

# Book Review: “The Story of the Human Body” by Daniel E. Lieberman, Ph.D.

These days “Paleo” is all the craze: Paleo Diet, Paleo Bars, Paleo Shakes, Paleo Running . . . what’s next? Paleo Match Dating.com (caveman sex)? Paleo Wear (workout skins)? Paleo Survivor (a new reality show)?

Paleo books abound, and we’ve covered some of them on our Intelligent Medicine podcasts with professor Loren Cordain (“The Paleo Diet”) <http://www.drhoffman.com/podcasts/channel-1/drhoffman-com-2013-10-01-77.mp3> and John Durant (“The Paleo Manifesto”) <http://www.drhoffman.com/podcasts/channel-1/drhoffman-com-2013-09-10-65.mp3>.

But recently, I came across what I consider the ultimate science-based Paleo investigation with the ambitious title *The Story of the Human Body*. <http://www.amazon.com/The-Story-Human-Body-Evolution/dp/0307379418>

Written by Daniel Lieberman, Ph.D., a Harvard professor of evolutionary biology, *The History of the Human Body* documents the evolution of modern man using the latest anthropological and paleoecological evidence.

But the key premise of the book is that several thousand years ago we became insulated from the usually adaptive forces of natural selection by our superior cultural evolution. We have achieved seeming success in terms of hegemony over the forces of nature that used to bump off our ancestors, but this has resulted in deleterious evolutionary “mismatches.”

Pretty well acknowledged are energy mismatches due to excess food intake and decreased physical activity, which result in obesity, diabetes and cardiovascular disease.

But Lieberman makes a convincing pitch that other common diseases of modern man are due to mismatches between our genes and our increasingly artificial environments. These include increasing susceptibility to autoimmune diseases, orthopedic problems such as back pain and plantar fasciitis, dental problems and digestive ailments.

Even such mental conditions as anxiety, attention deficit disorder and obsessive-compulsive disorder can be viewed through an evolutionary biology perspective as once-adaptive traits gone haywire in a modern world.

Cancer, too, he writes, “is actually an aberrant evolutionary process going on within a body.”

Lieberman decries the lack of emphasis placed on evolutionary biology in medical schools: “Just as knowing the history of the Industrial Revolution will not help a mechanic fix your car, why would knowing the Paleolithic history of the human body help a doctor treat your disease?” He adds: “But this way of thinking is deeply flawed and shortsighted . . . knowing your body’s evolutionary history helps to evaluate why your body looks and works as it does, hence why you get sick.”

In a recent conversation I had with Dr. Lieberman <http://www.drhoffman.com/podcasts/channel-1/drhoffman-com-2013-10-07-80.mp3> he decried the sometimes facile appropriation of “Paleo” by meat proponents: They distort the historical record to rationalize their proclivity

for ordering 16 oz. sirloin steaks. Hunter-gatherers, he points out, while certainly meat eaters, were subject to the harsh vicissitudes of their environments, which didn't always guarantee hot-and-cold running animal protein.

The potential effects of a high-meat low-carb diet on modern man, he suggests, are uncertain. That coupled with changes in the quality of meat and a sedentary lifestyle might spell trouble for too-avid proponents of Atkins-like diets.

Lieberman is, however, a fan of high-fiber, low-glycemic index diets such as the traditional Mediterranean diet that deliver their carbohydrates in slow-release form, reducing the risk of insulin resistance, fatty liver, heart disease, hypertension and diabetes.

He's also a dedicated proponent of barefoot running and, in fact, has been dubbed "The Barefoot Professor" by the Harvard community. He frequently can be spotted loping barefoot or in minimalist running shoes around Cambridge.

Man, he asserts is "Born to Run" and he is the author of a scientific paper by that title (with apologies to Bruce Springsteen). On the primitive savannah where humans evolved, our ancestors were not the fastest animals in the ecosystem, but they stalked their prey tenaciously, often wearing down speedier herbivores with teamwork and long-distance feats of endurance.

Modern-day maladies such as flat feet and plantar fasciitis, his studies have revealed, are the inevitable consequences of coddling our feet with comfortable shoes that unfavorably alter the biomechanics of running and walking.

Does all this portend a dire future for the human race? Not at all, says Lieberman. He believes that we have made considerable progress against human misery and disease but that we must learn the lessons of our evolutionary past to stave off future problems. Education and political initiatives to encourage exercise and eliminate perverse economic incentives to produce and market junk food are the answers he envisions.

All in all, *The Story of the Human Body* is a great read, and I highly recommend it for those of you who are interested in learning the facts about our biological roots and how we can rationally apply "Paleo" concepts to prevent and reverse modern "mismatch" diseases.