

THE MODERN STONE AGE DIET

BY DR. BILL SCHINDLER



ABOUT THE AUTHOR

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The Modern Food System = Complete Failure

Believe it or not, becoming obese should be hard to do. And yet, our food system has figured out how to create foods that trick our body's hard-wired instincts and has enabled widespread obesity in modern human populations where it never before existed. But that wasn't enough. Today the modern food industry is such a complete failure that it has produced - for the first time in the history of the planet - obesity and malnutrition in the same individual. Let that sink in for a minute... The food industry is producing food that is *so free of nutrition* that someone can eat enough of it to become obese while still being malnourished! This is criminal. This is

sick. This is the complete opposite of the approach our ancestors took to nourishing themselves in the ways that built us as a species both biologically and culturally. This is a modern problem, and, in order to find a solution, I believe we need to look to our past... our deep, deep past.

What Should We Be Eating?

I have dedicated my life to answering the simple question, "What should we eat?" My research has included everything from prehistoric and experimental archaeology, to ethnographic fieldwork with indigenous and traditional groups around the world, and all the way to professional kitchens. And you know what I concluded after all of this? I realized that I was asking the wrong

question. The question I should have been asking is not *what*, but rather *how* should we eat?

You see, no other animals ask the question what to eat... no other animals hire nutritionists or dieticians or doctors to provide dietary advice. No other animals, besides our pets, suffer from metabolic disorders (and that is because we feed our pets the same modern Western diets that are making us sick). And neither should we.

Eating is a powerful, multisensory, full-body, physiological and emotional experience. The way our body responds to the food we put into our mouths with a range of emotions including pleasure, disgust, satisfaction, satiation, and hunger, is an evolutionary response developed over millions of years to guide us in determining what and how much to eat. We don't need anyone to tell us what to eat - we just need to be in tune with our bodies and have access to real foods from which to choose.

We share this innate ability with every other animal on the planet.

Today, as we celebrate eating purely for pleasure - or hedonic eating - we stuff our faces with food designed to trick the very senses we should be relying upon for guidance. We have taught ourselves to normalize our body's negative responses to eating modified foods that have been artificially altered to contain the flavor, color, sweetness and aroma of food without the nutrition that would naturally accompany them. For some reason, we have taken the goal of nourishment out of eating and convinced ourselves that if we are celebrating, we should gorge, and if we are trying to be healthy, we should leave the table hungry and unsatisfied. In the words of Lunatic Farmer, Joel Salatin, "Folks, this ain't normal!"

We should get up from EACH AND EVERY MEAL feeling good... no, feeling great! We should feel comforted, satiated, and





content. We should not feel hungry and, likewise, we should not have to loosen our belts. We should feel... well... nourished. This is how our ancestors ate and this is what we should be striving for in our diets today. It IS possible to enjoy your meal and still be healthy - in fact, that is the only way it should be.

Why Does HOW we Eat Matter to Humans?

Figuring out *how* to eat is a challenge unique to human beings. And this fundamental difference of how we feed ourselves began millions of years ago with one simple yet powerful act - the smashing together of two rocks.

Around 3.3 million years ago, in a remote area just west of Lake Turkana in Kenya, one of our ancestors was staring longingly at the flesh adhering to a recent kill on the savannah. Salivating, he desperately wanted to engage in kleptoparasitism (stealing prey from another animal) by scavenging alongside the buzzards and hyenas who were ravaging the carcass, but was unable because he was not physically equipped to do so. Earlier, he had witnessed a large predator take down its prey, rip it

apart with razor sharp canines designed specifically for the task, and gorge itself on the blood, fat and offal inside. Once satiated, the predator did what predators often do in this situation - amble off and take a nap to digest the gluttonous feast. This provided a window of time for other animals to swoop in and scavenge the meat left behind. However, this meat was inaccessible to our earliest ancestors. They lacked suitable teeth, nails, and even muscles to harvest any significant quantity of meat before the predator returned.

Determined, this particular ingenious ancestor used the one biological advantage it did possess, its brain. He picked up two rocks, smashed them together, and, in less than a second, produced a durable, razor sharp edge. This simple stone tool was powerful. It allowed our ancestors, for the first time ever, to overcome their physical limitations and interact with their environment in new, enhanced ways. Armed with the world's first knife, our ancestor rushed in, hacked off a large piece of meat, and brought it back to share with the others in his group. And with that, nothing has ever been the same.

From the Weakest Species on The Planet to The Top of The Food Chain

My research has revealed a surprising fact: we humans are one of the weakest species on the planet. I know this is difficult to hear, but it has direct consequences for feeding ourselves in ways different than every other animal. We humans love to celebrate the athletic achievements of members of our species that stand out amongst the rest of us - Usain Bolt is incredibly fast, Michael Phelps is a great swimmer, and Arnold Schwarzenegger is powerfully strong. In our revelry for congratulating ourselves, we forget about how these athletic feats measure up to other animals. The Federation of American Societies for Experimental Biology reported relative to body length the fastest animal on earth is a Southern Californian Mite who can move at 322 times its body length per second. Researchers Robert J. Knell and Leigh W. Simmons discovered that a dung beetle

can pull 1,141 times its own body weight. Pound for pound this ability makes it the strongest animal on the planet. Fisheries Biologist Dave Kerstletter recorded sailfish reaching speeds of up to 68 miles per hour, crowning it the fastest swimmer in the world. To match these impressive feats, Usain Bolt would have to run 1,300 miles per hour, Arnold Schwarzenegger would have to pull six double decker buses full of people, and Michael Phelps would have to cover 2,800 meters in the time it normally takes him to swim 200!

You may be wondering what this has to do with food? Well, if we stripped ourselves of all technologies, we would have to rely solely on our anatomical features to obtain all of our food. This would create a huge dilemma - we would actually starve to death. Remember, we really are not that fast, we are not that strong, and we cannot swim very well. We cannot fly, have a difficult time climbing, and cannot even





dig into hard ground. Even our teeth and our nails are useless compared to other animals. In fact, the only resources we are *adapted* to obtain from our environments, without any technologies whatsoever to assist us, are a limited amount of wild, local, seasonal vegetables and fruits and some insects. This is exactly what comprised our ancestors' diets millions of years ago prior to the invention of stone tools. But these ancestors were small bodied, with small brains. They could fulfill their nutritional needs with those simple diets.

To access all other resources we must create technologies to overcome our physical limitations. We create digging sticks to dig into the ground to extract tubers. We make ladders to climb and access honey or eggs. We create spears and arrows to overcome our lack of speed and allow us to hunt at a distance.

We Do Outside of Our Bodies What Other Animals Naturally Do Inside Theirs

Our biological weaknesses also extend inside of our bodies. It turns out that we humans possess incredibly inefficient digestive tracts. Compared to a similar sized primate, our digestive tracts are 60% the size. In fact, relative to our body size, our digestive tracts have actually been shrinking over the past several million years! This is important because the size of our digestive tracts is directly proportional to the amount of food we can consume at any given time and the amount, types and quality of the nutrition that will be absorbed by our bodies. Meanwhile, our bodies have been getting larger and our brains growing exponentially, both with corresponding increases in nutritional needs. How did we nourish these growing bodies and brains while we are ill-equipped to get and make use of most foods available to us in the environment? The answer: **technology**.

The diets of other animals match what they are biologically equipped to handle. Cows are built for consuming tough vegetal



material like grass. Ducks, geese, and other granivorous (grain-eating) birds are fully equipped to safely and efficiently digest grains. But what about us? We humans eat tough vegetal material without a specially designed palate or a rumen. We eat tons of grains and do not possess neither a crop nor a gizzard. And, what about all of the other foods we consume for which we have no biological adaptation to detoxify and make its nutrients available for us?

The harsh reality is that we have no business eating almost every food that we consume - this goes for animal-based foods, dairy, grains, and tough vegetal materials. In fact, the only foods our digestive tract are *designed* to consume are the insects and limited amounts of wild fruits and vegetables that comprised the diets of our early ancestors. However, we have built bodies that *require* the nutrition these foods can offer.

The Answers Lie in Our Dietary Past

What we as humans do differently than every animal on the planet is we create technologies and behavior patterns that allow us to access resources from our environment that would otherwise be unavailable to us and, most importantly, process those resources to make them as safe, nutrient-dense, and bioavailable as possible for our incredibly weak, inefficient, bodies before we eat them.

We do not possess rumens, fermentation chambers in our stomachs designed to break down tough vegetal materials, but instead we ferment in specially designed pits in the ground and in ceramic crocks and mason jars on the counter. We do not have crops or gizzards, but for over 10,000 years we have been soaking, sprouting, and fermenting grains and then grinding them on ground stone tools before forming



them into loaves and baking them in the oven to produce sourdough bread. When we make cheese and ferment dairy, we are replicating the natural processes that take place in the stomachs of infant mammals, including humans. We essentially use the same mechanical and chemical processes that other animals naturally possess to access the resources in their natural diets and make those foods safe, nutrient-dense and bioavailable for our bodies. Or at least, we used to.

food consumers (beginning in the Industrial Revolution - 1700's), we grew increasingly distanced from our food. Today, we are now at a point where most people in this world are not engaged in any aspect of finding, growing/raising, harvesting, processing, or even cooking their food! We have been fooled into thinking that this represents some sort of progress or convenience. But the harsh reality is that our health and the health of our planet are suffering as a result.



During the transition from gatherers (5-7 million years ago) to scavenger/gatherers (3.5 million years ago) and finally to hunter/gatherers (2 million years ago), the nutrient density and bioavailability in our diets skyrocketed! At each step of the way, all humans were becoming more and more viscerally connected with their food, how to access it and, most importantly, how to prepare it for their bodies. But then everything changed. As we became food producers (beginning 15,000 years ago with the Agricultural Revolution) and later

I firmly believe that healing ourselves, our communities, and our environments begins with reconnecting to our food, where it comes from, and, most importantly, doing everything we can to make it safe, nutrient-dense and bioavailable.

What We Can Do as Chefs

The magic we make in our kitchens is the same magic our ancestors made for over 3 million years - magic that literally created us as human beings. This leaves us in

important and powerful positions. In fact, when you think about it, we have one of the most important roles in the world. Our work helps define people's perception of food and, most importantly, *how* they eat it.

We already serve a critical need in our communities. We create in our spaces not just meals but experiences for our diners. But, when we focus on the *how*, something magical happens. Common categories of food such as bread, cheese, and even meat and vegetables dissolve. What's left are simply two categories. In the first category are foods such as sourdough bread that rely on a combination of wild bacterial and yeast fermentations that do not simply leaven but also detoxify by neutralizing phytic acid and other lectins, predigest the grains to make the nutrients accessible to our bodies, and impart a hyperlocal level of terroir. In the same category is also real cheese and other fermented dairy foods made with grass-fed (preferably raw) dairy and fermented using traditional approaches

to reduce the lactose content, enhance the probiotic load, vitamin content, and digestibility. This category also contains all parts of the entire animal increasing not only the nutritional value but also the ethical, environmental, and economic advantages of a full nose-to-tail approach instead of simply "protein." And, of course, this category also contains vegetables processed using a variety of traditional techniques such as fermentation and nixtamalization to detoxify and enhance the density and availability of the nutrients they contain. This first category contains foods that safely nourish. The second category contains everything else.

Fast, cheap shortcuts in food preparation have permeated ALL aspects of our food and diet. Those small, incremental, steps that diminished the safety, nutrient density, and bioavailability of our food generation after generation has resulted in a human epidemic like we have never before seen. Likewise, small, incremental changes on





our plates like those described above, compounded meal after meal, day after day, and week after week can kick start a revolution - a revolution that we and our world desperately need.

The Modern Stone Age Kitchen - Informed by the Past, Inspired by the Future

Archaeological evidence suggests that modern *Homo sapiens* (us) first appeared 300,000 years ago in Morocco. Today, we have essentially the same bodies, brains, and digestive tracts, which means, biologically, we have the same nutritional needs. However, culturally we are very, very different from our ancestors (not to mention even just our parent's generation)! We have different expectations of taste, texture, aroma, and even presentation in our food. We also have genuine concerns for how our diets impact the world around us, and we have goals for sustainability,

ethics, and even economics in the way that we feed ourselves.

I believe that the diet of the future can accomplish all of these goals - I call it the *Modern Stone Age Kitchen*. It creates food system solutions that are economically, environmentally, and culturally sustainable by taking lessons from 3.4 million years of our dietary past, informed through archaeology and experimental archaeology, and blends them with modern culinary arts to produce a synergistic result that is not only nutrient-dense and sustainable/regenerative, but also meets or exceeds the expectations of the modern Western palate!

Here are some of the major takeaways from this approach.

Food production should:

- Focus on technologies and approaches that increase safety, nutrient density, and

bioavailability in our food - food processing should **never** compromise these elements

- Create and celebrate genuine hyperlocal terroir - this is accomplished not just by using local ingredients, but by employing traditional fermentation processes that rely on wild microflora in fermented vegetables, cheese making, meat fermenting/curing, and even brewing

- Identify, make use of, and celebrate underutilized wild resources - this includes insects, coastal resources such as limpets, and fish such as the Atlantic Menhaden

- Identify, make use of, and celebrate underutilized parts of plants and animals - this includes ultra high-yield butchering, nose-to-tail and root-to-stalk cooking and eating

- Use authentic and real ingredients to the exclusion of everything else - for example, there should be a focus on high quality animal fats that have been in our diets for 3.5 million years and an exclusion of nut and seed oils which have been in our diets for a little over a century

- Entail complete scratch cooking (what I call soul-authored meals) - this means being involved with the entirety of the food production system start to finish. This builds understanding, ethical responsibility, appreciation for human/environmental relationships, stewardship, healthy dietary approaches, and regard for sustainability in ourselves, our team, and our customers

- Result in full transparency - use your approach to food to educate your diners! Let the public know exactly what you are doing; in fact, let them see what you are doing. This is not just about entering a niche market and boosting sales - it is about starting and fueling a food revolution

I believe the most powerful and transformative thing that we can do as chefs is to use our skills to recapture the

way our ancestors approached food, the approach that literally built us as a species. This is the perfect time to reimagine how we eat and to redefine our food system. The Modern Stone Age Kitchen approach is real, genuine, and encompasses all that we need to be concerned about with our food - it not only nourishes us with the safest, most nutrient-dense, and bioavailable food possible for our bodies, but also exceeds our cultural expectations and social requirements for eating. We can do this. After all, the real movement began 3.3 million years ago with a sharp edge of a rock - we can certainly rekindle it with our keenly honed chef's knives.

Imagine what would happen if we actually used our skill set to concentrate on nourishing the public instead of just entertaining and satisfying their hedonic urges?

