The 11 Worst Breakfast Foods
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Breakfast: To Eat or Not to Eat

In case you haven’t heard, breakfast is the “most important meal of the day.” Okay, despite being touted as such, that commonly accepted notion has been under scrutiny recently, particularly with the rise in popularity of intermittent and periodic fasting. While there is both scientific and anecdotal evidence to suggest that fasting may be beneficial for health and body composition, many researchers posit that “breakfast skipping” is strongly associated with weight gain and the prevalence of obesity.1–3

Generally speaking, correlational studies have found that folks who skip breakfast tend to have poor overall diet quality and make poor food choices (e.g., snacking on nutrient-deficient, high-fat, and/or high-sugar foods and beverages) compared to regular breakfast eaters.4,5

Along those lines, a number of studies have found that consuming breakfast, particularly one higher in protein (which we’ll discuss more in a moment), may be a useful strategy to increase satiety, improve appetite control, reduce snacking, improve diet quality, reduce food motivation and reward, and support healthy weight management.6–10

Again, this is not to say that you have to eat breakfast to lose fat. In fact, speaking generally, it’s pretty safe to say that breakfast is “optional,” provided that food choices and portion sizes are held constant and consistent, and several well-conducted studies demonstrate just that.

In one study published in the American Journal of Clinical Nutrition, researchers from Vanderbilt University conducted a unique 12-week study including 52 women who were either regular “breakfast eaters” or habitual “breakfast skippers.” All women were
assigned to an identical reduced-calorie diet, and they were equally split up into either “breakfast” or “no-breakfast” conditions. In other words, half of regular breakfast eaters continued to eat breakfast while the other half skipped breakfast; likewise, half of the habitual breakfast skippers continued to skip breakfast while the other half began to eat breakfast. The only difference between the groups was the number of meals consumed (i.e., 3 versus 2) per day. 

At the end of the 12-week trial, all of the women lost a significant amount of weight. Interestingly, however, the regular breakfast eaters assigned to the “no-breakfast” condition lost 20 pounds whereas those who continued to eat breakfast only lost around 14 pounds. Conversely, the habitual breakfast skippers assigned to eat breakfast lost nearly 17 pounds whereas those who continued to skip breakfast lost only about 13 pounds. In other words, the women who made the most significant changes to their breakfast eating habits achieved the best results.

In a crossover study published in the journal *Nutrition*, Brazilian researchers randomly assigned obese women to a very low-calorie diet under three separate conditions: 1. Five meals spread throughout the day; 2. All of the meals consumed between 9am and 11am (i.e., breakfast only); and 3. All of the meals consumed between 6pm and 8pm (i.e., no breakfast). The women consumed the same number of calories during each of the conditions, which lasted 18 days apiece and were conducted in a hospital setting (i.e., controlled environment). The women lost weight in each of the conditions, and after completion, there were no differences in weight loss, body composition, or resting metabolic rate. This provides evidence that, in a highly controlled setting when food choices and portion sizes are consistent, timing of food intake doesn’t matter when it comes to weight loss.

In a crossover study funded by the National Institute on Aging and the United States Department of Agriculture, healthy normal-weight men and women (aged 40 – 50 years old) were randomly assigned to two separate 8-week treatment periods. During one condition, participants consumed their calories (at a “maintenance” level) across 3 meals per day; in the other condition, the folks consumed the same amount of food and number of calories in a single meal. In the second condition, the participants were given a 4-hour timeframe to eat in the evening (i.e., no breakfast). Not only did the men and women not gain weight when they consumed all of their daily calories in the
evening (i.e., 1 meal/day), they lost body fat (4.6 pounds). On the other hand, there was no weight or fat loss when they ate 3 meals per day.\textsuperscript{13}

In a study published in the \textit{American Journal of Clinical Nutrition}, a group of obesity researchers from the University of Alabama led by Dr. Krista Casazza challenged the notion that skipping breakfast causes weight gain, and conversely, that regularly consuming breakfast leads to weight loss. The culmination of their extensive research was that, despite being a widely held belief, \textbf{this is simply a presumption, unsupported by the existing body of evidence.} In other words, there's no consistent, conclusive evidence to support the belief that eating breakfast is necessary for weight loss or that skipping breakfast inevitably leads to weight gain.\textsuperscript{14}

All of this simply provides evidence that folks can lose a substantial amount of weight either eating or skipping breakfast, and in the overall scheme of things, \textbf{food choices, portion sizes, and consistency (i.e., adherence) seem to be more important than meal timing for most people.}

With that in mind, if you’re not a breakfast person, function just fine without it, and are accomplishing your health and body composition goals without it, then keep doing what you’re doing. However, if you’re a breakfast eater or a breakfast skipper who’s having difficulty controlling your appetite and achieving your health and body composition goals, then choosing the “right” foods at breakfast may make a tremendous difference.

\textbf{Breakfast: What to Eat}

A research team from the University of Missouri led by Dr. Heather Leidy has consistently found that \textbf{high-protein breakfasts} (containing at least 35 grams of high-quality protein) are superior to “normal-protein” breakfasts for improving satiety (i.e., feelings of fullness and satisfaction) and controlling appetite, cravings, snacking, and food intake throughout the day and at later meals.\textsuperscript{6,7,15,16}

In one study published in the journal \textit{Obesity}, Dr. Leidy and her colleagues have found that women who ate a high-protein breakfast for 12 weeks \textbf{lost over TWO TIMES more fat} than women who ate a “normal-protein” breakfast.\textsuperscript{8} They found that the enhanced weight loss was the result of voluntary reductions in daily calorie intake—to the tune
of 400 fewer calories per day. In other words, over time, the reductions in hunger (i.e., increased satiety) experienced with the high-protein breakfast consistently led to less food intake over the course of the days—and subsequently, weeks.

Wondering what a “normal-protein” versus a “high-protein” breakfast looks like? Good question. In these studies comparing the two breakfasts of differing protein contents, the “normal-protein” breakfast was what many would consider a “healthy” breakfast: A bowl of ready-to-eat cereal and milk, providing 13 grams of protein. The “high-protein” breakfast, on the other hand, was composed of eggs, lean meats, and dairy (e.g., Greek yogurt), and it provided 35 grams of protein.

In another recent study, a research team at Tel Aviv University led by Dr. Daniela Jakubowicz, professor of medicine at Tel Aviv University found that study participants who consumed a protein shake (containing 49 grams of whey protein first thing in the morning) lost nearly 2.5 TIMES more weight than a group consuming a normal amount of protein at breakfast over the course of 23 months. Only the group consuming the protein shake at breakfast experienced significant reductions in the “hunger hormone” ghrelin.\(^\text{17}\)

Additional studies have shown that supplementation with protein shakes (e.g., whey) leads to weight loss, reductions in ghrelin, suppressed appetite, and increases in other appetite-related hormones (e.g., GLP-1, which suppresses appetite).\(^\text{18–20}\)

Dr. Leidy and her research team have also demonstrated that high-protein breakfasts have a beneficial effect on “hunger hormones,” reducing ghrelin and increasing peptide YY (PYY) concentrations. Ghrelin stimulates the appetite, promotes food intake, and may facilitate weight gain.\(^\text{21}\) Previous studies have shown the greatest (and most sustained) reductions in ghrelin after eating protein-rich meals (compared to carbohydrates and fats).\(^\text{22,23}\) On the other hand, the gut hormone PYY suppresses hunger; in fact, evidence suggests that low circulating PYY concentrations may predispose people to the development and/or maintenance of obesity.\(^\text{24}\)

In addition to focusing on protein-rich foods, low-energy dense foods are another solid option to include at breakfast. You see, feeling full and satisfied (i.e., satiety) is a major reason that people stop eating; in fact, rather than the calorie content of food, the
volume of food that is consumed at a meal appears to be an important factor that makes people feel full and stop eating.\textsuperscript{25}

Energy density is defined as the relationship of calories to the weight of food (i.e., calories per gram). Foods like oils, bacon, butter, cookies, crackers, junk food, fast food, and the overwhelming majority of traditional breakfast foods are generally considered “high-energy-dense” foods (i.e., 4 – 9 calories per gram by weight); on the contrary, nearly all fresh vegetables (and many fruits) are considered “low-energy-dense” foods (i.e., 0.0 – 1.5 calories per gram, by weight), as they tend to have a high water content and be a very good source of fiber, two important factors reducing energy density.

Along those lines, researchers have found that when folks consume low-energy-dense foods, they feel satisfied earlier and those feelings of fullness persist for relatively longer periods of time—despite reductions in calorie intake. In other words, diets rich in low-energy-dense foods like vegetables and moderate amounts of fruit allow folks to eat more total food, leading to greater feelings of satiety, all while reducing calorie intake.\textsuperscript{26} By definition, that’s eating more (overall food) and less (calories). Bingo!

A number of other studies have demonstrated that diets rich in low-energy dense foods like vegetables promote satiety (i.e., feelings of fullness and satisfaction), reduce hunger, and decrease overall calorie intake.\textsuperscript{26-30} What’s more, long-term studies have shown that low-energy-dense diets also promote weight loss. In fact, studies lasting longer than 6 months show that folks who eat more low-energy dense foods experience THREE TIMES greater weight loss than people who simply opt to reduce calories.\textsuperscript{31}

Nearly all fresh vegetables and many fruits are considered low-energy dense foods, and even some dairy products, which are also excellent sources of protein, fit into this category as well, making them a highly beneficial option for many folks.

Healthy fats — like those found in avocados, nuts, certain oils, and fatty fish—are also good additions to breakfast. On one hand, fats can help slow the rate that the stomach empties, and when combined with carbohydrates, fat may help to reduce the glycemic response of the meal (i.e., how quickly carbohydrates appear in the bloodstream).\textsuperscript{32,33}

In general, healthy fats can also help increase feelings of fullness and satisfaction,
as they regulate appetite through a number of mechanisms, including favorably modulating hunger hormones, including reduced ghrelin and increased PYY, GLP-1, and cholecystokinin (CCK), which is another gut hormone that suppresses appetite.\textsuperscript{34,35}

What’s more, combining fat with fiber (e.g., low-energy dense foods) has been shown to further increase the satiating potential of fat.\textsuperscript{36} The satiating power of fats is often one explanation offered to describe why some weight loss trials have shown that low-carbohydrate (and higher-fat) diets tend to lead to greater weight loss than low-fat diets.\textsuperscript{37}

In addition, many of the important micronutrients (e.g., vitamins A, D, E, and K) and powerful antioxidant phytochemicals found in plant-based foods, like vegetables and fruits, are fat-soluble nutrients. In other words, dietary fat is necessary to ensure absorption of these health-promoting, fat-fighting, age-defying nutrients.

With all of that in mind, there are \textbf{several key components of a high-quality breakfast:}

\begin{itemize}
  \item Protein-rich foods
  \item Low-energy dense foods
  \item Smart carbs
  \item Healthy fats
\end{itemize}

\textbf{Breakfast: What NOT to Eat}

The unfortunate reality is that the overwhelming majority of traditional breakfast foods are, for all intents and purposes, \textbf{the exact opposite}. As alluded to, many of the common choices are a far cry from what would be a considered “\textbf{smart carbs},” which are whole, minimally-processed foods that are slow-digesting and high in naturally-occurring fiber.

Conversely, when it comes to traditional breakfast foods, the acronym representing the Standard American Diet (SAD) is quite fitting, as it is indeed sad how typical Americans (and individuals in the vast majority of developed nations) eat today. The typical Western dietary pattern (i.e., SAD) is composed of more than 70\% processed foods with a heavy emphasis on refined carbohydrates, added sugars, and added fats and oils (e.g., industrial vegetable oils).\textsuperscript{38}
Common breakfast foods (e.g., ready-to-eat cereals, pre-packaged oatmeal, bagels, fruit juices, granola bars, pastries, donuts, etc.) are prime culprits that contribute to many of the following sad facts about the Standard American Diet:

- Folks in America and other developed nations are consuming upwards of 150 pounds of sugar per year.\(^3^9\)
- Consumption of soda, fruit juice, and other sweetened beverages has increased over 135% over the last several decades, and researchers have found that this is associated with weight gain and obesity. In fact, researchers from the Harvard School of Public Health state that “sufficient evidence exists for public health strategies to discourage consumption of sugary drinks as part of a healthy lifestyle.”\(^4^0,^4^1\)
- As mentioned above, processed foods make up approximately 70% of what most folks eat, including many of the predominant, commonly-eaten breakfast “foods.”\(^3^8\)
- Although estimates vary, calorie intake has increased upwards of 400 calories per day over the last several decades.\(^4^2\) Based on the information above, it’s unlikely that this increase in caloric intake is the result of eating more vegetables, fruits, and lean meats; more likely, it can be explained by consumption of processed foods, including all of those pre-packaged breakfast items and sugar-sweetened beverages, including fruit juice.

According to Harvard researcher and professor of Nutrition and Epidemiology Dr. Frank Hu, “Refined carbohydrates are likely to cause even greater metabolic damage than saturated fat,” and “the time has come to shift the focus of the diet-heart paradigm away from restricted fat intake and toward reduced consumption of refined carbohydrates.”\(^4^3\)

In one recent study, researchers analyzed nearly 90 years’ worth of data, and they found that “increasing intakes of refined carbohydrate concomitant with decreasing intakes of fiber paralleled the upward trend in the prevalence of type 2 diabetes observed in the United States during the 20th century.”\(^4^4\)

Along those lines, refined carbohydrates (e.g., refined flours and sugars) are typically void of fiber, and researchers have linked low fiber intakes to increased risk for diabetes and obesity.\(^3^2,^4^5–^4^7\)
It’s becoming increasingly apparent that consumption of refined carbohydrates (e.g., refined flours and the “foods” that are made with them like breads, breakfast cereals, bagels, baked goods, etc.; refined sugars like table sugar and high fructose corn syrup) is closely related to obesity and various forms of chronic illness, including cardiovascular disease and diabetes. In fact, numerous studies have linked consumption of these highly processed carbohydrates to obesity.48–50

Thus, when it comes to breakfast foods not to eat, there are a number of common themes:

- Low in protein
- Low in naturally-occurring fiber
- Low in healthy fats
- High in refined carbohydrates (e.g., flour)
- High in added sugar
- High in added fats and oils (e.g., vegetable oils like soybean, safflower, sunflower, canola, and corn oils)
- Contain trans fats

Introducing the “Probably Suspects”

With all of that in mind, it’s time to take a look at some of the “probable suspects” when it comes to traditional breakfast foods. Worry not, however, as we won’t simply leave you with a list of what not to eat; rather, we’ll provide specific suggestions that meet the criteria that we’ve provided above.

Now, before we delve into the list, we feel that it’s important to remind you that, in the grand scheme of things, looking, feeling, and performing your best are all contingent on your entire body of “nutrition work”—not an individual food or single meal. In other words, there’s no “magic bullet.”

Instead of viewing foods in isolation as “good” or “bad,” think about weight management and “deep health” as the product of practicing healthy eating habits, creating a positive food environment, and choosing high-quality, nutritious foods in appropriate amounts relative to your goals and activity levels regularly and consistently over time. Good
nutrition takes practice, and just like getting better and mastering anything in life, it’s about progress—not perfection.

Start where you are and make small changes that you are ready, willing, and able to take on; focus on mastering those new behaviors one step at a time.

1. Ready-to-Eat Cereals

*What they have:* Refined carbohydrates, added sugar, added fats and oils  
*What they don’t have:* Protein, naturally-occurring fiber, healthy fats

The majority of store-bought ready-to-eat cereals are high in refined carbohydrates, contain added sugar, and often contain added fats and oils in the form of industrial processed vegetable oils. What’s more, even when they’re eaten with milk, they’re still too low in protein, as clearly and conclusively illustrated by Dr. Leidy’s research. What’s more, they’re low in naturally-occurring fiber, lack healthy fats, and contain none of the phytonutrient-rich low-energy dense foods we mentioned previously.

Another interesting fact about ready-to-eat breakfast cereals is that they are often a substantial source of [advanced glycation end-products](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7119598) (AGEs).\(^{51}\) AGEs are a complex class of compounds produced by the addition of carbohydrates to proteins or fats (i.e., Maillard reaction), and they can be formed both inside and outside the body. For instance, AGEs can be formed during cooking, and they can also be formed by the body after exposure to high levels of blood sugar, which results from regular consumption of simple sugars and refined carbohydrates.\(^ {52}\)

While minimally-processed whole food carbohydrates are naturally low in AGEs, processing greatly increasing AGE content, and that’s precisely why the AGE content of ready-to-eat breakfast cereals is as much as 10-fold that of minimally-processed “smart carbs.” AGEs can wreak havoc on the body’s tissues, and what’s more, AGEs increase free radical formation, impair antioxidant defense systems, increase oxidative stress, and promote inflammation.\(^ {53}\)
So, if breakfast cereal is out, what's in? That's a great question, and we think you might like our spin on a traditional breakfast favorite.

**Guilt-Free Peanut Butter Crunch Granola**

**Ingredients:**
- 1 ½ cups rolled oats
- 4 scoops BioTrust® Low Carb Vanilla Cream
- ¼ cup powdered peanut butter
- Pinch of pink Himalayan sea salt
- 1 tsp baking powder
- 2 tbsp organic peanut butter
- ¼ cup egg whites
- 1 tsp vanilla extract
- 2 tbsp honey
- ¼ cup sliced almonds (optional substitutions: flax seeds, chia seeds, walnuts, pecans)

**Directions:**
1. Preheat oven to 350 degrees.
2. Mix all dry ingredients (except sliced almonds) together in a bowl.
3. Add in wet ingredients. Mix together until mixture is crumbly.
4. Add sliced almonds.
5. Cover a baking sheet with wax paper and crumble the mixture onto the pan in bite-sized pieces.
6. Bake for 15 - 18 minutes until golden brown and granola reaches a crunchy consistency.
7. Our favorite way to enjoy this guilt-free granola is mixing it with plain Greek yogurt and berries. Delicious!
2. Bread & Toast

What they have: Refined carbohydrates, added fats and oils.

What they don’t have: Protein, naturally-occurring fiber, healthy fats

When it comes to refined carbohydrates, bread is a prime example. Like ready-to-eat breakfast cereals, bread is heavy on refined carbohydrates and added fats and oils (often, added sugar) and light on protein, naturally-occurring fiber, healthy fats, and phytonutrient-rich energy dense foods (e.g., vegetables and fruits).

Like breakfast cereal, bread is also a significant source of AGEs. Believe it or not, research has shown that white bread has even more AGEs than fried meat, which is typically considered one of the greatest sources of AGEs. Studies show that adults with the elevated levels of the most common AGE (i.e., CML) are at greater risk for arterial stiffness, chronic kidney disease, anemia, poor skeletal muscle strength and physical performance, and cardiovascular and all-cause mortality.

To top it off, most people don’t eat bread or toast by itself. Instead, they add sugar and fat in the forms of jelly, jam, and margarine, which is a major source of trans fats. And there’s nothing healthy about industrially produced trans fats (e.g., partially hydrogenated vegetable oils).

The good news is that you don’t necessarily have to ditch the bread completely. Rather than traditional flour-based bread, you could try sprouted grain bread, which isn’t made with flour. What’s more, sprouting grains tends to increase digestibility, absorption of minerals, antioxidant content, vitamin C and B vitamin (B2, B5, and B6) content, and products made from sprouted grains tend to have more naturally-occurring fiber.

While sprouted grain bread may be a healthier alternative to traditional flour-based bread, remember that it’s still bread. At the end of the day, we recommend consuming as many whole, minimally-processed foods as possible.
Now, speaking of toast, how about French toast? You may be thinking, “Yeah, right.” Well, check this out. Not only did we swap sprouted grain for flour-based bread, we also added a healthy dollop of protein.

**French Toast**

**Ingredients (Dredge):**
- 1 egg
- 2 egg whites
- ¼ cup almond milk (unsweetened)
- 1 scoop BioTrust® Low Carb Vanilla Cream
- 1 tsp vanilla extract
- ½ tsp cinnamon

**Ingredients (Toast):**
- 2 slices sprouted grain bread

**Directions:**
1. Preheat skillet on medium heat.
2. Mix all dredge ingredients together.
3. Dredge bread into batter on both sides.
4. Place bread into a skillet.
5. Allow bread to cook for 1 - 2 minutes, flip, and allow to cook 1 - 2 minutes on the other side.
6. Remove bread from skillet.
7. Top with real maple syrup, sugar-free maple syrup (no artificial sweeteners), or fresh fruit (e.g., berries, banana)

**3. Bagels**

*What they have: Refined carbohydrates, added sugar, added fats and oils*
*What they don’t have: Protein, naturally-occurring fiber, healthy fats*
Bagels share all of the same characteristics as bread; in fact, perhaps they might be regarded as bread’s big brother. After all, bagels are even more energy dense and even heavier on the refined carbohydrates and added sugar while still lacking any of the favorable qualities we’d want in an ideal breakfast (e.g., protein, low-energy dense foods, healthy fats, naturally-occurring fiber). Like toast, few people eat bagels plain. Instead, they schmear them with energy-dense schmears.

So, if breakfast cereal, bread, and bagels are out, what should you eat? Good question.

For many of us at BioTrust, there’s nothing we enjoy more for breakfast than a hearty, protein-packed omelet. Here’s a basic omelet recipe to get you started, and we encourage you to experiment by adding any protein (e.g., bacon, ground beef, pulled pork, salmon, sardines), veggies (e.g., peppers, mushrooms, asparagus, broccoli), and seasonings (e.g., turmeric, cumin, chili powder, garlic) to customize your omelet experience.

**Basic Omelet**

**Ingredients:**
- 2 large eggs, scrambled in a bowl
- ½ cup cooked chicken, diced
- 1 tsp butter
- 2 green onions, diced
- 1 cup fresh spinach
- 2 small tomatoes
- ½ fresh avocado, cut into small pieces

**Directions:**
1. Heat butter on low in a nonstick omelet pan or skillet.
2. Sauté onions until tender.
3. Add eggs and cook on low for 2 minutes.
4. Add remaining ingredients.
5. Fold and flip omelet until eggs are fully cooked.
4. Granola Bars

What they have: Added sugar, added fats and oils

What they don’t have: Protein, naturally-occurring fiber, healthy fats

Perhaps you’ve “drank the punch” that leads you to believe that granola bars are a healthy snack or quick breakfast on-the-go. While some might argue that they’re a step in the right direction because they typically—but not always—contain rolled oats as a primary ingredient, that’s about the extent of the silver lining. From there, you’ll find added sugar—often in 3 – 4 or even more forms—and added fats and oils, including soybean, corn, safflower, sunflower, and canola oils.

It’s refined vegetable oils like these, which are high in omega-6 fats and prevalent in processed foods, that are in large part responsible for the dramatic imbalance of omega-6 fats consumed relative to omega-3 fatty acids, which some estimates have even suggested may have increased from a more balanced 1:1 ratio to as much as 30:1. In a study published in the *American Journal of Clinical Nutrition*, researchers from the National Institutes of Health estimated that the average individual’s consumption of soybean oil increased more than 1000-fold from the early 1900s to the beginning of the 21st century.

Researchers attribute this same imbalanced intake of omega fatty acids to an increase in virtually all inflammation-related conditions including cardiovascular disease, diabetes, obesity, metabolic syndrome, irritable bowel syndrome, inflammatory bowel disease, rheumatoid arthritis, asthma, mood disorders, mental illness, autoimmune disease, and more.

What’s more, excess omega-6 intake and an imbalanced intake of omega fatty acids have also been shown to be associated with shorter telomere lengths and accelerated aging. As a normal cellular process, telomere length shortens with age. However, accelerated telomere shortening is associated with early onset of many age-related...
health problems, including coronary heart disease, heart failure, diabetes, increased cancer risk, osteoporosis, and decreased lifespan.63

With that being said, we understand the value of convenience. That’s exactly why we created the delicious, protein-packed BioTrust® Protein Brownies. As tasty as they are, even we like to change it up from time to time. Here’s one of our go-to homemade protein bar recipes.

Nut & Fruit Protein Bars

**Ingredients:**
- ¼ cup raw almonds
- ¼ cup Brazil nuts
- ¼ cup pumpkin seeds
- ¼ cup sunflower seeds
- ¼ cup unsweetened shredded coconut
- ¼ cup almond butter (any nut or seed butter can be substituted)
- ¼ cup virgin coconut oil
- ¼ cup flaxseed meal or almond meal
- 1 ½ tsp vanilla extract
- 1 tsp honey
- ½ cup BioTrust® Low Carb
- 1 large egg
- ½ tsp sea salt
- ¼ dried blueberries
- ¼ unsweetened shredded coconut (for garnish)

**Directions:**
1. On a cookie sheet, toast nuts, seeds, and shredded coconut until golden brown; shake/stir the ingredients on the tray halfway through for even toasting.
2. Preheat oven to 325 degrees after toasting.
3. Pour nut/seed mixture into a food processor and pulse until nuts are chopped and mixture becomes coarsely ground (including some larger chunks).
4. In a small bowl (or pot), melt coconut oil, almond butter, and honey.
5. Remove from microwave (or stove top) and stir to combine.
6. Add vanilla extract and sea salt to melted ingredients.
7. Pour wet ingredients into nut mixture; add flax/almond meal and protein powder until combined.
8. Beat egg and add to mixture; combine thoroughly.
9. Fold in blueberries until well incorporated.
10. Press mixture into an 8 x 8 pan.
11. Bake for 12 minutes; remove from oven and sprinkle with shredded coconut.
12. Place back in the oven until top begins to brown (3 – 4 minutes).
13. Let cool for 15 minutes or in the refrigerator overnight.
15. Store in an airtight container.

5. Instant Oatmeal

What they have: Refined carbohydrates, added sugar
What they don’t have: Protein, healthy fats

For starters, there’s nothing “wrong” with oatmeal. Real oatmeal, that is, which is made simply with whole rolled oats (or groats, the “true” whole grain form of oats) and liquid (e.g., water). Unfortunately, pre-packaged instant oatmeal isn’t typically made with groats or whole rolled oats. Rather, the “quick” oats used are generally pre-cooked and rolled and pressed thinner than traditional rolled oats. Further, you’ll also find added sugars in at least one form in flavored instant oatmeal.

Although there’s considerable debate about the relevance of the glycemic index (GI), it may be worth pointing out that the GI of instant oatmeal is, on average, about 44% higher than whole rolled oats. That said, oats and oatmeal can indeed be included as part of an overall healthy nutrition plan, and here’s one of our favorite protein-packed recipes.
Brownie Batter Overnight Oats

Ingredients:
- 1 cup rolled oats
- 1 scoop BioTrust Low® Carb Café Mocha
- 1 scoop BioTrust Low® Carb Milk Chocolate
- ¾ cup plain Greek yogurt
- 1 cup almond milk (unsweetened)
- 1 tablespoon dark cocoa powder
- 1 teaspoon chia seeds
- 1 teaspoon all-natural sprinkles (optional)

Directions:
1. Mix all ingredients in a bowl.
2. Transfer into a sealed container (e.g., Mason jar).
3. Refrigerate overnight for 8 - 12 hours.

6. Muffins & Bran Muffins

What they have: Refined carbohydrates, added sugar, added fats and oils, trans fats.

What they don’t have: Protein, naturally-occurring fiber, healthy fats

Store-bought muffins got it going on. What, exactly, do they have going on? Pretty much everything we don’t want in a breakfast food and nothing that we do.

If you take a look at the ingredients list, you’ll find refined carbohydrates (e.g., wheat flour), added sugar (often in multiple forms), and poor-quality added fat and oils (i.e., vegetable oils). What’s more, like many baked goods, some store-bought muffins contain trans fats to help improve shelf-life. What you won’t find in store-bought muffins is adequate protein, fiber, and healthy fats.
That’s precisely why we came up with our own homemade muffin recipe that’s packed with protein.

**Blueberry Lemon Zest Muffins**

**Ingredients (Muffins):**
- 1 ½ cups oat flour
- 6 scoops BioTrust Low® Carb Vanilla Cream
- 1 teaspoon baking soda
- ½ teaspoon baking powder
- ½ cup granular stevia
- 1 egg
- 1/3 cup almond milk (unsweetened)
- ½ cup unsweetened applesauce
- ¾ cup plain Greek yogurt
- 1 teaspoon lemon zest
- 1 cup blueberries

**Ingredients (Glaze):**
- 2 tablespoons virgin coconut oil
- Juice and zest of 1 lemon
- 1 teaspoon honey
- Coconut sugar for garnish (optional)

**Directions:**
1. Preheat oven to 350 degrees.
2. Mix all muffin ingredients (except blueberries) in a large glass bowl until well combined.
3. Gently fold in blueberries.
4. Pour 1/3 cup batter into individual cups in a muffin pan, almost filling the cup.
5. Bake at 350 for 18 - 20 minutes.
6. Remove from oven and let cool for 15 minutes.
7. Mix glaze ingredients together in a medium sized bowl.
8. Drizzle glaze over muffins, add lemon zest on top, and garnish with coconut sugar.
7. Pancakes

What they have: Refined carbohydrates, added sugar, added fats and oils, trans fats.

What they don’t have: Protein, naturally-occurring fiber, healthy fats

Like most people, we like pancakes. Unfortunately, traditional pancakes are made with refined flours, added sugars, and poor-quality vegetable oils. Not only that, most people top off their flapjacks with margarine (which contains trans fats) and sugar-laden syrup or fruit sauces with added sugars.

With that in mind, we knew we had to come up with a better option. That’s precisely why we created the following high-protein blueberry pancake recipe.

Blueberry Pancakes

Ingredients:
• ½ cup oat flour
• 2 scoops BioTrust® Low Carb Vanilla Cream
• ½ cup egg whites
• ¼ cup almond milk (unsweetened)
• ¼ cup blueberries
• ½ teaspoon vanilla extract

Directions:
1. Preheat greased skillet on medium heat.
2. Mix all ingredients (except blueberries) together.
3. Pour half of pancake batter into skillet.
4. Add blueberries into pancake batter.
5. Cook 2 - 3 minutes per side and flip pancake when you see little bubbles form.
6. Optional toppings: blueberries, real maple syrup, sugar-free syrup (no artificial
8. Orange Juice & Other Fruit Juice

*What they have:* Refined carbohydrates, added sugar.

*What they don’t have:* Protein, naturally-occurring fiber, healthy fats

While food manufacturers might lead you to believe that fruit juice is closely related to whole fruit, researchers categorize it as a sugar-sweetened beverages (SSB), a category that also includes sodas. SSB have been linked to weight gain, diabetes, metabolic syndrome, and dental caries (i.e., cavities).64–71

In a recent systematic review published in the journal *Critical Reviews in Foods Science and Nutrition*, researchers from Australia gathered all of the available evidence (e.g., randomized control trials, cohort studies) with the goal of identifying the association between fruit and fruit juice consumption and weight management.72 They found that consumption of whole fruit led to weight loss and reduced the risk of weight gain by helping to control calorie intake. On the contrary, they found that consumption of fruit juice *promotes* weight gain, and their directive was to encourage the consumption of whole fruits and replace fruit juice with plain, filtered water.

Although savvy marketers cleverly lead you to believe that fruit juice is the same as whole fruit, this is simply not true; fruit juice is higher in both calories and sugar and lower in fiber than its whole fruit counterpart. For instance, four ounces of 100% apple juice has NO fiber yet has 13 grams of sugar and 60 calories. By comparison, a half-cup of sliced apples has 50% fewer calories (30), 58% less sugar (5.5 grams), and 1 ½ grams of fiber. An 8-ounce glass of orange juice, on the other hand, contains double the sugar, no fiber, and nearly twice as many calories.

Fiber promotes a healthy digestive tract, regularity, improves carbohydrate management (e.g., slowed gastric emptying), promotes satiety, reduces calorie intake, and enhances weight loss.73,74 Fiber slows the rate of digestion and gastric emptying, and
subsequently, blood sugar management, energy levels, and feelings of fullness.

Unfortunately, most people don’t consume nearly enough dietary fiber, and swapping juice for whole fruits does little to help. According to American Dietetic Association, the average person consumes a paltry 15 grams of dietary fiber per day—only about HALF of the recommended daily intake.\(^{67}\) As already mentioned, research has linked low fiber intakes to increased risk for diabetes and obesity.\(^{48,76}\)

What’s more, you could down that glass of juice in less than half the time it takes to enjoy the whole fruit—that’s a natural form of mindful eating.

While consuming low-energy-dense whole fruits increases feelings of fullness and satisfaction and subsequently decreases calorie intake and reduces body fat, the same cannot said to be true with juices.\(^{26-28,31}\) Research also shows that fruit juice isn’t as satisfying as whole fruits, and even when calories are identical between liquid and solid food meals, liquids leave people feeling hungrier and result in eating more calories in subsequent meals.\(^{77,78}\) Research also shows that fruit juice may even alter nervous system signaling, resulting in dependence and habituation, which is associated with overconsumption and metabolic syndrome.\(^{79}\)

Instead of fruit juice, try a high-protein smoothie like one of the recipes below:

**Almond Berry Delight**

**Ingredients:**
- 2 scoops BioTrust\textsuperscript{®} Low Carb Vanilla Cream
- 1 cup unsweetened almond milk
- ¼ cup frozen raspberries (unsweetened)
- 1 tbsp almond butter
- 1 – 2 handfuls spinach (optional)
- Stevia, to taste (optional)
- 5 ice cubes

**Directions:** Put all ingredients in a blender and enjoy!
Banana Coconut Supreme

Ingredients:

- 2 scoops BioTrust® Low Carb Vanilla Cream
- 1 cup unsweetened coconut milk
- ½ frozen banana
- 1 tbsp coconut oil (extra-virgin, cold-pressed)
- 1 – 2 handfuls spinach (optional)
- Stevia, to taste (optional)
- 5 ice cubes

Directions: Put all ingredients in a blender and enjoy!

Blueberry Bliss

Ingredients:

- 2 scoops BioTrust® Low Carb Vanilla Cream
- 1 cup unsweetened almond milk
- ¾ cup frozen blueberries (unsweetened)
- ½ avocado
- 1 – 2 handfuls spinach (optional)
- Stevia, to taste (optional)
- 5 ice cubes

Directions: Put all ingredients in a blender and enjoy!

Chunky Monkey

Ingredients:

- 2 scoops BioTrust® Low Carb Vanilla Cream
- 1 cup unsweetened almond milk
- ½ frozen banana
- 1 ounce walnuts
- 1 – 2 kale leaves, stems removed (optional)
- Stevia, to taste (optional)
- 5 ice cubes

**Directions:** Put all ingredients in a blender and enjoy!

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**Dark Chocolate Raspberry Delight**

**Ingredients:**
- 2 scoops BioTrust® Low Carb Milk Chocolate
- 1 cup unsweetened almond milk
- ¾ cup frozen raspberries (unsweetened)
- 2 tbsp ground flaxseed
- Stevia, to taste (optional)
- 5 ice cubes

**Directions:** Put all ingredients in a blender and enjoy!

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**9. Hash Browns**

*What they have: Added fats and oils.*

*What they don’t have: Protein, naturally-occurring fiber, healthy fats*

Despite what you’ve heard, potatoes are indeed a solid food choice that can be included as part of an overall healthy diet. Potatoes are a nutrient-dense food, containing a variety of different phytonutrients that have antioxidant activity, as well as 10 different vitamins and minerals, including the following:

- Vitamin B6
- Copper
- Potassium
- Vitamin C
- Manganese
- Phosphorus
• Niacin
• Pantothenic acid

What’s more, in a study published in the European Journal of Clinical Nutrition, Dr. Susanna Holt and her team of researchers at the University of Sydney found that, out of 38 foods tested, boiled potatoes scored highest on the satiety index—over 40% higher than any other food tested.\textsuperscript{25}

Even more, potatoes (that are cooked then cooled) are also a good source of resistant starch. Multiple studies have shown resistant starch increases satiety and reduces food intake both acutely and in subsequent feedings.\textsuperscript{80,81} Research has also shown that consumption of resistant starch increases fat burning, decreases fat storage, and improves insulin sensitivity.\textsuperscript{82,83}

Resistant starch also serves as a prebiotic for the beneficial bacteria that compose the gut microflora. In other words, while it goes undigested by us, resistant starch is fermented by gut bacteria, and as a result, has the potential to positively impact human health in the myriad ways.\textsuperscript{84}

For example, when gut bacteria ferment resistant starch, a byproduct is short-chain fatty acids (e.g., butyrate), which serve to fuel the immune cells that line the gut. These short-chain fatty acids can also help suppress appetite by promoting the release of key anorectic (i.e., hunger diminishing) gut hormones (e.g., GLP-1, PYY).\textsuperscript{85}

Now, traditional hash browns aren’t necessarily on the same page as French fries, “loaded” baked potatoes, or potato salad—classic cases of a good thing gone wrong; however, they could indeed be improved upon by omitting vegetable oils and adding some high-quality protein. Since we know that there’s just something about a good breakfast hash that reminds us grandma’s home cooking, we wanted to share this tasty recipe from Juli at PaleOMG.com.\textsuperscript{86}
Easy Breakfast Hash

Ingredients:
- 4 slices of bacon, diced
- 1 poblano pepper, diced
- ¼ yellow onion, diced
- 1 large sweet potato, shredded
- 5 – 6 baby portobello mushrooms, sliced
- 2 chicken Italian sausages, cooked and diced
- 1 tsp garlic powder
- ¼ tsp smoked paprika
- salt and pepper, to taste
- 4 eggs
- hot sauce, to garnish

Directions:
1. Place large skillet over medium-high heat.
2. Add diced bacon to pan and cook until bacon begins to brown.
3. Once bacon is cooked halfway, add diced poblano pepper, yellow onion, and sweet potato. Mix together then cover.
4. After 6 – 8 minutes of cooking, add mushrooms and chicken sausage along with garlic powder, smoked paprika, and salt and pepper. Mix well, cover again, and let cook for 7 – 9 minutes, being sure to mix around to keep from sticking to the bottom of the pan.
5. Once everything is nice and toasty, use a spoon to press four spots into the hash mixture. Crack an egg into each spot, then add about a tablespoon of water to the pan and cover to help steam eggs.
6. Let steam until eggs are cooked to preference.
7. Top with hot sauce and serve.
10. Breakfast Sandwiches

What they have: Refined carbohydrates, added fats and oils.

What they don’t have: Enough protein, naturally-occurring fiber, healthy fats

Breakfast sandwiches can be considered a step in the right direction. After all, they do contain some protein. Unfortunately, the protein (which is usually heavily processed itself) is “sandwiched” between a muffin, bagel, or croissant, all of which have been discussed above. The “meat” and “eggs” that may be found in a breakfast sandwich are typically cooked in refined vegetable oils.

With that being said, given those limiting factors, there are a number of ways we can improve on the concept of the breakfast sandwich. For instance, you could actually use eggs as the “bun”; or, you could ditch the bun altogether. One of our favorite options—which adds veggies and healthy fats—is the following recipe.

Portobello Bacon, Egg & Avocado Sandwich

Ingredients:
- 4 slices of bacon
- 2 eggs
- 4 slices of avocado
- Lettuce (or other greens)
- 2 Portobello mushrooms

Directions:
1. Heat a skillet over medium heat and cook bacon to your preference.
2. Pour off most of the bacon grease, leaving some, and put the skillet back on the heat.
3. Slice off the stem of the Portobello mushroom caps so the whole cap is flat and level.
4. Cook the Portobello mushroom caps in the bacon grease for about 2 minutes on
medium heat.
5. Remove mushrooms from heat and set aside on a plate.
6. In the same pan, cook eggs to preference.
7. Stack the lettuce, eggs, avocado, and bacon on top of the mushroom caps. You can use both mushrooms for one “sandwich,” or you can make two “open-faced” sandwiches.

11. Fruit-Flavored Yogurts

What they have: Added sugar, artificial sweeteners.

What they don’t have: Enough protein, naturally-occurring fiber, healthy fats

While dairy seems to have gained a negative reputation in certain circles, a large body of evidence has demonstrated that dairy consumption improves body composition (i.e., decreased body fat, increased lean body mass), and what’s more, the effectiveness of reduced-calorie diets may be enhanced when dairy is a major component.87–91

While dairy (e.g., Greek yogurt, yogurt, cottage cheese, kefir, etc.) may indeed be a healthy option to include in one’s nutrition plan, it’s important to delineate plain, unflavored choices between sugar-sweetened versions, including the majority that are fruit-flavored, which typically contain added sugar and/or artificial sweeteners.

In its recent Scientific Report, the 2015 Dietary Guidelines Advisory Committee (DGAC) identified added sugars as one if its five “cross-cutting topics of public health importance.”92 The Committee examined the evidence surrounding the potential health effects of added sugars, and the DGAC assessed that added sugar negatively impacts the health risks for obesity, diabetes, cardiovascular disease, and dental carries.

The DGAC determined, based on the available evidence, there was a strong correlation between added sugars and negative health risks. The DGAC specifies that folks should include more foods without added sugars, and the Committee even went so far as to recommend that nutrition labels be updated to include added sugars. The FDA has
also recently proposed similar changes to the Nutrition Facts label that would require manufacturers to include the amount of added sugars to the product packaging.93

One popular brand of yogurt contains 30 grams of added sugar in a single 1-cup serving. As a point of reference, that’s equivalent to 7 ½ teaspoons of sugar—more than an 8-ounce serving of sugar-sweetened cola. By comparison, the American Heart Association recommends that men and women limit their consumption of added sugar to 9 and 6 teaspoons, respectively.94

In lieu of adding sugar, some food manufacturers may opt for artificial sweeteners, which can reduce the calorie cost of the food while boosting sweetness. However, consuming artificial sweeteners may not be the sweetest option for your health and body composition.

In a recent study published in the journal Nature, a team of researchers led by Dr. Eran Elinav from the Weizmann Institute of Science in Israel found that humans fed a commonly-used artificial sweetener (i.e., saccharin) for JUST 5 days demonstrated significant reductions in carbohydrate tolerance (i.e., glucose intolerance), as well as significant changes in the composition and function of their gut microbiome (i.e., gut dysbiosis).95

This research is very important for numerous reasons. With regard to fat loss, the evidence that gut bacteria contribute to energy balance (i.e., weight management) is so strong that Dr. Patrice Cani and his colleagues at the Metabolism and Nutrition Research Group in Belgium have coined the term “MicrObesity” to describe the relationship between gut “dysbiosis” (i.e., an imbalance of gut bacteria) and obesity.96 Research has even shown that gut dysbiosis can increase the number of calories you absorb from food.97

With all of that in mind, when choosing dairy, it’s best to choose plain, organic versions whenever possible. If you prefer to add something sweet, by all means, please feel free to do so in the form of whole, fresh fruit, just like we do in the recipe below.
Greek Yogurt Parfait

Ingredients:
- 1 cup Greek yogurt
- 1 scoop BioTrust® Low Carb (flavor of your choice)
- ½ cup blueberries (or other fruit)
- 1 – 2 tbsp walnuts (or other nuts, seeds, or nut butter)
- 1 tsp cinnamon (optional)

Directions:
1. Add Greek yogurt to a bowl and stir in BioTrust Low Carb. Mix well.
2. Add fruit, nuts, and cinnamon and combine well.

Breakfast Is Served!

The take-home point of all of this is that consuming the right foods in the right amounts, consistently, at breakfast—if you choose to eat breakfast—is crucial to helping you look, feel, and perform your best. In fact, a balanced breakfast rich in high-quality protein, low-energy-dense, fiber-rich foods, and healthy fats can help improve appetite control and satiety, decrease body fat, improve body composition, increase muscle size, strength, and recovery, and optimize health.

Remember, it’s not a single food or meal that will make or break your body transformation efforts; it’s your entire body of nutrition work, and it’s a commitment to healthy eating habits, creating a positive food environment, and choosing high-quality, nutritious foods in appropriate amounts regularly and consistently over time.
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