EDITOR’S COMMENTARY

Decolonizing Our Diets By Recovering Our Ancestors’ Gardens

DEVON A. MIHESUAH

For Native Americans, current federal dietary guidelines promoting a meaty, cheesy diet amounted to, perhaps inadvertently, the nutritional equivalent of smallpox-infected blankets.


Ninety percent of diabetes and 80 percent of heart disease cases can be directly attributed to unhealthy eating and lifestyle habits.

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Poor health resulting from lifestyle choice is a serious problem for Americans.¹ Heart disease, obesity, diabetes, cancer, high blood pressure, and alcoholism rage across tribal Nations and have struck both the young and old. Members of my tribe, the Choctaw Nation of Oklahoma, for example, have been especially hard hit by a variety of ailments directly related to poor diet and lack of exercise.

In a recent commentary, physicians Neal D. Barnard and Derek M. Brown stated that the 1995 Dietary Guidelines (that were reviewed in mid-2000) advocate a diet that is unlike the traditional diets of Native peoples. An example of how out of step nutrition “experts” are with the needs of Natives is a study conducted in 1977 in Gastroenterology that revealed that 100 percent of Natives tested were lactose intolerant, which is a food intolerance to lactose, a sugar found in milk products. Those suffering from lactose intolerance are deficient in the enzyme lactase. Without being di-
gested by lactase, food then enters the colon where it produces uncomfortable bloating, cramping, and diarrhea. Almost 50 million Americans have lactose intolerance, and it is estimated that 75 percent of American Indian adults have lactose intolerance. Yet the Dietary Guidelines advises that everyone eat two or three servings of dairy foods, despite the reality that other foods, such as green, leafy vegetables and beans, also supply calcium.³

But lactose intolerance seems a minor problem compared to other ailments with which Natives must contend. Using the Oklahoma Choctaw’s situations as examples, consider that almost every back issue of the Choctaw Nation’s newspaper *(BISHINIK)* since 1995 has at least one, but usually two or three, articles about diabetes, obesity, eating right (usually a WIC—Women, Infant and Children—column that features recipes and nutrition information), and exercise. The Nation participates in the “Walk This Weigh” campaign, an annual Walk/Run for Diabetes Awareness sponsored by the Choctaw Nation Health Care Center, sponsors a Youth Wellness Camp and funds a Diabetes Treatment Center that tests and educates Choctaws. In addition, a group of workers with the Diabetes Multi-Resource Task Force travels across the Choctaw Nation to test fifth graders for diabetes and to give presentations about healthy lifestyles.

There is good reason for publishing this information and opening more centers. At the 2002 Labor Day Festival in Tushkahoma, Oklahoma, for example, 115 participants in a test to measure fat content revealed that over half of those people were at risk for developing diabetes; of 44 who took a blood test, 5 people had blood glucose levels of 140 mg/dl and 64 people who have diabetes were tested for blood glucose level and 22 had levels above 200 mg/dl. The Native American Diabetes Initiative asserts that in some tribes, Type II diabetes has stricken half the tribal members.³

Diabetes is one of the most common ailments afflicting Native people. It is estimated that 17 million Americans, or 6.2 percent of the U.S. population, has diabetes compared to 0 percent of American Indians who are 25 percent more likely to develop diabetes than non-Natives. In February 2002, the Choctaw Nation reported that in 2001, 81 new cases of diabetes were diagnosed, bringing the total number of Choctaws with diabetes in the service area to 800.³ The number may be much higher, however, because many people with diabetes have not been diagnosed.

Diabetes mellitus occurs when the pancreas stops producing the hor-
mone insulin or does not create enough for the body to function properly. Without insulin, the liver cannot absorb enough to store and the cells cannot absorb enough to use for energy. The result is excessive glucose into the bloodstream and into the urine. There are two types of diabetes mellitus: Type I and Type II. The first type affects 5 to 10 percent of all cases of diabetes and occurs when the pancreas produces little or no insulin. The body must obtain energy from fat because it has no glucose to draw upon. As the fat is utilized and burned, the by-product ketone is produced; this leads to a dangerous condition called ketoacidosis which causes dehydration and high levels of blood sugar.

Type II usually affects those over forty and is usually caused by an imbalanced diet. The insulin-producing cells in the pancreas produce insulin, but not enough for normal bodily functions; it affects 90 to 95 percent of those with diabetes and is often caused by overeating and obesity, although genetics is also a factor. Those who suffer from Type II diabetes must take insulin injections.

Symptoms of diabetes include frequent thirst, excessive hunger, skin ulcers, pain when walking, an uncontrollable urge to urinate, and fatigue, especially after a meal because the body is awash with sugar that it cannot process. A diabetic will also have numb or tingling feet and hands, cuts that heal slowly, blurry vision from too much sugar in the bloodstream that stretches the lenses, headaches, higher than normal blood pressure, breath that smells strongly because of the liver breaking down fat for fuel, and a leathery band of skin around the neck.

Those who suffer from diabetes have a higher chance of developing atherosclerosis and high blood pressure that can lead to a stroke or heart attack. There also is a chance to develop retinopathy, an eye disease that can lead to blindness, especially those with Type II diabetes. Nerve damage is sometimes a factor, and can cause blindness and extremity amputations, at least.

Diabetes does not just attack the elderly. Although an individual may think he or she is eating right and has no family history of diabetes, that person may be surprised to find they are diabetic. And, even if an individual is lean in comparison to most people around them, that person may still weigh more than he or she is supposed to. Some apparently skinny people may carry too much fat in comparison to their muscle content.

Very thin people can create high glucose levels if they eat incorrectly.
Many believe that consuming sports and fruit drinks and a fat-free diet can make them immune; but even strong athletes with little body fat and high metabolisms often eat a tremendous amount of calories. All that sugar and carbohydrate is turned into more glucose than their bodies can handle. A test can tell a person quickly: a blood sugar level greater than 125 is considered diabetic. Abnormal blood-fat levels can put one at risk, so also have lipid screening done. A person may have trouble if the triglyceride level is high and HDL cholesterol level is low.

A major contributing factor to developing diabetes is being overly fat. Gaining 11 to 18 pounds doubles the risk of developing Type II diabetes (gaining 10 pounds ups one’s risk of heart disease and gaining 20 pounds doubles a woman’s chance of developing breast cancer). Although genetic background accounts for the disposition to being obese, the major culprits are overeating and under-exercising. Many Natives pay little attention to what they put in their mouths and take advantage of the American culture that presents food in extra-large sizes, in cheese-filled crusts, in easy to microwave containers, in lattes with heavy cream, and in fast-food shops. McDonalds’ French fries servings have increased, as have the sizes of movie popcorn bags and buckets. Restaurant portions and bottles of soft drinks are often large enough for three people (mainly because they use foodstuffs with the cheap trans fats and high-fructose corn syrup). Americans have adopted a sedentary lifestyle, watching hours of television and playing videogames every day. They exercise little or not at all. Corn is produced on such a large scale that it can be sold cheaply as sweetener for high-fat and high-calorie snacks such as corn chips and as feed to create fatter pigs and cattle. Unless someone is a hunter who eschews deer blinds, stands, and ATVS and walks to stalk game, or are skilled with a blow gun and can track squirrels, rabbits, and birds for hours, or are a devout gardener who eats only what is grown, they rarely have to use many calories to acquire meals. Obesity is indeed an epidemic and, sadly, obese children usually grow into obese adolescents and 80 percent of obese teenagers will expand into obese adults.

According to the National Center for Chronic Disease Prevention and Health Promotion, approximately 60 percent of the American population is obese. In 1999, an estimated 61 percent of U.S. adults were either overweight or obese, defined as having a body mass index (BMI) of 25 or more. Just one year later, in 2000, 8.8 million American adults were obese, defined as having a body mass index score of at least 30. The Behavioral
Risk Factor Surveillance System shows that in 2002, fifty states in the country had at least half their adult populations overweight or obese, up from twelve states in 1992. There are almost twice as many overweight children and almost three times as many overweight adolescents today as there were in 1980. Those who are “severely obese,” with a BMI of 40 or more, is growing twice as fast as the number who are “obese.”

This problem is so pervasive that consumers can now buy items to fit their bulk: larger caskets, chairs, stronger beds, washcloths on “sticks,” and plus-size clothes. One reason for obesity among Natives may be that a supposed “thrifty gene” might allow them to store more fat during times when food is not available. If one eats “traditionally” and stays active, then that gene is unnecessary and the person stays slim. Conversely, by eating more calories than one spends will then lead to becoming overfat. A notable example is found in 1994 Diabetes Care that reveals Pimas in Mexico who ate a more traditional diet were less fat and suffered less from diabetes than Pimas living in Arizona who ate a Westernized diet of fattier foods.

Physical problems associated with obesity are numerous. Children and adults are prime candidates for cardiovascular disease, diabetes, high cholesterol levels, hypertension, orthopedic disorders, pancreatic disorders, respiratory diseases, and various cancers. Obesity also causes a variety of other problems, such as low self-esteem, lack of confidence, and it attracts stereotypes.

**Traditional Diet**

The Western Hemisphere provided the world with at least half the plant foods we know today. This “New World” was home to tomatoes, chile peppers, squashes, potatoes, corn, peanuts, corn, beans of many kinds, pecans, cherries, acorns, black walnuts, hickory nuts, vanilla, avocado, yellow and red bell peppers, manioc, raspberries, strawberries, blueberries, cactus, and cacao (those golden-green pods that when mixed with sugar and other ingredients give us chocolate).

In South America, a variety of foods unfamiliar to most of us supplied Natives with adequate nutrients: grains with twice the protein content of white rice or corn; potatoes with a naturally buttery taste; tubers that were pink, yellow, and red striped; purple, white, and yellow roots with a taste like celery, cabbage, and chestnuts. The conquistadores, in their re-
religious and economic zeal destroyed those crops in favor of more European traditional crops of wheat and barley. Fortunately, we do see a resurgence of some of these foods in the produce aisle: cherimoya, tamarillo, quinoa, and pepino dulce.8

Some scholars argue that the basis of Natives’ diet was “guts and grease.” This is debatable, considering the sheer variety of vegetable matter available to some groups, such as the Choctaws. While some tribes may have depended on animals for the vast majority of their diet (such as Arctic and Plains tribes), not all of them did.9 Still, most tribes people were not vegetarians. Depending on where they lived, Natives consumed alligators, bears, beavers, buffalo, caribou, deer, moose, ducks, elk, fish, geese, insects, opossums, raccoons, squirrels, turtles, seals, shellfish, and whales, to name a few animals. This New World was indeed bountiful, which is why our Thanksgiving dinner is in large part based on foods indigenous to this hemisphere: turkey, cornbread stuffing, beans, squash, tomatoes, corn bread, cranberry sauce, baked beans and maple syrup, mashed potatoes, peanut brittle, pecan, sweet potato, and pumpkin pie.

The addition of these foods to the world’s diets fantastically altered the human population. Although the Indigenous population of the Western Hemisphere plummeted dramatically, the population of the world doubled between 1650 and 1850; then doubled again in the next one hundred years. In the area we know as the United States, from 1492 to 1750, the non-Native population grew to 2 million; by 1900 it had grown to 8 million. In 1492 the population of Europe was approximately 70 to 88 million, but by 1900 it had exploded to 45 million. Much of this can be attributed to food, most notably because of corn that is now grown around the world; peanuts that became popular in Africa and China; sweet potatoes that were grown in Africa, Southeast Asia, and China; and manioc, that tropical shrub root that grows in harsh environments, especially in Africa. Of course vaccinations, better health care, and sanitary conditions also contributed to non-Native population increase. The Indigenous peoples were not so fortunate. In the Western Hemisphere, their numbers decreased from 72 million in 1492 to 4.5 million in 1700. In the area we know as the United States, their numbers dropped from 5 million to 600,000 in 1800 to less than 125,000 in 1900 from disease, warfare, removal and relocation, destruction of lifeways, fertility decline, and other factors.10
A Story

A long time ago there was a small Chahta boy named Achafa Chipota who, despite his stature, ran faster and had better aim with his bow than any other child. One day, Achafa Chipota accompanied his father and group of hunters on a trip to find game. He quickly proved himself to be tough and ready to work hard. He killed several rabbits and squirrels for the hunters to eat. One morning as he was hunting small game, he came across a large hog—a *shukhusi*—and he managed to kill her by shooting her through the eye with his small arrow. He then discovered that shukhusi had a family of small piglets, whom he took with him on the rest of the hunt and then back to his home.

He cared for the piglets as they grew into hogs. Then they reproduced. One time a Miko (district leader) came to his house for a meeting and Achafa Chipota’s parents did not have enough food. Achafa Chipota surprised them by killing one of his hogs to cook along with the acorns. Normally his mother would have served bear meat. The Miko was delighted with what he called the sweet meat. The Miko then renamed Achafa Chipota “Pelichi Shukhusi”—the tamer of pigs—and he was given the task of instructing Choctaw families how to raise hogs.

Another Story

One time shortly after Achafa Chipota became Pelichi Shukhusi, two hunters became lost in the woods. They were cold and hungry with only one little rabbit to cook for dinner. As they watched the rabbit cook, they heard a woman crying. They rushed through the woods to find a young woman dressed in white, sobbing. They led her back to their fire and asked who she was and why she was out in the cold woods alone. She explained that she was the daughter of Hashtali (Sun Father) and Moon Mother, and while she was on an errand for them, she ran out of food and became too weak to continue. They gave her their small rabbit and she took only one bite, then told them they would be rewarded for their kindness. She told them to return the next morning to where they found her and then she vanished. The surprised hunters then ate the remainder of the rabbit and waited through the night to return to where they found her.

Upon returning to the site, the two hunters found in the snow a green plant over six feet tall with a golden tassel at the top. The leaves were long.
and within were long fruits. The hunters took one of the fruits, peeled back the green covering to see what looked like small seeds set in neat rows. They took a bite and realized that the strange food would taste even better cooked. They took the remaining five ears home and planted the kernels in the spring. In the fall, they had a crop of the new food they called *tanchi*. Shortly afterwards, Chahtas families planted *tanchi* every spring, harvested it in the fall, and learned to dry the kernels and to cook *tanchi* in a variety of ways. Chahtas liked *tanchi* so much that *tanchi* and pork replaced their previous favorite dish of bear meat and acorns.

The story about *shukhusi* was created after contact with Europeans because pigs were brought to the Southeast by Hernando de Soto when he landed at the Atlantic Coast of Florida in 1539. But similar to Apache groups, who have stories that say horses were always a part of those cultures, and Navajos, who have similar stories about sheep, Chahtas have stories that imply pigs and hogs were always with them. The story tells of how important the animals and food sources quickly became to the tribes.

Combining Choctaw stories with those of non-Native observers, we find that while in Mississippi, the tribe raised or had access to a cornucopia of food. Chahtas cultivated or foraged for *tanchi* (corn/maize), *isito holba* (squash), *tobi* (beans, although it is unclear as to what type besides pole beans), *shukshi* (watermelon), *nusi* (acorns; acorns are a food used by many tribes in bread and stews, although they must go through a difficult processing so they won’t taste bitter or give the eater abdominal distress), *tobe hollo* (peas), *shachuna* or *hatofalaha* (onions), *ahe* (potatoes and sweet potatoes) and *isht atiaka* (fruits), such as *takkonlushi* (plums), *hashi* (sunflowers), crabapple, *ukof* (persimmons, often mixed with *wak nipi*, beef, or *isi nipi*, deer, meat in a stew), *paki lusa* (black grapes), *italikchi ani* (cherries), *bihi* (mulberries), and *ani* (nuts), such as *uksak* (hickory), *fala* (pecans) and *uksak hahe* (walnuts; Swanton states that walnuts were not used much for food, but considering their flavor, this is a surprising comment). Bernard Romans, a surveyor and mapmaker who traveled through Chahta country in the late 1770s, states they grew *tohe* (cabbage), *hatoofalaha* (leeks), and garlic, but claims that they only grew these crops for trade, along with *okfochush kanhmi* (ducks) and hogs. Considering that Choctaw stories tell us they did indeed use hogs, it stands to reason that the people also ate the crops they cultivated.
Chahtas also ate *isi* (deer), *akaka chaha* (turkeys), and *nita* (bears). Gideon Lincecum (1793–1874), a nineteenth-century physician and “naturalist,” wrote his observations and information gleaned from Chahta informers from 1823 to 1825. He writes in his *Lincecum Manuscript* that Chahtas who lived in Louisiana smoked out hibernating *nita lusa* (black bears) from hollow trees and caves and shot or speared them. They boiled the *nita nia* (bear fat) and *nita nipi* (bear flesh) and then stored it in deer bladders or plugged deer heads. The bear oil could be used for cooking, curing, or rubbing on rheumatic parts of the body. They also fished (he mentions the *nakishtalali*—catfish that were broiled) using bone and later metal hooks and gathered *oka fulush* (mussels). He reports that Chahtas ate *hachunchuba* (alligators), *yannash* (buffalo; far west of the Mississippi River), *chukfi haksobish falaia* (long-eared rabbit, perhaps the jack-rabbit), *shunlulo chito* (big larks), *kofi* (quail), *hachtaki* (this word properly spelled “hachotakni” refers to a loggerhead turtle, but Lnicecum calls them hard-shelled turtles), and *halwa* (soft-shelled turtles).\(^\text{13}\)

Traditionally, Chahtas followed a thirteen-month calendar that reflected how they dealt with the variety of foods they cultivated:

*Hash Hoponi* (Month of cooking), when the gardens had to be harvested and the food stored in some way, either dried or cooked. Many foods were made into “breads” that included acorns, beans, berries, nuts, onions, peas, persimmons, squash, and sweet potatoes. *Banaha*, for example, was and still is made by mixing boiling water and cornmeal and sometimes beans into a firm dough. This dough would be shaped into small rolls, then placed in corn shucks, tied with strips of shuck, then cooked under hot ashes. For a different flavor, hickory or chestnut oil might be added to the cornmeal. This could be stored for months and re-cooked.

Squash, corn, and beans are also known as “The Three Sisters” because these three vegetables often are grown together. For many tribes there is much spiritual significance associated with corn. Hopis, Navajos, Cherokees, Iroquois, and Apaches tribes, for example, have creation stories that focus on corn and numerous tribes knew the convenience and practicality of cultivating the three plants together. Climbing or pole beans wrap upwards around the corn stalks, while the large squash leaves help to keep competitive plants out and shade the ground, and therefore provide moisture and protection for the corn roots.\(^\text{14}\)

A properly maintained garden of Three Sisters can help ward off night-
time visitors such as raccoons, deer, and rabbits because of the densely-
grown vegetation (although I have found that prairie dogs and moles are
apparently undeterred even by fencing that extends two feet under the
ground), and can be a shelter for birds. I have discovered that sparrows,
Stellar, Pinon Jays, and nuthatches especially enjoy the damp shade from
the Flagstaff sun when the soaker hose is turned on.

Corn can be made into a variety of dishes. *Tamfula*, for example, is
made several ways, generally with finely ground and shifted corn (that
had been previously soaked to loosen the hulls), water, and wood ash lye
that is garnered by pouring cold water over clean wood ashes. The water
drips into a trough and is collected. The high alkaline lye from ashes con-
tributes to the nutritional quality of the dish. The mixture is boiled from
a few hours to all day. Variations include adding beans or cracked hickory
nuts. *Tansh pishofa* (also seen as *pashofa*, *tansh lubona*, or *tansh hoshponi*)
is unground corn boiled with pork. *Tán hlabo* can be made from green
corn. The kernels are cut from the ear and boiled with lye and any kind of
meat until the meat falls off the bone. *Walakshi* (also seen as *walusha*) are
dumplings made from cornmeal, grape juice and/or peaches and mixed
with boiling water. The oil from hickory nuts harvested in the summer
was sometimes used to flavor dishes containing corn.

Chahtas used corn in a variety of other ways: roasted on the cob, ground
into flour, crushed into mush to mix with fruits and meats. One way of
preparing tanchi was to dry out the kernels with hickory smoke to keep
out insects. In winter the cracked corn could be cooked with meat. Some
Chahtas carried a bag of either cracked corn with them when they trav-
elled and would eat it, presumably with strong teeth (think of Corn Nuts)
or finely ground corn to mix with water in a hurry. It was observed by a
Frenchman in the late eighteenth century that Chahtas would serve
cracked corn softened with milk and honey as a cold meal. Husks and
stalks were burned for fuel, while dolls, masks, and mats and were made
from the husks. Surplus corn was stored by hanging the husks in storage
pits. Swanton cites a Chahta source, Simpson Tubbee, as saying that “In-
dian flint” or “flour corn” contained both white and blue kernels and was
used for roasting. Some corn was used for popping.

Potatoes were preserved by cutting them into thin slices and drying
them over a hickory fire. The result would have been similar to today’s
potato chip (without the frying, however). Those who preserved pota-
toes in this manner were from the *Ahi apet okla* (potato eating people).
Hash Kaf (Month of sassafras) corresponds to our current December and early January in which the tree sap is now mainly in the roots; Chahtas dug buckeye, sassafras, snake root, and witch hazel that were used for medicines, while dyes were made from indigo native to the western hemisphere, maple, poke roots, puccoon, and walnut.

Hash Chafiskono (Month of little famine) is our January and Hash Chafo Chito (Month of big famine) continues into February. As one might expect, by this time the supplies had dwindled and game animals were difficult to find.

Hash Mali or Mahili (Month of the winds) saw warmer winds from the southeast and patches of green began to show. Poke salet, sheep shank, sour dock, lambs quarters, and wild onions were available for harvesting. Hash Bissi (Month of the blackberry), Hash Bihi (Month of the mulberry), and Hash Takkon (Month of the peach) tell us what fruits were picked during these times.

Hash Watullak or Hash Watonlak (Month of the crane) is named after a white crane that lived in Mississippi; the squab (baby bird) was a favorite food, especially when mixed into a stew with corn and greens. Late July and early August was Hash Luak Mosholi (Month of the fires all out) when corn reached its roasting stage and the tribe danced the Green Corn Dance. The Green Corn Festival lasted several weeks and was a time for thanks. The entire family would go on hunting trips, and so the home fires were literally out. The tribe had become so dependent on tanchi that Chahtas performed the Green Corn Dance every year when tanchi reached the roasting stage. Chahtas continued to perform the Green Corn Dance well after they had been introduced to Christianity, and like many other Natives today, some Chahtas continue to dance every summer.

Hash Tek Ihashi (Month of the woman) was when young women were courted (although they were presumably courted during other times as well). This time was after the Green Corn Dance, the weather was good, and heavy work for preparing for the year was not yet required. Hash Koinchush (Month of the wildcat) and Hash Koichito (Month of the panther) are named after two large felines that were more populous than they are now. At this time, the mother cats were easier to kill because their kittens had started to wander more and the mother was with them. Their meat was dried into jerky and reportedly lasted through the winter.
Like peoples of other tribes, Choctaws were consistently active. Hunting, gardening, performing mundane chores such as washing clothes, building structures, finding firewood, and so forth; using feet as transportation burned thousands of calories. And so did the traditional game of kapucha (stickball) that is sometimes known as ishtaboli (although this can also mean playing field).

Kapucha used to be played with extreme fervor and much ceremony; players and hundreds of spectators gathered at the field the day before. The field was reportedly around four hundred yards long, and at each end of the field stood two poles set in the ground. The forty players on each side used kabocca (sticks) about three feet long with a pocket at one end, the pieces sewn together by sinew. The goal of each side was to hit or catch, then throw the leather ball with their sticks until the ball touched the other team’s poles at the other end of the field. The players stripped to the waist and wore paint on their chests, sometimes with a horse, raccoon, or big cat tail (perhaps a puma) and feathers on their heads, arms, and waists. After the men played, the women took the field and played just as aggressively. Kapucha was colorful and exciting and bets were eagerly made. The game was also fast-paced, violent, and taken very seriously by all players. Broken arms, legs, noses, and dislocated kneecaps were common, and the players wore their scars the rest of their lives. Some players even died from injuries sustained during the game. Still, most of the players were observed to be “of splendid physique, spare and wiry.”

Tribe members continued to play in significant numbers until the turn of the century, but by that time baseball and football had become popular. Chahtas still played kapucha after that, but in decreased numbers and often for the purpose of entertaining spectators. Today, Chahtas in Mississippi and Oklahoma play, usually at annual tribal celebrations but also in tournaments such as the “World Series of Stickball” held each year at the annual Choctaw Indian Fair in Mississippi. Players use hand-carved hickory sticks (in some games players are allowed to use two sticks) that at one end have leather or deer hide thong pockets. The towa (ball) is made from cloth tightly wrapped around a small stone or piece of wood with a leather thong over the cloth. But, like with other sports that are played periodically, such as weekend touch football and seasonal softball, if one only plays stickball on special occasion then the chance for injuries
is high. Running and practicing specific kapucha skills on a regular basis can keep one fit.

With all these unprocessed, nutritious foods and physical activity, one might think that tribes would be in superior physical condition. At one time they were. Anthropologist Richard Steckel argues that Plains tribes (Blackfeet, Cheyenne, Comanche, Sioux) in the late 1800s (after being introduced to horses but prior to being confined to reservations), were at one time the tallest people on earth. Their nomadic lifestyle kept them literally moving from accumulated wastes and parasites; their varied diet that included game animals (buffalo, antelope, deer) and native plants provided all the nutrients they needed. An active lifestyle burned energy (calories) so being overweight was uncommon. Other studies reveal that nomadic tribes in British Columbia, the Florida everglades, and Alaska suffered little or no tooth decay or bone problems.16

**HOW DID WE COME TO THIS UNHEALTHY SITUATION?**

It did not take long after contact for the health of Natives to deteriorate. Many Choctaws became addicted to alcohol that was brought by non-Native traders and British who desired to trade for deer hides. After removal to Indian Territory in the first part of the 1800s, the tribe continued to cultivate corn, beans, squashes, and melons and to raise pigs. With the decline of the deer hide trade, some Chahtas with the means turned to raising cattle. After the Civil War, Chahtas continued to grow corn and potatoes in large quantities, in addition to raising cattle, swine, and sheep.17 Although they continued to eat garden foods, the influx of “American” foods began to take its toll on Natives.

For example, Chahta students had a varied but high-fat diet at the Choctaw Academy in Kentucky in 1828, in which the students consumed bacon, beef, mutton—baked and broiled—soup, corn bread, and wheat bread, “the best of” coffee, pies, apple dumplings, molasses, milk, shooat baked and broiled, beans, cabbage, potatoes, turnips, salads, peas, “hommony [sic] great and small,” butter, and rice.18 At the Spencer Academy (ten miles north of Doaksville) served meat (unspecified), sweet potatoes, molasses, peanuts, and hominy. Strawberries and raspberries grew around the school and were harvested, as was honey. The boys caught squirrels, fish, and other game, presumably deer. One student after the Civil War recalled that meals were repetitious and consisted of “beef, corn
bread, milk, and a cup of coffee. Biscuits were given only on Sunday morning”; another student concurred, stating that he recalled most vividly prunes, rice (whether white or whole grain is unknown), sugar, coffee, vegetables, pork corn, wheat, beef, milk, and butter.19

This kind of boarding school diet was common among the Choctaws and Cherokees at least. Young women at the Cherokee Female Seminary (located first in Park Hill, then rebuilt later in Tahlequah to the north of the Choctaw Nation) consumed an array of food, especially after the Civil War: fruits and vegetables (much of it from their parents’ gardens), grains, meats, eggs, butter, oil, sugar, salt, buttermilk, and desserts. Students also were given spending money so they could buy foods in Tahlequah during field trips: bread, candy, sugar cookies, salted nuts, suckers, chewing gum, and tamales. The girls consumed so many fats and sugar that the administration became concerned about their weight gain. The students also suffered many ailments normally associated with groups of people being confined in a relatively small area. Physicians treated their various problems with mercurial purgation, turpentine emulsion, quinine, Dover’s Powder, and hot whiskey toddies.20

As were other Natives, many Choctaws were well aware of the material goods of white society. What white America ate, the Choctaws ate. By the late 1880s Choctaws (especially those who could not afford to buy groceries) still ate fruit and vegetables they cultivated themselves in addition to hogs and wild game. They also consumed coffee when available and bread made from wheat. Merchants stocked vegetables, but also butter, eggs, nuts, sugar, candy, cakes, molasses, and nuts.21 While Choctaws had the ability to grow their food, other tribes, after being placed on reservations, suffered from malnutrition (because of inadequate food provided by the federal government) and a variety of ailments brought on from crowded living conditions and poor sanitary conditions, not to mention depression and frustration from being unable to live the way they had previously.

Navajos underwent similar changes. The tribe went from cultivating beans, chilis, corn, melons and squash to heartily accepting the introduction of sheep by the early 1800s. Throughout the first half of that century Navajos continued to consume fruits, vegetables, sheep, and game meats, but by the 1860s the tribe was overwhelmed by the intrusive Americans who proceeded to force them onto a reservation where farming was difficult. They no longer could rely on the land for sustenance and depended
on near-inedible government rations, especially meat. Here they began consuming lard, sugar, tea, and coffee. Through the 1930s and 1940s the tribe continued to eat meat and raise their own fruits and vegetables, but by the 1950s their diet changed dramatically as they began to depend on processed goods from trading stores, such as canned milk, lard, peanut butter, sugar, wheat flour, and soda pop, which had once been unknown to them.22

I distinctly recall my grandparents’ garden in Muscogee. My grandmother Eula was an original Choctaw enrollee who, like her Irish husband Thomas, came from a family who liked to grow much of their food. “Big Tom and Nana” cultivated a huge garden with neat rows of corn, potatoes, pole beans, strawberries, squashes, onions, and surrounding the garden was a wooden fence where black raspberries twined their way up the poles and grew until their stems were as big as small trees. Around the house were fruit trees of all kinds. I recall this garden with such fondness that it plays a major role in my novel Roads of My Relations (University of Arizona Press, 2000), in which I use family stories and scenarios to create eleven generations of one family. Food is a huge part of those stories, and each generation tries to recreate that garden planted by the matriarch Billie. Just like other Natives who plant and lovingly care for their gardens, they can still run into great health problems if they also eat fatty, processed, and refined foods—which is exactly what happened in my family. Green beans, squash, and corn are a terrific lunch, but these foods are greatly diminished if cooked in butter and salt and are supplemented with greasy fried chicken.

More recently, anthropologist Sandra Faiman-Silva found that those less acculturated Choctaws in Oklahoma prefer to shop at stores they are familiar with, but the problem is that the prices are higher and the quality of food is poor (frozen foods are found to be outdated and spoiled and selection of items is scarce). In a survey, she found that many of these Choctaws were likely to be poor and bought food on credit with the stores where they had long-standing accounts. In addition to finding inadequate food at many of the stores, Choctaws also fall victim to the credit trap, in which the store owners charge an exorbitant amount for them to use credit instead of cash.23

Our metabolism slows as we grow older, which means that adults on the average gain two pounds per year. Natives are no exception to the reality that we eat more and exercise less than ever before. In order to
make foods taste better, dishes are cooked with cream, fat, lard, grease, salt, and sugar. It is easier to buy a bag of corn chips than it is to prepare banaha or tamfula. Without question, the more choices we have and the easier it is to find something to eat when we’re hungry, the more we tend to eat.

*Parade* magazine recently revealed that of over 2,000 Americans interviewed, nine of ten buy convenience foods (microwavable sides to complete meals); this is 25 percent more than just two years ago. Because our society is faster moving than ever, those who responded said they buy such foods because of the quick time it takes to prepare them, because they are too tired to cook, because they believe the convenience foods taste good, and because they believe the convenience foods are nutritious (the reality is that you do have to pick and choose carefully). Nine out of ten adults eat dessert at least once a week. The favorite snack is chips (almost seventeen pounds of potato chips per person, per year), followed by popcorn, fruits, cookies, and ice cream.24

One way Natives are succumbing to a host of physical problems is because of commodities that are distributed to tribes for those members who live in a certain proximity to their Nations. “Commods” are cheap foods, high in carbohydrates and trans fats. Natives who take advantage of this program can chose among eighty or so different foods, but if they chose the white flour, lard, cheese, sand ugared and salty foods, how is this benefitting them? Unless they are educated and pick fruits, vegetables, and meats that are low in fat (or can be rinsed and drained), sugar, and salt or supplement the government foods with grocery-bought fresh vegetables, they are well on their way to becoming ill.25

Foods that are dense with nutrients, such as “protein” or “energy” bars, may also be dense with calories. Some eaters believe such foods are fine and they have license to consume whatever and however much they want. But it is not just “junk food” sugars that can cause diabetes. Foods with high carbohydrate counts are converted into glucose and that includes fruits and grains. Many calorie-burning, low-body-fat runners have found out the hard way that their diets of spaghetti, fruits, cheeseburgers, energy bars, fast food, and beer has set them up for diabetes.

Natives are particularly susceptible to the adverse effects of fry bread, or more accurately, fried bread, because of the amounts they consume. Fry bread stands can be found across the country at powwows and county fairs. “Indian tacos” or as they are called in the Southwest, “Navajo tacos”
and “Hopi tacos”—fried bread topped with ground spiced meat (usually beef) or beans, cheese, lettuce, and sometimes sour cream, are now on the menus of many restaurants.

Although fry bread has been around for centuries, it is not truly “traditional,” because wheat was brought from the Old World to the New in 1602 and was first grown off the coast of Massachusetts. Wheat is thought to have originated in southwestern Asia, and today, the production of wheat is behind only rice and corn in terms of worldwide production.26

Obviously, it was not until Natives were introduced to the plant and figured out the various ways to prepare the harvested wheat that they started eating white flour cooked in grease. Generally speaking, because there is some variation in recipes, fry bread is made with flour, baking powder, a bit of salt, water, and vegetable shortening or lard. The water and dry ingredients are mixed in a bowl until it forms a sticky dough, then it is taken off and formed into either small pieces, like an egg, larger pieces, like a brick, or maybe even larger pieces, like the size of a plate. Then the pieces are placed in hot shortening or grease until golden brown.

Fry bread can be eaten alone or as part of a meal, or can be dessert topped with butter, cinnamon, and sugar, or perhaps honey. Fry bread is tempting to most people because of the grease/lard/shortening ingredient, and therein lies the problem. Not only is fry bread high in fat, it is also caloric.27 A person who regularly eats fry bread without exercising is probably carrying excess weight. If that person does not consume foods that contribute to his or her daily nutrition requirements, they will be unhealthy, overweight, and will be at risk for diabetes and all the problems associated with being overfat.

**Trans Fats**

Trans fats lurk in thousands of foods, but manufacturers are not required by law to include them on their list of ingredients. In fact, the FDA will not require trans fats to be listed on nutrition information labels until 2006. Most readers have heard that there are different kinds of fats: monounsaturated fat (in olives; olive oil, canola oil, peanut oil; cashews, almonds, peanuts, and most other nuts; avocados), polyunsaturated fat (in corn, soybean, safflower, and cottonseed oils; fish), saturated fat (mainly animal fats such as meat and seafood; whole-milk dairy products such as cheese, milk, and ice cream; poultry skin, and egg yolks; some plant foods:
coconut and coconut oil, palm oil, and palm kernel oil), and the bad one: trans fat. If the words “hydrogenated” or “partially hydrogenated” appear in the ingredients, then the product contains trans fat. This ingredient helps to increase the shelf life of food, but it has disastrous effects on our bodies.

The first two are “good” fats (although that does not mean large amounts can be eaten). Saturated fat can be a “bad” fat, but luckily, when too much of it is eaten, your body converts it to monounsaturated fat (a good fat). Trans fats from partially hydrogenated vegetable oils are a serious problem. Trans fats cause a lowering of HDL (good) cholesterol and an increase in LDL (bad) cholesterol. This problem is so pervasive that a nonprofit organization, Ban Trans Fat, sued Kraft/Nabisco, because not only do Oreos contain trans fat, the company markets its Oreo cookies specifically to young children and failed to list trans fat as an ingredient. The same nonprofit group also sued McDonald’s after the restaurant chain promised to reduce the amount of trans fat in its food, but McDonald’s quietly withdrew that promise and did nothing.28

According to the Harvard School of Public Health, trans fats lurk in most margarines, vegetable shortening, partially hydrogenated vegetable oil, deep-fried chips, many fast foods, and most commercial baked goods.29 This list can include waffles, chicken tenders, fish sticks, cheese and cracker sandwiches, Raman noodles, Chex party mix, pizza, biscuits, tater tots, margarine, non-dairy creamers, popcorn, and apple pie. The list is a long, scary one. Unfortunately, trans fat is not listed as an ingredient on most food labels, so when going out to dinner or to a doughnut place, ask them for the ingredients. Ban Trans Fat even has a T-shirt available for those who feel strongly about being duped by manufacturers that reads: “DON’T PARTIALLY HYDROGENATE ME.”

ALCOHOLISM

Another severe problem Natives face is alcoholism. In fact, alcohol abuse is the most widespread form of drug abuse in the country. A disease, alcoholism has touched most Natives either because they personally drink too much, or they have family or friends who do. Alcohol can cause cancers, can damage internal organs, can cause problems with memory, concentration, judgment and coordination, can lead to bleeding gastritis, impotence in men, and can damage fetuses—a condition referred to as
Fetal Alcohol Syndrome. If alcohol is consumed in cold weather, hypothermia can result from the blood vessels dilating and allowing heat to escape the body. Over consumption of alcohol can lead to liver failure which means it can no longer process nutrients, and the heart can become weak and damaged. Alcohol inhibits the absorption of medication and adds a significant amount to the drinker’s daily caloric intake. And it is not just the alcohol itself that can destroy the body, the effects of alcohol impair judgment that has resulted in thousands of vehicle accidents and homicides.

**Tobacco**

Tobacco, while not a food, is often associated with food. Some people smoke to curb their appetites or they smoke after a meal. Smokers have difficulty breathing and may find walking—and certainly running—difficult. Tobacco is indigenous to the New World, but Indigenous people did not smoke themselves to death. Depending on the tribe, tobacco was (and is) associated with religion and ceremonies. “Indian Tobacco,” that tobacco without any additives (carcinogenic substances, tar, and nicotine found in commercial cigarettes), is the common name for the plant *Lobelia inflata* (although it is also known as Asthma Weed, Gagroot, Pulseweed, Emetic Herb, Frengiotu, Lobelia, Wild Tobacco, and Vomitroot). This botanical medicine is used for medicinal purposes as an antispasmodic herb, a respiratory stimulant for conditions such as bronchial asthma and chronic bronchitis. The dried herb and the seed also can be used as an antiasthmatic, diaphoretic, diuretic, emetic, expectorant and nervine and can be used to treat asthma, bronchitis, whooping cough, and pleurisy. The plant can be used externally in treating pleurisy, rheumatism, boils, and ulcers. Excessive use, however, can cause nausea, vomiting, and respiratory failure.30

The use of commercial tobacco today is a huge threat to Natives. Not only is it addictive, tobacco smoke also contains almost 4,000 chemicals, and for every cigarette smoked, a smoker can expect to lose approximately 5.5 minutes of his or her life expectancy. Smoking cigarettes and cigars is the major cause of lung cancer. It reduces fertility, severely damages the fetus, causes cancers of the pancreas, bladder, mouth, esophagus, and cervix. Even if a person does not smoke, but someone in the household does, he or she is still vulnerable to these problems because of second-hand smoke. Dipping snuff can cause a variety of cancers as well.
Dieting

Many people are acutely aware that numerous health problems arise from a poor diet and lazy lifestyle. Most people who are overweight, or those who suffer physical ailments because of poor lifestyle habits are aware that their diets have largely contributed to their situations. Parade magazine tells us that in 1993, one American out of five was on a diet to lose weight. Ten years later, that has risen to one in three. U.S. News and World Report states that at any time, 29 percent of men and 44 percent of women are dieting. It appears that many of us know there is a problem here. But, diets rarely work because as soon as the diet stops, the weight comes back on and the problems return.

The number of diets on the market at any given time is staggering. The Zone, the Atkins Diet, the South Beach Diet, the Paleo Diet, in addition to the old ones: Grapefruit, Cabbage, Peanut Butter, and Snickers Bars (and on and on) diets all promise the same thing: quick weight loss with minimal effort. In addition, debate among doctors and physicians rages over whether a high-protein, high-fat, low-carbohydrate diet (such as the Atkins Diet and to a lesser extent, the Zone) is even healthy.

Why Return to Our Gardens?

All the ailments discussed here should be enough incentive to convince Natives to consider a traditional diet, or to at least incorporate parts of a traditional lifestyle into their current unhealthy one. The Choctaws’ dilemma is similar to what other tribes face: once our people were strong and physically healthy. Now, we’re facing a health crisis of epidemic proportions. If we have knowledge about how we got into this situation and we want to improve ourselves, then what will we do about it?

Planting and cultivating gardens large enough to feed our families and to keep us active is one option. A return to playing stickball on a regular basis and practicing enough to keep us strong, and our body fat low is another. It can be done; my son and I not only practice tossing and catching in our yard, we always take our sticks to the gym and use the racket ball courts to throw against the wall. While this isn’t exactly the traditional way to play, it does give us the opportunity to work on skills and hand-eye coordination. This, in combination with running and lifting weights, is an effective workout.
The most radical option is to give up all foods prepared in ways that are different from how our ancestors traditionally ate them. Not everyone would be enthused about eating only unrefined and unprocessed foods, but some people do. A notable example is Matt Graham, a long-distance runner who lives outdoors under tarps, makes tools like spears and arrowheads from flint, runs only in sandals he made himself, and only eats foods he finds outdoors, such as raccoons and coyotes (that he makes jerky from). To fuel his body on long runs he depends on sunflower and chia seeds. This strategy of living off the land seems to work; he recently completed a fifty-five-mile race in under seven hours and the three who placed ahead of him were on horseback.32

Historically it is true that Natives did not fry everything and they were constantly active. Nor did they breathe, drink, or eat pollutants. And therein lies a catch: today, much of the meats and fish we consume are contaminated with PCPs and other toxins. In other words, the diets of people in one century may not necessarily be practical for those of us in the current century for the simple reality that today there are many more variables to consider. This is especially true of northern tribes who mainly depended on blubber and meats. For example, some researchers write that many of the animals—and especially parts of the animals like the kidneys, beaver tail, depot fat of the harbor seal, sheep intestine—are high in saturated fat, as much as 65 percent, and Natives consumed this fat on a regular basis. While tribespeople did eat more parts of the deer, elk, buffalo, and so forth, than we might today, they were consistently active and did not eat processed or toxin-laden foods that would have devastated their health, like a modern diet has affected us.

But we can try to eat in a similar fashion. According to the Mayo Clinic, three ounces of venison (deer meat), for example, contains 134 calories, as opposed to 259 calories for the same amount of beef. (This is a composite of all cuts that have been trimmed and cooked.)34

Few of us are willing to give up all sweets, milk products, chips, and pizza. Some argue that we don’t have to abstain from processed foods to stay healthy, but we must eat them only in moderation. Regardless of the arguments over the intricacies of nutrition, many Native activists advocate educating ourselves about our histories in order to take a stand against colonization, and that includes studying the way our people used to eat. One symptom of accepting colonization is adhering to the typical American diet, even while it is killing us. Conversely, one way to decolonize is to
change our eating habits. As Dakota intellectual activist Waziyatawin Angela Wilson writes concerning a recent diabetes conference:

A group of us in attendance committed to the revitalization of our traditional ways discussed the importance of Dakota people returning to our traditional diet ... we all agreed that in order to build healthy bodies, we need to return to a diet based on the plants and animals also Indigenous to our homeland. If we could sustain ourselves on the lean meats of venison, buffalo and fish, wild rice from our traditional lands, corn, beans and squash from our gardens, and the numerous berries, nuts and root vegetables we routinely harvested, diabetes would not be a health concern for future generations. The supposedly "superior" diet and food ways forcefully imposed on us have only served to deteriorate the health of our people.35

All Natives can try to do the same. A "clean" lifestyle that includes a diet free of (or minimal use of) processed foods, no use of commercial cigarettes, moderate drinking, and daily exercise will bring many rewards. And it can come easily if we remain optimistic. Proper living will keep our weight down and our blood pressure normal and energy high. Even twenty minutes of exercise per day, three days a week can reduce the chances of developing diabetes. Studies reveal that a reduction of 5 to 10 percent of the body weight of obese individuals can reduce their chances of developing cancer by 58 percent.

By gaining good health we also gain confidence, pride in ourselves and in our tribe's rich traditions. Even small steps are greatly meaningful. Follow the lead of the Nez Perce in their restoration of camas bulbs.6 Contact members of your tribe and exchange traditional recipes, then consider creating a cookbook. Try to make one traditional meal per week, then begin incorporating two or three per week.

It does take self-control and willpower to eat healthily on a daily basis. But it is up to us to make ourselves physically and mentally strong again so that we may take care of our families and our Nations. We can only do so much to combat racism and prejudice, but we can control what we put in our mouths. We must take responsibility for our health and for the well-being of our children. In so doing, we pass on a legacy of self-respect and tribal strength to future generations.
GUIDELINES AND SUGGESTIONS FOR A HEALTHY DIET

What solves many health problems is a diet heavy in vegetables and lean meats, plus daily exercise. Not everyone has time or the desire to lift weights or to run for two hours per day, but walking and lifting light weights can easily be managed by most everyone. Choose an activity that is likeable and one you can look forward to; if it feels like a chore, then try something else: swimming, basketball, softball (the benefits come from training, mainly), bicycling. Weight lifting builds muscle and muscle burns more energy than fat, even at rest. So the more weight-resistant exercise, the more calories the body will burn at rest.

- Learn to play stickball and invite friends to join in weekly games. Start a walking group with your friends or neighbors. Go to the YMCA, walk around a mall, or look for aerobic classes in your town and take a friend for motivation. Some activists argue that we should only perform “traditional” exercise. But that is not always possible (running and walking, however, are). You must choose something to do that will burn calories and build muscle, however!

- Many new mothers find it difficult to exercise. Try what I did with both my children: I bought a baby jogger (not a cheap stroller that cannot withstand much use; even my joggers with shocks wore out after a year) and went out for six-mile walks until my body was ready to run and we went out every day. You don’t have to go as far, of course—I’ve been a runner for over thirty years. I took along diapers, bottles, and sunscreen (get a jogger with a shade) and a fanny pack to carry my water, Kleenex, money for stopping at garage sales, and extra clothes in cold weather. Both my kids basically grew up in the joggers; along the way they learned about trees, birds, and squirrels, and once we moved into the woods they got to see deer, elk, porcupines, and hawks.

- Trying to complete a degree is stressful. Studying for exams and keeping up with readings and assignment deadlines is difficult enough without the student having to also face racism and prejudice. Indigenous students, along with other marginalized students, often are emotionally charged just by being on campus. Having to travel to keep up with community duties and ceremonies, dealing with family responsibilities, and worrying about finances can be overwhelming. How is it that Native academics can combat this stress? Many
people turn to alcohol or drugs to relax, while others watch movies or try and forget the daily drudge by sleeping. According to the NAU Native American Student Services office that deals with Native drop-outs, many students simply stop going to class or “stop-out,” that is, when the going gets tough they leave school and return when they feel like it.

Those ideas for improving one’s attitude almost immediately include walking to classes instead of driving or taking the bus, foregoing processed, fried, and fatty foods in favor of fruits, vegetables, and lean meats, and stopping bad habits such as smoking and drinking. Not only is one’s physical state improved, but just making the changes is greatly empowering and can inspire one to face the challenges thrown at them in school. One can even take those strategies a few steps farther. Along with proper diet, students can find easy ways to exercise by focusing on other things. For example, buy an animal tracks book or small pocket guides to insects, trees, clouds, and so forth, and make a point to take several outings per week to visit trails and try to identify what you see. Take plenty of water and food, plus clothes depending on the weather, and you can stay outside for hours not only walking and exercising, but learning about the natural world at the same time.

It is not the purpose of this discussion to provide medical advice about “curing” diabetes or obesity. A person with diabetes must consult with a physician. One thing a diabetic will need to be aware of, however, is how to count carbohydrates. One way to educate yourself is to look at “Carb Counting” at http://www.diabetesnet.com/diabetes_food_diet/carb_counting.php, a Web page that gives you a formula for calculating how many grams of carbohydrates you may consume depending on how much insulin you use. Also see the Native American Diabetes Project Diabetes Wellness Connection for information on how to control and prevent diabetes at http://www.laplaza.org/health/dwc/nadp/. Other tips you may want to consider:

• Look at the Native American Food Guide at http://www.aaiip.com/tradmed/tradmedfoodguide.html that gives lists of types of “common” foods that might be eaten every day to satisfy nutritional requirement alongside lists of traditional tribal foods that can be used as substitutes. For example, in the bread group one could use corn
or cattail bread, dried corn, lukameen, and wild rice. Try new ways of preparing foods such as wild rice, venison, salmon, squashes, beans, and corn.

• Dropping hamburgers, fries, and milkshakes and substituting fruit, vegetables, chicken, and game meats in addition to daily exercise can make a tremendous difference in body fat percentage and sugar levels.

• Eating five to six small meals a day are easier on your body than three large meals. You are better able to monitor how full you are if you eat smaller portions.

• Try ground turkey instead of hamburger and “turkey dogs” instead of hot dogs.

• Instead of French fries, try scrubbing new potatoes (the little red ones) and cutting them into chunks with the skins on. Place them in large baggie and add a few tablespoons of olive oil (just enough so the spices will stick), and sprinkle in pepper, oregano, rosemary, and whatever spices you like—except for salt. Place them on a cookie sheet and bake them. My kids would eat them every night.

• Eat yogurt that contains L.acidophilus, bacterium that helps to break down food and to extract more nutrients.

• There are 15,000 species in the legume family. A nineteen-year study shows that men and women who eat legumes four times a week have a 22 percent reduction in the risk for heart attack.37

• When the bran layer is removed from grain, 80 percent of the nutrients are lost. Eat whole grains. They keep you fuller longer. Beware of bran muffins, however, that are very high in fat and calories.

• Wild rice is native to North America. Stop eating white rice (and certainly fried rice at Chinese restaurants) in favor of wild rice. Add vegetables such as peas and carrots to the mixture.

• Use nutrient-rich spinach instead of iceberg lettuce.

• Use vegetable oil instead of lard. Better yet, try Pam cooking spray that comes in several flavors (butter, garlic, olive oil, lemon, “original”) that can coat your pots and pans, will brown your turkey, and so on, but adds almost no calories. If you need to use lard or grease in a recipe, try using no-salt chicken broth instead.

• Learn to use a crock pot (slow cooker). You can put, for example, chicken breasts, carrots, new potatoes, celery, tomatoes, mushrooms, and spices in the pot in the morning and the hearty meal will be
ready for dinner. Crock pots are inexpensive, durable, and the combinations of foods to cook are endless.

• Eat smaller portions and eat slowly. If you eat quickly, try putting each food on a separate plate. This will make you slow down.

• Blot excess grease from bacon, fries, sausage, and bread with paper towels.

• If you have difficulty consuming enough fiber, try Citrucel caplets.

• Do not eat the skin of chicken or turkey. Trim all visible fat from meats and chill canned meat so you can remove the layer of grease that accumulates on the top. Stop eating fried foods; roast, broil, bake, or steam instead.

• Stop using salt and try herbs instead. Drain and rinse canned vegetables to get rid of salt and do the same for fruits to lose the sugar syrup. You do not need salt to cook pasta, rice, or oats.

• We eat almost twice as much protein as we need. Unless you are very active, cut back on red meats.

• If you must eat dessert, share it. Our family may indulge in say, Key Lime pie, but we divide one serving between four people. A dessert that we eat guilt-free is low fat yogurt topped with mandarin oranges and a banana.

• If you need something sweet on oatmeal, try Stevia, a natural sweetener.

• You can lesson the carbohydrate and calorie count of a sandwich or hamburger by removing the top half of the bun or one piece of bread.

• University students must beware of the “freshman fifteen,” that is, the average amount of weight a freshman gains after his or her first year at school. Keg parties, high carbohydrate and fatty foods, such as chips, cookies, breads, fast foods, and sweets are the main culprits. Walking to classes and eating a salad instead of French fries each day can hugely improve a student’s health.

• Severely curb or stop drinking colas. Even diet drinks can be problematic because they erode your teeth and they can make you crave sweet foods.

• Start checking your foods for “high-fructose corn syrup,” an inexpensive ingredient that appears in everything from Cool Whip to Special K cereal. HFCS does not stimulate the creation of insulin and leptin that can tell you when you’ve had enough to eat. You don’t feel full by consuming large quantities of HFCS. It is recommended
that if a food you’re about to purchase at the grocery store has more than 8 grams of sugar, and if HFCS is listed as first or second on the list of ingredients, then buy something else. Remember that sugar also goes by these names: corn syrup, crystalline fructose, dextrose, fructose, fruit-juice concentrates, glucose, high-fructose corn syrup, high-maltose corn syrup, honey lactose, invert sugar, lactose, malt, maltose, molasses, sucrose, syrup.

- If you drink a glass of wine or beer, drink a glass of water while considering if you really need another glass. Avoid hard liquor that has much higher alcohol content. Try non-alcohol wine and “near beers,” those brews with less alcohol.

- A George Foreman grill solves many problems. You can easily and quickly cook meats and watch the excess fat dribble away into the collection bowl. Our family grills slices of squash, zucchini, red bell peppers, and green chilies for a very low-calorie dish of vegetables, combined with grilled shrimp or grilled skinless chicken breasts. I know some athletes at NAU who have a Foreman grill in their dorm rooms and they’ve used it so much the Teflon has worn off. They make grilled turkey and vegetables, sandwiches, and burgers.

- Roasted green chili peppers can serve as a garnish or side dish for any meal. We use Hatch chiles that come from New Mexico and are roasted at the local farmer’s market. I buy them already roasted in twenty-pound bags then I divide them into smaller portions in baggies to freeze. Because they are roasted, after they are thawed the skins come off easily when held under warm water. We put them on pizza, sandwiches, eggs, baked potatoes, in stews, and when freshly roasted, I eat them plain. Beware of eating too many because they’re members of the nightshade family, so you can get headaches. Go slow until you know your tolerance level (and start with the “mild” variety.)

- We eat gallons of salsa. Like the green chiles, salsa goes on almost everything. In a food processor, add 2 cups of fresh-sliced tomatoes, 4 or 5 green chiles, garlic to taste (1 use several cloves), black pepper and sea salt to taste, 1 Tbs. of olive oil, 1 can of drained and rinsed sweet corn (or corn off the cob) and 1 can of drained black beans. Experiment with how smooth or chunky you like your salsa. Add and subtract according to the size of your processor and to what ingredients you like the best.
• Baked potatoes have only around one hundred calories plain and are filling. But when you add butter, sour cream, bacon, and cheese, you can easily add up to five hundred or more calories. Try your spud with no-fat Italian dressing instead, or if you must, a bit of I Can’t Believe It’s Not Butter. Better yet, have a yam (or half a yam) for a sweet taste and lots of vitamin A. Potatoes are primarily carbohydrates which means they are converted into sugar very quickly. Diabetics must beware of eating too much.

• Stop eating soft noodles at Chinese restaurants; they contain mainly fat. Stop eating canned meats and soups and cold cuts unless the label says “low sodium.”

• Eat the entire fruit instead of the juice. Juice may contain nutrients, but is high in calories and sugar. Eating a whole apple instead of drinking apple juice provides you with fiber and a feeling of satisfaction.

• Take a tip from Dolly Parton, who stands five feet tall. “I just eat small portions of what I like,” says Dolly. “You just have to watch it when you’re this short and have an appetite this big.”

NOTES


5. National Center for Chronic Disease Prevention and Health Promotion at http://www.cdc.gov/nccdphp/dnpa/obesity/faq.html; Lyndsey Adams, “Diet, Exercise Can Help Prevent Cancer,” Arizona Daily Sun, 14 December 2000 , A4; U.S. News and World Report, 9 February 2004, 52. An adult is “overweight” when he or she is above a healthy weight, which varies according to a person’s height and physical fitness. A person is overweight when their BMI “body mass index” is between 25–29.9. A person with a BMI of 30 or more is obese. For example, for a five-foot-four-inch woman, this means that she is 30 or more pounds over her healthy
weight. This can be confusing, however, because some people are quite muscular and because muscle weighs more than fat, they weigh more than the height-weight charts that are geared towards the “normal” population. To calculate BMI and read more about the difference between overweight and obesity, see http://www.halls.md/body-mass-index/bmi.htm; http://www.cdc.gov/nccdphp/dnпа/obesity/bmi.htm; and http://www.obesity.org/subs/about.shtml.

6. Barnard and Brown, “Commentary: U.S. Dietary Guidelines Unfit for Native Americans.” Outside magazine recently cited a study by psychologist Paul Rozin, who found that despite the French propensity for fatty foods, only 7.4 percent of the French population is obese compared to 22.3 percent of the American population. He found that regular fries at McDonald’s are 72 percent larger in the United States than in France; a Pizza Hut pizza is 2 percent larger; an average chocolate bar is 41 percent larger; an average Coca-Cola is 52 percent larger; an average hot dog is 52 percent larger; an average serving of ice cream is 24 percent larger. Outside, December 2000, 142. For information about research on Pimas, see http://diabetes.niddk.nih.gov/dm/pubs/pima/pathfind/pathfind.htm.


12. Bernard Romans, A Concise Natural History of East and West Florida (New York, 1775); various issues of BISHINIK and on Choctaw and Chickasaw Web sites.
Choctaws also used a variety of plants for medicinal purposes. See for example, Michael A. Weiner, Earth Medicine, Earth Food: Plant Remedies, Drugs, and Natural Foods of the North American Indians (New York: Collier Books, 1972).


14. According to NativeTech: Native American Technology and Art at http://www.nativetech.org/cornhusk/threesisters.html, here is one way to plant Three Sisters in the garden:

1. In late May or early June, hoe up the ground and heap the earth into piles about a foot high and about 20 across. The centers of your mounds should be about four feet apart and should have flattened tops.
2. First, in the center of each mound, plant five or six corn kernels in a small circle.
   . After a week or two, when the corn has grown to be five inches or so, plant seven or eight pole beans in a circle about six inches away from the corn kernels.
3. A week later, at the edge of the mound about a foot away from the beans, plant seven or eight squash or pumpkin seeds.
4. When the plants begin to grow, you will need to weed out all but a few of the sturdiest of the corn plants from each mound. Also keep the sturdiest of the bean and squash plants and weed out the weaker ones.
5. As the corn and beans grow up, you want to make sure that the beans are supported by cornstalks, wrapping around the corn. The squash will crawl out between the mounds, around the corn and beans.

I have used long green poles to form what looks like a tipi frame (I do not call it a tipi, however) and plant pole beans at the base of the poles. By August my kids have a dense “wall” of green bean vines and leaves to hide behind. I have had great success growing beans, yellow squash, and zucchini using chicken and pigeon waste from our various coops. Corn does not do as well in the Flagstaff weather because of the short growing season and cooler weather.


16. Jeff Grabmeier, “Standing Tall: Plains Indians Enjoyed Height, Health Advantage,” http://researchnews.osu.edu/archive/tallind.htm. Story based on research of Richard Steckel. In a personal communication on 26 January 2004 with Steckel, he confirms that information used for his study was garnered from measurements taken by Franz Boas or his assistants in the late 1800s.


20. See Devon A. Mihesuah, Cultivating the RoseBuds: The Education of Women at the Cherokee Female Seminary, 1851–1909 (Urbana: University of Illinois Press, 199 ), 85–94, for the [many] specific citations of food and health care at the female and male seminaries. I recall that when writing an essay, “Medicine for the Rose Buds,” that became part of the book, I made a comment that the women looked hefty in comparison to Natives of other tribes at the same time period. The professor of that class remarked “Meow. That’s catty. Take that out.” I did, but my comment stemmed from a concern not only over the large amount of fat and carbohydrates they ate in comparison to caloric expenditure, but also because of the long list of physical ailments they suffered as a result of their diet such as constipation, “bowel complaint,” and hemorrhoids, in addition to headaches, “fevers,” diarrhea, chills, tonsillitis, rheumatism, neuralgia, scrofula, jaundice, colic, ulcers, “skin eruptions,” “La Grippe,” “summer complaint” that resulted from the foods not being properly cooled in warm months, lice in the hair, “hysteria,” and homesickness. Further, the curriculums at both the male and female seminaries contained nothing about traditional Cherokee culture, including traditional food cultivation.


27. For example, one-eighth of a fried bread recipe that calls for 1/4 cups flour, 1 cup of non-fat dry milk powder, 1/2 tsp. salt, 5 Tbs. chilled lard (that will be stirred into the mixture until it looks like tiny cubes), 1 cup ice water, 1 Tbs. sea salt, and 1 cup lard for frying, contains 54 calories; 08 of those calories come from fat. Although this recipe yields small amounts of valuable nutrients (protein: 21 percent (10.7 g); Vitamin A: 7 percent; Vitamin C: 2 percent; Calcium: 7 percent; Iron: 26 percent; Thiamin: 46 percent; Niacin: 26 percent; Vitamin B6: 5 percent; Magnesium: 10 percent; and 24 mg of potassium), the problem here is that this one serving of fry bread also supplies 5 percent of one’s daily requirement of fat—67 percent of that being saturated fat, in addition to 5 mg of cholesterol, 1274 mg of sodium, 47 g of carbohydrates and only 1.4 g of fiber. This can change, of course, if one adds concentrated caloric foods such as honey, butter and sugar, and the aforementioned “taco” ingredients. See http://bread.allrecipes.com/AZ/Nutrition/NavajoFryBread.asp.


3. Fallon and Enig, “Guts and Grease.”


9. See also Consumer Reports, January 2004, 12–16.
40. Celebrity Diets, August 2002, at http://www.donaly.com/celebrity_diet_C14.html. The best all-around source on diet and exercise plus “tons of useful stuff” is Men’s Health magazine, although females will want to steer clear of the misogynist articles. It is available at newsstands or on the Web at http://www.menshealth.com, where you can purchase articles online. Another source of information is Outside magazine that often features articles on health and fitness. See www.outsideonline.com. Clarance Bass, a sixty-four-year-old body builder eats an enormous amount of [specific] food per day, yet he maintains an astonishing 5 to 6 percent level of body fat. Go to http://www.cbass.com for a great deal of information about diet and exercise.