Food and Nutrition

What’s in it for me? Bust common myths around nutrition, and learn the real keys to sustainable, healthy eating.

Food has always been a heated subject. But, in recent years, the debates around it have reached fever pitch. Of course, there’s ongoing disagreement about what type of diet is healthiest or most effective at weight-loss. But now something else has been thrown into the mix: people are taking a closer look at where their food comes from and how it’s produced. There’s no doubt that the food industry has been contributing to greenhouse gas emissions and climate change. This makes many of us eager to choose more sustainable foods. Most people already understand how better eating habits can translate to a healthier life. But now we also want to boost the planet’s health. These blinks will help point you in the right direction. In these blinks, you’ll learn

how conventional meat and dairy farms claim to be helping the planet; why you should probably eat less red meat; and how to choose the most humane eggs.

Making the right food choices affects both you and the planet.

Is what you eat really that important? The answer is, of course, yes. That’s the easy bit. Explaining why, on the other hand, is much harder. Conversations about healthy eating can quickly get confusing – and personal. But it is possible to cut through the noise. The key message here is: Making the right food choices affects both you and the planet. First of all, what you choose to eat directly impacts your health. Biochemists and nutrition scientists agree that up to 80 percent of chronic diseases can be prevented through healthy lifestyle choices. Obviously, your diet plays a large role in this. But there’s more. What you buy at the supermarket also directly impacts the planet. Currently, the way we produce food is very harmful to our land, sea, and air. The food industry creates a lot of greenhouse gases, such as carbon dioxide and nitrous oxide, which directly contribute to climate change. We’re now producing more food than ever before, and it’s helping in the global battle against hunger. Over the last 23 years, the rate of hunger in developing countries has fallen by more than 10 percent. But we’re also wasting food on an epic scale. Every year, around 1.3 billion tons of perfectly edible food are thrown away. And it’s not just about vegetables and meat. It’s also a huge waste of money, resources, and energy. So what does this all mean? Well, for one, we should be more aware of what we’re eating. And two, we need to be more mindful of how much food we need, where it comes from, and how it’s produced. Every time we buy food we’re making choices – and whether or not we’re consciously thinking about them, these choices reflect our personal values about the world we want to live in. We theoretically know how to produce enough food to feed everyone on the planet. We also have the technology to build sustainable, eco-friendly food systems. So what are we waiting for? Now is the perfect time to reconsider the kind of food systems we’re supporting with our current food choices.

Modern farming practices are efficient,

but they aren’t good for the planet.

There’s no doubt about it – food production has become a lot more efficient. In the 1970s, the use of concentrated animal feeding operations – or CAFOs – became widespread in the meat industry. It now takes much less food, water, and land to produce beef, milk, and eggs. In fact, the carbon footprint of beef production has decreased by 16 percent since the rise in CAFOs. But these numbers don’t tell the full story. The key message here is: Modern farming practices are efficient, but they aren’t good for the planet. For CAFOs to hit these numbers, farmers have to use chemicals, hormones, and antibiotics. The aim is to make animals grow faster and keep infections at bay. But these chemicals often end up on our dinner tables. They can also seep into our drinking water. Ultimately, we humans are indirectly consuming antibiotics intended for farm animals. The American Centers for Disease Control and Prevention has determined that the use of antibiotics in the food industry is directly related to the growing rate of antibiotic resistance in humans. But the harm caused by CAFOs can also be much more explicit: in 2015 alone, there were nearly five thousand fatalities among American farmers, ranchers, and agricultural managers. The only job to claim more lives was professional driving. Along with dangerous machinery and often unsafe working conditions, workers must contend with terrible air pollution. If you’ve ever been near an industrial farming complex, you’ll know the stench is unbearable. It’s created by a mix of gases – some produced by cattle and some appearing as byproducts of other specialized processes. These gases include methane, ammonia, hydrogen sulfide, nitrous oxide, and many more. Routinely breathing these can cause asthma and chronic bronchitis, among other respiratory illnesses. And when these substances enter the atmosphere, they also contribute to climate change. It’s becoming increasingly clear that CAFOs come with health concerns, and the US beef industry has responded. People who run industrial farms are in the process of, as they put it, “reassessing their operations.” For its part, the European Union has banned the use of hormones in cattle. Given the problems behind CAFOs, you may be wondering why we put so much importance on meat, dairy, and eggs. What’s their nutritional value anyway? Let’s take a look in the next blink.

Meat has nutritional value, but there are dangers in eating too much red and processed meats.

The majority of people around the world receive their vital nutrients from meat. More specifically, pork is the most widely eaten meat in the world. It makes up 36 percent of global meat consumption. Poultry comes in second, at a close 35 percent, and beef stands at 22 percent. Amazingly, in 2018, the world produced a record high of well over 200 pounds of red meat and poultry per person. The volume of chicken produced globally has grown five-fold since 1970. Clearly, we’re eating a lot of meat. But that may not be a good thing for our health – or for the planet. The key message here is: Meat has nutritional value, but there are dangers in eating too much red and processed meats. Meat provides us with essential nutrients like zinc, various forms of vitamin B, riboflavin, iron, and, of course, protein. Calorie-wise, pork comes out on top with 310 calories for a standard three-ounce portion. It is followed by beef at 245 calories, lamb at 235, goat at 122, and chicken at 120 calories. So is meat part of a healthy diet? Well,

it depends on the sort of meat you consume and how much of it ends up on your plate. An excess of red meat – which includes beef, pork, veal, lamb, goat, and mutton – can be a problem. The same goes for processed meats like smoked bacon or salami. Processed meats generally contain lots of salt, sugars, and preservatives. And smoked meat products, as well as meat grilled over high heat, have been proven to contain carcinogenic substances. But even though processed meat isn't the healthiest of foods, it's a popular element of many Western diets. And this means that it's been heavily researched. In 2014, experts from around the world reviewed over 800 studies and confirmed that there is a link between eating processed meat and having a greater risk of cancer. Their analysis found that eating as little as 50 g of processed meat every day increased the risk of colorectal cancer by 18 percent. As for red meat, experts agreed that a daily intake of 100 g increased the risk of colorectal cancer by 17 percent. Scientists are studying cooking methods as well. And there are also some researchers who are looking at correlations between red meat and stomach or prostate cancer. That research is ongoing, but it's safe to say that many Western diets do include too much red meat. By cutting back a bit, you can make sure that the nutritional benefit of meat isn't outweighed by the risks.

There is a spectrum of processed foods, and it includes both healthy and unhealthy items.

Technology has changed the world beyond recognition. And one of the many areas it has transformed is the food industry. Refrigeration makes it possible to ship food further than ever before. And advances in canning and packaging mean that food can now be preserved in mass quantities. New chemical additives keep food from spoiling and give it a much longer shelf life. But what do we actually mean when we say "processed food"? Technically, this term could describe anything from cheese to Cheetos. So let's clear things up a bit. The key message here is: There is a spectrum of processed foods, and it includes both healthy and unhealthy items. Just about everything we eat these days is processed in some way. So it's helpful to think of most foods as existing on a spectrum. On the one end, we have "minimally processed," and on the other, there is "ultra-processed." Minimally processed foods go through stages like washing, peeling, or dehydrating. Examples include canned fruit or dried beans. And ultra-processed foods are things like packaged bread, sugary snacks, breakfast cereals, potato chips, and frozen pizzas. Generally speaking, minimally processed foods are the healthiest – but, of course, nothing is ever black and white. Processed foods like canned fish and frozen fruit and vegetables can be high in nutritional value. In fact, flash-frozen produce is often processed at peak freshness and can contain lots of vitamins and nutrients. Counterintuitively, frozen fruit may even be better for you than the "fresh" produce that's traveled halfway around the world before arriving at your local supermarket. The argument against ultra-processed food is much more clear-cut. It's bad for you – and for the planet. Not only do these types of foods contain lots of sugar and salt, they're also produced and packaged in ways that pollute the environment. Given the amount of processing and packaging involved, ultra-processed foods are considered "resource-intensive." These are the sorts of foods that negatively contribute to climate change. Sadly, in many countries, people get a lot of their calories from foods that fall into this category. Ultra-processed foods are extremely popular in Brazil, Canada, Australia, Sweden, Norway, and the US. One study showed that Americans receive nearly 60

percent of their energy from ultra-processed foods. If you do decide to buy prepackaged foods, it's always good to check the label for nutritional value. But, as we'll see in the next blink, packaging can also be misleading.

Food labels are sometimes confusing, or meaningless, but they can still help you make better choices.

Food labels can be very confusing. Words like "conventional," "organic," and "natural" are bandied about a lot, but what do they actually mean? And what's the difference between cage-free and free-range eggs? Let's dig into some common misconceptions and find out! The key message here is: Food labels are sometimes confusing, or meaningless, but they can still help you make better choices. Let's start with the word "organic." The finer points of what it means can differ from region to region, but essentially, organic refers to farming practices. For example, in the US, organic agriculture doesn't permit the use of genetic engineering or synthetic pesticides. That doesn't mean farmers steer clear of all pesticides; they can still use naturally derived substances like rotenone. But beware; natural doesn't always mean healthy. Studies show that exposure to rotenone can increase your risk of Parkinson's disease. So, even if your produce is organic, it's still a good idea to wash it thoroughly before eating. That brings us to the word "natural" – another misleading label. Ultimately, it's nothing more than a marketing gimmick – a way to make one food sound healthier than another. Many granola bars, for example, are labeled "natural." But they're still likely to be packed with added sugar. And now, for the most confusing part: eggs. You've got cage-free, free-range, certified organic, pasture-raised – and the list goes on! But what's the difference between all these? Well, unlike some other labels, these terms do mean something. For your average commercial egg producer, as many as four to twelve birds can be kept in a single battery cage. On average, they only have 67 square inches in which to move. The "cage-free" label indicates that the birds live in confined warehouses rather than cages. But they each still only have a square foot of space. Conditions remain poor for the birds, and the chicken farmers have to contend with highly polluted air. Free-range or free-roaming means the birds do spend some time outdoors – although how much, and what the word "outdoors" actually means, can vary. It may just be a small hatch leading to a tiny outdoor cement square that the birds may not even use. Certified organic eggs must be free-range and meet the standards of the region's organic certification, even though the actual practices behind the eggs can vary. Pasture-raised, on the other hand, is more specific. It means the birds spend their days outdoors and their nights in a barn. Their diets often include natural ingredients like grass and worms. This is widely seen as one of the most humane production methods.

There are still misconceptions around dietary cholesterol and GMOs.

You may or may not remember, but there was a time when eggs were getting a bad rap in the press. The reason? Cholesterol. In 1968, the American Heart Association recommended that people consume no more than 300 mg of dietary cholesterol per day.

It also suggested limiting egg intake to no more than three per week. This all stemmed from the belief that the cholesterol we eat is directly linked to “bad cholesterol.” Scientists refer to this substance as low-density lipoprotein – or LDL – cholesterol, which is linked to heart disease. But as the science of biochemistry and nutrition progressed, it became clear that the cholesterol in eggs has little to do with LDL. The key message here is: There are still misconceptions around dietary cholesterol and GMOs. It’s true that eggs are high in cholesterol. Each egg contains around 185 mg of the substance. But two studies – one in 1999 and the other in 2013 – found no connection between egg consumption and coronary heart disease. There was also no link between eating eggs and having high levels of LDL. There is still some uncertainty as to whether eggs make some people more likely to develop heart disease – in particular, those who live with type 2 diabetes. But at least the issue of cholesterol in eggs is sorted; the Dietary Guidelines for Americans no longer consider it a risk. Debates around food don’t stop at cholesterol, though. There’s still a heated discussion about GMOs, or genetically modified organisms. In the US, such crops have been used since the 1990s. Disagreements about them are just another example of a misunderstood label. There are a number of ways in which we can change a plant’s genetic makeup in order to enhance or remove some of its traits. Numerous tests have shown that this kind of genetic engineering is perfectly safe. In fact, a meta-analysis of more than 1,500 studies showed that GM crops carried no significant health or environmental dangers. Evidence suggests they can even be beneficial. Genetically modified crops use less water, create a smaller carbon footprint, and require fewer pesticides. In fact, one 2014 study revealed that GM crops resulted in a 22 percent higher crop yield, needed 37 percent less pesticide, and offered farmers nearly 70 percent more profit. If all this sounds a bit confusing, don’t worry. The science of food and nutrition is never black-and-white. In the next blink, we'll explore another common misconception.

Not all fat is bad for you, and good bacteria can create a healthy microbiome in your gut.

American nutrition habits have a history of being anti-fat. But that’s too simplistic. Just as there is “good” and “bad” cholesterol, there is also good and bad fat. Bacteria can be good and bad, too. This might sound confusing, so let’s try and work some of these things out. The key message here is: Not all fat is bad for you, and good bacteria can create a healthy microbiome in your gut. There are two main types of fats: saturated and unsaturated. Unsaturated fat can be further broken down into subtypes, which include monounsaturated or polyunsaturated fats. The latter is perhaps easiest to recognize. These fats turn into liquids at room temperature; one example is olive oil. Unsaturated fats are better for your heart. In fact, they can contain some very healthy ingredients, such as vitamin E, or fatty acids like omega-3 and omega-6. These substances are hard to find elsewhere. Polyunsaturated fats can help with blood sugar control and insulin resistance. This is great news for people who have type 2 diabetes. Now, let’s talk about bacteria. You may have heard the expression “gut microbiome.” A whopping 90 percent of the bacteria that live inside your body can be found in the gut. They’re doing essential work there; without them, there would be no metabolism as we know it. Some studies even suggest that you can control your microbiome – for example, you can improve it by eating a range of seasonal foods throughout the year. Two

categories of food help your microbiome: probiotic and prebiotic foods. Yogurt and other fermented foods, such as kimchi, contain probiotics – live microorganisms within the food itself. Prebiotics don't carry live microorganisms. Instead, they're full of things like fiber and refined starches, which are hugely beneficial for your gut bacteria. In 2014, scientists analyzed 43 studies of probiotics. They found a 21 percent reduction in the symptoms of irritable bowel syndrome, such as bloating and abdominal pain, when people consumed fermented foods like yogurt. In some cases, yogurt has even been shown to help control diarrhea. So, then, are bacteria and fat universally bad for your health? Well, by now we've learned that the answer is far from a straightforward "yes."

When choosing a weight-loss diet, scientifically consider the calories involved.

Diets are always going in and out of fashion. Perhaps you, too, have jumped on some bandwagons over the years. But the truth is, one size never fits all. For the most part, diets are all about changing how many carbs, fats, and proteins you eat. Some diets are low in fat, while others prioritize foods that are high in protein or low in carbs. One of the more popular diets in recent years has been the ketogenic diet. It's focused around a low intake of carbohydrates, and it basically gets the body to burn fat rather than carbs. This diet can promote weight loss – but it also demands potentially difficult lifestyle choices, like giving up bread. The key message here is: When choosing a weight-loss diet, scientifically consider the calories involved. Diets only work if you stick to them. And the more demanding a diet, the less likely you are to follow it to the letter. There's also another problem: many diets don't take into consideration the broader picture. What we should be asking is, what's really crucial for overall health? The field of nutrition has long been focused on the minutiae. It can be hard to stick to all the advice that's out there. And diets make things even more confusing because they stem from a reductionist point of view. Eat this, they say, and don't eat that. But there's something they ignore altogether, which is the important interplay between different foods and nutrients. Ultimately, when it comes to nutrition, the old adage is true: the total is greater than the sum of its parts. One thing that many diets do have in common is counting calories. And, generally, if you're concerned about weight loss, you can always fall back on a time-proven rule – you must burn more calories than you consume. Other factors, such as having a good support group, are also important, of course. But ultimately it's all about the arithmetic of your calorie intake. In the end, we each have different bodies and different microbiomes, so how we respond to different diets will vary. Luckily, we do know the nutrients we need – and how to obtain them in environmentally conscious ways.

Final summary

The key message in these blinks: There are a lot of dietary choices out there, and trying to pick foods that are healthy for both you and the planet can be overwhelming. But some ground rules do exist: Ultra-processed foods and concentrated animal feeding operations can contribute significantly to harmful carbon emissions and climate change. By paying attention to labels, you can keep a better eye on nutritional value, as well as support humane farming practices. Finally, you can seek out probiotic and prebiotic

foods to support a healthy digestive system. Actionable advice: Drink filtered coffee. Coffee is an excellent source of antioxidants. If you drink between three and five cups a day, you may lower the risk of heart disease and even stave off type 2 diabetes. But all coffee is different, of course, so how do you pick the kind that’s best for you? Well, you’ll get the most benefits by drinking filtered coffee, while coffee containing grounds can mean an increased amount of “bad cholesterol” – which negates all of coffee’s potential health benefits. Got feedback? We’d love to hear what you think about our content! Just drop an email to with Food and Nutrition as the subject line and share your thoughts! What to read next: Nutrition and Physical Degeneration, by Weston Andrew Price If you’d like to learn more about the dangers of processed foods, you’ll enjoy our blinks to Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects. You’ll discover how the sugars and sodium in processed food can harm our bodies – and how we might benefit from looking back at what our ancestors ate before the Industrial Revolution.