

Polar Bears in the Jungle: Reflections on Obesity and Overeating

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CHINOOK, THE POLAR BEAR

This is the story of Chinook, a young polar bear who lived up north above the Arctic Circle. For much of the year, Chinook ambled over frozen tundra and swam in ice-choked waters, hunting for the fat seals and succulent fish that kept him well fueled and healthy. Cold nights and icy waters didn't bother him. His abundant body fat and dense fur kept him warm in the harsh climate that would have quickly claimed the lives of most other creatures.

When the long arctic winter came and completely covered the freezing sea with ice, hunting was impossible. So Chinook dug a snow

especially lucky, Chinook would snag a sinewy old Eskimo or a careless missionary, which he considered great delicacies. Chinook was content, living in perfect harmony with his environment.

One day, however, his life changed forever. Hunting hadn't been very good that morning. Most of the animals seemed to have gone into hiding. Since all Chinook had caught was one small salmon, his growling stomach gave a joyful lurch when he caught sight of the pile of fresh seal meat lying on the ice. This must be my lucky day, he thought as he grabbed a huge bite of the tempting meat. Whap! Thump! Chinook heard a loud bang as the

commentary

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cave, crawled in, and comfortably slept away the unforgiving winter. As he hibernated, his ample store of body fat provided the nutrition and warmth he needed to stay alive. With his energy needs at a low level, Chinook's body could keep functioning for months on the fat he had stored during the short summer season. His metabolic efficiency was a wonder of nature. Polar bears had evolved over the ages to not only survive, but to thrive in the harsh glacial climate.

The young bear, like all of his kind, awakened each spring with a voracious appetite and started the yearly cycle again. Hunting and devouring everything he could catch, he laid down the fat stores that would see him safely through another winter. When he was

trap was sprung, but he had not heard it soon enough to escape the falling net. He cried out in alarm and tried desperately to run first in one direction and then another, but it was no use. In spite of his roaring protests and angry snarls, Chinook was hauled from the net into a steel cage and then trucked overland to a huge, silver plane. He was confused and frightened. His sides hurt where he had crashed repeatedly against the steel bars of the cage. The puzzled young bear knew nothing about zoos and had no clue that he was headed for one. He only knew he was miserable for the first time in his life.

Chinook's troubles had only just begun. As the plane winged toward a far-off zoo, it developed engine trouble and crashed deep in

the jungles of New Guinea. When the roaring and tearing of metal had stopped, Chinook was unhurt but more frightened than ever. However, he soon noticed that his cage had sprung open and he could see a hole in the side of the plane. Desperate to regain his freedom, Chinook ran for it, lumbering through the steaming jungle as fast as he could. He was determined to put as much distance between himself and his captors as possible. As he ran, however, he soon realized that something was terribly wrong. His heart was pounding. He felt hot and flushed, and his energy was fading quickly. The heat and humidity were sapping Chinook's strength. The wonderful insulation that had protected and served him so well in his arctic home was no longer an advantage. It was now a disadvantage that placed Chinook on the verge of heat prostration. His running slowed with every step. Finally, near exhaustion, he stumbled into a small stream and collapsed. He lay on his back in the water with his legs thrown wide, gasping for air and taking occasional sips of the water that surrounded him. He was a sick, confused, and very unhappy polar bear. In his distress, he didn't realize that falling into the little stream had actually saved his life.

As Chinook lay there in misery and confusion, a couple of pygmies walked into the clearing. It's hard to say who was more surprised and frightened. Chinook had never seen people who weren't covered with bulky furs and protective hoods. The pygmies had never seen anything as huge, white, and round as Chinook. But the pygmies' fears

soon turned to curiosity and then scorn as they realized that the huge creature was weak and all but unable to move.

"What is that?" said the first pygmy. "I don't know," the other answered, "but look how fat he is." "Yeah," replied the first. "And I've never seen such a lazy creature. He's not moving at all. That must be how he got so fat!"

Accustomed as they were to the lean jaguars and snakes of their tropical home, the pygmies thought the bear was disgusting and ungainly. They ran to their village to spread the news of their strange discovery. Within minutes, the clearing

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was filled with villagers who pointed, gaped, and laughed at the unfortunate bear. Even though Chinook didn't speak their language, he knew he was being ridiculed. Shame was a new emotion for Chinook, but he quickly felt its power to deepen the fear and pain he already experienced.

Eventually the tribe's shaman joined the crowd. Ranjit-Rah was regal in bearing and the wisdom of years shown from her wizened, old face. She was both the physical and spiritual healer for the tribe's members (the tribe had not yet benefitted from Western taxonomies) who loved and revered the old woman for her insight, compassion, and healing powers.

Although she had never seen a polar bear either, Ranjit-Rah grasped very quickly that this was a very sick animal. As she stood there observing the bear, she heard the insults of the tribe. "Knock it off, you knuckleheads," she said (she was getting a bit impatient in her later years). "You're acting like fools. This animal is very ill and cannot harm you. You bring shame on us all with your stupid and heartless remarks." The tribe fell silent as the old woman approached Chinook to examine him more closely.

His heaving sides and hot, dry nose told her that if he did not get cooled off very soon, he would perish. "Pick up those gourds and pour water over our poor, white brother. Help him drink. He is dying from the heat. None of us could survive wearing the thick coat he bears." Eventually, Chinook's breathing slowed and his strength began to return. When the bear finally stood up in the shallow pool, Ranjit-Rah began to coax him through the underbrush. She led him to a deep pool in another part of the jungle. Fed by an underground mountain spring, it contained the coldest water in the entire area. Chinook slipped gratefully into its cool depths. There were no lovely blocks of ice, no seals, and no salmon. But it was deep enough for him to fully submerge himself and, for the first time in days, he began to feel like life would and should go on.

Over time, Chinook and the tribal members became friends. The tribe helped find food to sustain the great white bear, although it never satisfied him in the same way as his old diet of seal, salmon, and Eskimo. And although he could

never again travel far from the cooling mountain pool, he lived a relatively happy life eating fruit, berries, indigenous mammals, and the occasional incorrigible child. Over the years, his weight lessened somewhat and his fur thinned a bit, but he never fully adapted to his new surroundings. He was, after all, a polar bear in the jungle.

OBESITY AND OVEREATING

There is a substantial body of research¹⁻⁵ that suggests that many obese people are like polar bears living in the jungle. These individuals are now trapped and endangered by a physiology that once conferred a distinct survival advantage. Most of the human family tree evolved in environments in which food and the life-sustaining energy it contained were scarce. In that situation, the ability to store excess energy as fat had strong survival value. In the same circumstances, being metabolically efficient (ie, able to accomplish the greatest amount of work while burning the smallest number of calories) also had strong survival value. In addition, body fat helped keep people warm and preserved core body heat in cold climates where there were few sources of warmth other than the campfire. Over time, people adapted to these environments in which food was scarce and required strenuous effort to obtain. Many of those among us who now grapple with weight and hunger are descended from the survivors of that evolutionary adaptation. Theirs are the ancestors who were able to go for long periods of time between meals, could easily store excess energy as fat when it was available, and were metabolically efficient (ie,

could maintain their bodies and accomplish their work at a lower calorie cost). This adaptation was still true of many Native American and other indigenous peoples living a hard, primitive lifestyle until quite recently.

Today, however, a great many people live in environments in which food energy is abundant, body warmth is maintained by well-designed clothing and climate-controlled buildings, and the

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amount of physical energy required for survival is extremely low. The ability to store and conserve excess energy no longer carries the same benefit. An abundance of body fat, which once helped keep people alive, has now become a major health threat.

Like Chinook in his early encounters with the pygmies, problems of the obese today are not limited to the physical realm. Obesity has also become a major psychosocial problem. Prejudices and stereotypes regarding obesity continue to pervade our society. In spite of the growing body of science that places the roots of most obesity squarely in the soil of physiology, obesity is still viewed by many people—including a distressing number of healthcare professionals—as evidence of a character flaw such as lack of will power, self-indulgence, laziness, lack of discipline, or gluttony. In a recent survey,⁶ primary care physicians

selected “lack of will power” and “lack of self-discipline” as the major causes of poor regimen adherence among their patients with diabetes. Such comments reveal more about the ignorance and prejudices of the respondents than they do about the source and meaning of patient behavior and its outcomes. This finding among physicians is especially troubling because it violates the fundamental tenet of the Hippocratic oath, “First, do no harm.” Criticizing, blaming, and judging patients for being overweight causes harm by further damaging the self-esteem and self-efficacy of persons already subjected to a lifelong barrage of such criticisms by the society at large. If the doctor feels they are worthless and unlikely to succeed, who are they to disagree? Without self-esteem and a reasonable expectation of success, these patients are unlikely to take the difficult steps required for lifelong management of the chronic disease of obesity.

Blaming and labeling patients is an ineffective strategy for promoting behavior change. Long-lasting and difficult behavior changes are facilitated by a strong sense of self-efficacy and self-worth. People must believe that they can change and that they are worth the effort. Repeated attacks on the self-esteem of people who are overweight—especially when the attacks come from authority figures such as physicians and other healthcare professionals—convince them that they are neither worthy nor capable of living healthier lives. William Ira Bennett, in his editorial⁷ in the *New England Journal of Medicine*, stated the following:

The folk belief that overeating causes obesity has influenced clinical thinking with remarkable tenacity, despite two fatal flaws in the theory. First, the proposition is logically vacant in as much as the definition of overeating is circular: only if one is fat can one be said to have overeaten. Second, whenever the proposition has been reframed so as to have meaning and then tested in a well-designed experiment, eating behavior has appeared to be the dependent variable, rather than the independent variable.

Although it is both desirable and possible for people who are overweight to change, they and we must become realistic about the level of weight loss that they can actually achieve and sustain. Setting a goal of achieving a so-called ideal body weight is a recipe for failure for such people. Chinook, in spite of his newly adopted diet of berries and grasses, would never develop the svelte line of a jaguar. He was a different kind of animal. Acceptance of a body weight that supports health and quality of life, even though it may not meet current concepts of

style and appearance, is an important step for both provider and patient.

Obesity is in some ways similar to our earlier views of mental illness and alcoholism (ie, viewed as a character flaw). Due to the state of knowledge at the time, people in previous centuries usually failed to recognize that mental and behavioral illnesses were largely beyond the control of their victims. People with these problems were scorned and ridiculed. They were called crazy, loony, possessed, or drunkards. Because the diseases that produced their symptoms were not recognized (paranoia, manic-depressive disease, schizophrenia, alcoholism, etc), meaningful help could not be obtained. As our understanding of brain chemistry, genetics, the immune system, and other fields has expanded, we have come to see that many vilified conditions, once viewed as moral weaknesses, have a physiological basis and are, in fact, treatable. We can only hope that the expanding body of science in gene expression, metabolic regulation,

and appetite control will have the same effect on societal attitudes toward obesity.

In the meantime, our obese patients must live with a once valuable genetic adaptation that no longer matches the environment. Diabetes educators can perform a significant service by helping their patients understand that much of what they have heard about being overweight is an expression of ignorance and stereotypical thinking. Most patients are not overweight because they are bad, weak, or lazy; rather, they are like polar bears in the jungle. They need a shaman—someone who understands their plight, accepts them as they are, recognizes their unique needs for education and support, and helps them function as well as possible in an environment in which their once valuable metabolic efficiency has become a threat to survival.

As diabetes educators, would we rather be shamans or intellectual pygmies?

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