According to the American Heart Association, adult women should limit their consumption of added sugars to about 25 grams or less (i.e., about 6 teaspoons) per day while adult men should limit their intake to about 36 grams or fewer (i.e., about 9 teaspoons).²¹ While a good rule of thumb is to look for any words on the ingredients list ending in *-ose* (e.g., sucrose, maltose, glucose, dextrose), some forms of added sugar that you might find on organic food labels include:

- Agave syrup
- Beet sugar
- Brown sugar
- Cane juice
- Cane sugar
- Caramel
- Carob syrup
- Corn syrup
- Corn syrup solids
- Date sugar
- Fructose
- Fruit juice
- Fruit juice concentrate
- Honey
- Maple syrup
- Molasses
- Raw sugar
- Rice syrup
- Tapioca syrup
- Turbinado sugar

Despite the fact that energy bars have a pervasive healthy connotation, most don't fare much better than regular chocolate candy bars. Some of the most popular energy bars in supermarkets have more than 20 grams of sugar each, which is often the same as a packet of candy. What's more, some brands you can find in health food stores typically don't provide less sugar. In fact, two top organic bars touting holistic eating habits contain 24 grams of sugar each.

That being said, a high-quality organic nutrition bar can help you overcome the dilemma of maintaining your nutrition standards in the midst of a busy lifestyle as well as provide you with versatility and convenience. With that in mind, it's a good idea to look for a nutrition bar that combines metabolism-boosting, appetite satiating nutrients like protein, healthy fats, and fiber, preferably under 20 grams of sugar.

Sauces and Salad Dressings

When it comes to organic foods, there are certain manmade chemicals that you won't find on the list of ingredients:

- Hydrogenated oils (i.e., trans fats)
- High fructose corn syrup
- Artificial sweeteners, flavors, colors, and preservatives
- Genetically modified organisms
- Monosodium glutamate

Thus, you could argue that simply swapping an organic option for a similar product in the conventional category would be “better,” and in some cases, you'd probably be on the right track. When digging deeper, however, you'll notice that it's not as big of an improvement as you might think.

Take barbeque sauce, for example, and based on the following Nutrition Facts (one organic, one conventional), which would you choose?

Barbeque Sauce #1 (Serving Size: 2 tablespoons):

- Calories: 50
 - o Calories from fat: 0
- Total Fat: 0 grams
- Sodium: 200mg
- Total Carbohydrates: 13 grams
 - o Dietary Fiber: less than 1 gram
 - o Sugar: 11 grams
- Protein: 0 grams

Barbeque Sauce #2 (Serving Size: 2 tablespoons):

- Calories: 25
 - o Calories from Fat: 0
- Total Fat: 0 grams
- Sodium: 240mg
- Total Carbohydrates: 6 grams
 - o Dietary Fiber: 1 gram



- o Sugar: 4 grams
- Protein: 0 grams

Would it surprise you that Barbeque Sauce #1 is a popular organic brand? Although it claims to have “no added sugars,” you’ll find agave nectar and molasses on the ingredients list, and as noted above, the American Heart Association would disagree with the manufacturer on both accounts.

When you take a look at the ingredients list of any bottle of salad dressing, oil will typically be right at the top. Regardless of whether the salad dressing is organic or not, the majority of the time these oils will be one or a combination of the following: soybean oil, canola oil, and/or sunflower oil.

Every so often, you’ll find a salad dressing that contains “heart healthy” extra virgin olive oil, but even in the majority of these instances, it’s blanketed by one of the aforementioned vegetable oils, which are rife with inflammatory omega-6 fatty acids.

As a reminder—because this can’t be overstated—excessive consumption of omega-6 fatty acids coupled with a deficiency in omega-3 fatty acids, is connected to an increase in all inflammatory diseases, ²² which is basically all diseases, including:

- Cardiovascular disease
- Type 2 diabetes
- Obesity
- Metabolic syndrome
- Irritable bowel syndrome and inflammatory bowel disease
- Macular degeneration
- Rheumatoid arthritis
- Asthma
- Psychiatric disorders
- Autoimmune disease

What’s more, this overconsumption of omega-6 fatty acids not only affects you but also your offspring, as it can increase the incidence of obesity in future generations. ²³

When it comes to salad dressings, your best bet is to make your own with a combination of extra virgin olive oil, vinegar, and fresh herbs and spices (all of which you can order when eating out also). While there are tons of options—including a few [here](#)—you can make a simple balsamic vinaigrette by combining extra virgin olive oil and balsamic vinegar (in a 1:1 or 2:1 ratio) along with a teaspoon or two of Dijon mustard, some salt and pepper, and some garlic powder in a jar and shaking until emulsified.

Kids' Snacks, Candy, and Cookies

Simply put, organic junk food is still junk food. While certified organic foods are void of manmade hydrogenated oils (i.e., trans fats), high fructose corn syrup, and artificial ingredients, this category of organic products is typically quite similar to its conventional brethren, chock full of heavily processed flour, vegetable oils, and added refined sugars. (Do you hear an echo yet?)



For instance, one brand of organic chocolate chip cookies contains a similar laundry list of probable suspects compared to its popular conventional counterpart:

- White flour
- 3 types of added sugar, including more sugar per serving (10 grams versus 9 grams)
- Soybean oil
- No fiber

One popular energy bar marketed for children contains FIVE sources of added sugar and provides the equivalent of 3 teaspoons of sugar, which is the recommended daily limit of added sugar for children, according to the American Heart Association. In addition to the added sugar, this snack will also provide your child with soybean and sunflower oils, which are dominant in omega-6 fatty acids, and as discussed above, may lead to a whole host of health issues.

In fact, we have long been told to heed the advice to substitute vegetable oils like these for animal fats, which are typically higher in saturated fats (e.g., substituting

margarine for butter). Unfortunately, this “cornerstone” of worldwide dietary guidelines has turned out to be heavily misguided, as research now demonstrates that substituting polyunsaturated fats rich in omega-6 fatty acids for saturated fats has resulted in “increased the rates of coronary heart disease, cardiovascular disease, and death from all causes.” ²⁴

Although quite direct, in his audiobook *Small is the New Big*, best-selling author Seth Godin had this to say about the packaging and marketing of organic junk foods: “They just make it easier to lie to yourself when you feed them to your kids.”

Make Your Organics Count

Remember, the term organic refers to how a food is grown. It does not, however, tell you about a food’s nutritional properties. Processed organic food is still processed food, and just because a food is labeled organic does not make it healthy. Likewise, choosing organic is not a license to eat more of a food or move less.

If you are an organic consumer, the best way to invest your grocery dollars is on the unprocessed foods that matter most: fruits, vegetables, nuts, seeds, legumes, true whole grains, nuts, meat, poultry, eggs, and dairy.

In the case of fruits and vegetables, there is some research to suggest that organic varieties may have higher concentrations of antioxidants and certain vitamins and minerals. In addition, you may lower your exposure to pesticides and other synthetics when choosing certain organic fruits and vegetables.

Likewise, it may be best to opt for organic sources of dairy whenever possible, as organic dairy has a significantly different fatty acid profile when compared to conventional dairy. ²⁵ The take-home point is to focus on whole foods packed



with important nutrients, like protein, healthy fats, fiber, vitamins, minerals, and phytonutrients.

The next time you go shopping, if a package says organic on it, try covering up the word “organic,” and focus instead on the item itself, to see if this is something that supports your health and fitness goals and if you would feed it to your family.

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