Integrating Historic Food Ways into Current Healthcare Practices

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Sioux Tribes in South Dakota
Hmuya Mani – Lakota Medicine Man

“Long ago the people lived with respect for all creation. They never took more than they needed from the land. They knew the two-legged must never cause imbalance. It was through this thinking that we as a people respected all life, including ourselves. We lived gathering roots and berries, we sustained our life through the four-legged: the deer, the antelope and most importantly the Buffalo.”
Food Ways

• Tribes of a common region often shared a similar food way.
• Our Ancestors developed many methods to obtain food from their unique environment.
• These crops you see here were domesticated by them from wild plants. It took a keen knowledge of these plants to work with them to create many varieties.
Original Pre-Columbian Foods
Original Americans were Great Agriculturalists!

Three out of every four plants we eat today were first grown by Native North and South Americans.
Native American Food Crops

- Corn Varieties
- Bean Varieties
- Potato Varieties
- Sunflowers
- Avocado
- Squash
- Chili Peppers
- Blueberries/Cranberries
- Coffee
- Tomato
- Cocoa
- Strawberry/Raspberry
- Pumpkin
- Pineapple
- Peanuts
Slow Foods – Absorption Keeps Pace with Insulin Production

• High in complex carbohydrates and fiber
• Low in simple carbohydrates/ sugars
• Higher in protein
• Moderate to high in fat
• Teas, flavored waters
• Did not use salt or sugar, except maple sugar and honey
Tradition of Superior Health
Change in Diabetes Rate Among the Pima

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Diabetes Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early 1950s</td>
<td>3%</td>
</tr>
<tr>
<td>1960s</td>
<td>19%</td>
</tr>
<tr>
<td>1980s</td>
<td>50% (over age 35)</td>
</tr>
<tr>
<td>1988–1993</td>
<td>69% (over age 45)</td>
</tr>
</tbody>
</table>

Here is an example of one tribe’s experience with diabetes over fifty years. Diabetes appeared among the Tohono O’odham shortly after the Gila River was dammed, limiting their access to water for irrigating their crops.

- These Pimas went to purchased foods and food-program foods.
- The Pima who live in Mexico and live similar to how they always had, do not experience this rate of diabetes.
Historical Trauma

Multigenerational trauma that is passed from one generation to the next in a family, community, or population without being resolved or worked through.
Loss of the Bottom Lands

Mandan/Hidatsa/Arikara Nation – North Dakota

- Loss of 98% of agricultural lands
Loss of the Traditional Land Base

• Fishing, Hunting and Gather places were made off limits
• Agricultural became difficult or impossible
• Traveling was prohibited and trade all but stopped
• The culture and economy changed…
Loss of the Traditional Land Base (cont.)

- Processed foreign foods high in fats and sugar replaced our Heritage foods.
- Our bodies got out of balance and disease developed.
AIANs and Diet-Related Diseases

“It is widely recognized that the replacement of indigenous foods with a diet composed primarily of modern refined foods is the center piece of the diabetes problem.”

Native Americans and Diabetes

Native Americans have more diabetes than any other race or ethnicity.
Food Sovereignty and the Rights of Indigenous Peoples

“Indigenous Peoples’ Right to Food is a collective right based on our special spiritual relationship with Mother Earth, our lands and territories, environment and the natural resources that provide our traditional nutrition”

– The Declaration of Atitlan

• https://www.iitc.org/
Restoration, Recovery, and Rights

• Inter Tribal Buffalo Council
  • http://www.itbcbuffalonation.org/
• White Earth Land Recovery Project
  • http://welrp.org/
• Seed of Native Health
  • A Campaign for Indigenous Health
• Dream of Wild Health
  • https://dreamofwildhealth.org/
• Intertribal Agriculture Council
  • https://nativefoodnetwork.com/
• Oneida Nation of Wisconsin
  • Annual Food Sovereignty Summit

“As we bring our herds back to health, we will also bring our people back to health.”

Fred Du Bray
Cheyenne River
Sioux Tribe
Tribal Food Sovereignty

• The Native Agriculture and Food Systems Initiative (NAFSI) is dedicated to increasing food access and improving the health and nutrition of Native children and families.

• NAFSI grants are intended to help tribes and Native communities build sustainable food systems such as community gardens, food banks, food pantries, and/or other agricultural projects related to Native food-systems control.
What Constitutes Health?

Tribal people must create their own narratives of what constitutes health. This definition is specific to each Indigenous nation.

• Conference on Native American Nutrition Participant
Restoring Nutritional Balance

2005 – California Rural Indian Health Board
Northern Plains Food Way – Traditional Times

- In Traditional Times, our people were healthy because everything they ate was directly from **Unci Maka – Grandmother Earth**. Each food is related to the Four Directions:
  - **The West**: Brings Mni – Water, the source of all life.
  - **The North**: Gives us the buffalo and other four legged to hunt.
  - **The East**: Brings Springtime, growing plants, and the beginning of gathering.
  - **The South**: Brings the warm summer winds and the growing season for our cultivated plants that were used in trade.
Northern Plains Food Way – Current Times

- A balanced plate of food for today’s Lakota includes the four aspects of our ancestral diet.
  - Water
  - Lean Meat/Protein
  - Fruits or Vegetables
  - Starch/Grain
- In a balanced meal, no food group dominates the plate.
Columbia Plateau
Native Nutrition Wheel

Many Native people consider the restoration of traditional subsistence foods and practices as essential in order to regain their health, traditional economy, and culture for generations to come.
Draft Nutrition Model – Spring

- Prepare garden soil
- Wild rhubarb
- Trap for beaver, muskrat
- Typical meal: beans and pilot bread with dried fish
- Late Spring: Move to fish camps, whitefish
Traditional Harvesting

- Cultural Preservation: transfer of food knowledge, cultural identity
- Elders as Wisdom Keepers
- Eating plants in season for optimal nutrients
- Traditional processing and preserving of the harvest for later use
Tree of Life
Food Guide
Cycle of Life
Food Security

• One in four Native households
  • 24% are food insecure
  • 24% received SNAP
• Only one in four people on Tribal lands live within one mile of their grocery store.
• “Diets of poverty”
• Food Insecure Seniors
  • 60% more likely to experience depression
  • 53% more likely to report a heart attack
  • 52% more likely to develop asthma
  • 40% more likely to report an experience of congestive heart failure
Traditional Methods of Cooking

• Boiling
• Roasting
• Baking
• Drying

Frying was not traditional

• Contemporary Foods
  • Indian Tacos
  • Bacon/Sausage
  • Popovers
  • Cake
Traditional Recipes

http://www.diabetes.org/
Food Distribution Program on Indian Reservations – FDPIR

• FDPIR aims to provide low-income households with a healthy variety of foods to supplement their diets and is designed as a more accessible alternative to SNAP.

• FDPIR distributes a monthly food package. Participants can choose a wide variety of nutritious foods—fresh and canned fruits and vegetables, juices, cereals, grains and whole-grain products, pasta, vegetable oil, meats, poultry, fish, and other proteins such as canned and dried beans, peanut butter, and powdered egg mix.

  • There have been many improvements in the types and variety of products offered in the food package.

• Food insecurity is dramatically higher for FDPIR households than all households in the United States. In 2013, the percent of FDPIR households with low food security was more than four times the percent of U.S. households (34% compared to 8%).
FDPIR (cont.)

• Fresh Produce Program: Delivered weekly to ensure availability of fresh fruits and vegetables to participants throughout the month.

• Almost 90% of survey respondents indicated that they were satisfied with the food package – including the variety, freshness, quality, nutritional value, taste, and visual appeal of the food. Across sites visited, there was a commonly held perspective that the quality of food in FDPIR has improved over time.

• Recommendations
  • Participant suggestions for improvements centered on building a more culturally relevant, local, and fresh food package. The diversity across programs is perhaps most apparent in requests for cultural foods. Food items that are viewed as cultural vary considerably across Indian Country.
Follow a Healthy Eating Pattern for All Stages of Life

Healthy eating is one of the most powerful tools we have to prevent or delay disease. It can help keep people healthy and active as they age—giving them more time to spend with their families and do the activities they enjoy.
Reduction in Incidence of Diabetes

- Placebo (n = 1082)
- Metformin (n = 1073, p < 0.001 vs. Placebo)
- Lifestyle (n = 1079, p < 0.001 vs. Metformin, p < 0.001 vs. Placebo)

- Hazard Rate Reduction
  - 31% for Metformin
  - 58% for Lifestyle

**Hazard Rate Reduction**
- 31% for metformin
- 58% for lifestyle

NEJM, 2002
Cancer-Fighting and Health-Promoting Compounds Found Naturally in Plants

• Antioxidants
  • Beta Carotene
  • Lycopene
  • Vitamin C
  • Vitamin E

• Antioxidants found in plant-based foods fight free radicals, which are compounds in the body that attack and destroy cell membranes. The uncontrolled activity of free radicals is believed to cause many cancers.
## Indigenous Beans – Antioxidant Capacity

<table>
<thead>
<tr>
<th>Bean</th>
<th>Antioxidant Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabbit Bean</td>
<td>24,000 (TE/100g)</td>
</tr>
<tr>
<td>Chadron Bean</td>
<td>23,200</td>
</tr>
<tr>
<td>Potowanami Lima</td>
<td>22,475</td>
</tr>
<tr>
<td>Black Turtle</td>
<td>15,300</td>
</tr>
<tr>
<td>Women’s Yellow</td>
<td>10,700</td>
</tr>
<tr>
<td>Market Lima Bean</td>
<td>1,100</td>
</tr>
<tr>
<td>Market Red Bean</td>
<td>6,800</td>
</tr>
</tbody>
</table>

Source: Craig Hassel PhD, Univ. of Minnesota, Dream of Wild Health Network
What Do Antioxidants Do?

• Antioxidants are nutrients in food that protect your cells from damage from free radicals.
• Free radicals are unstable molecules that can damage your cells. Your body creates them when you digest food or breathe in pollution.
• This cell damage may increase your risk of cancer, heart disease, cataracts, diabetes, or infections. Free radicals may also affect brain function.
Healthy Eating Is for Everyone

- They say: “I can’t afford healthy foods.”
- Explain that healthy eating is for everyone—regardless of income or household budget. For example, if fresh vegetables seem too expensive, suggest frozen or canned—just make sure they check the sodium content.
Celebrate Successes

- Celebrate successes. If your patient makes steps toward healthier eating, cheer them on. If you notice any benefits—like a lower weight or improved blood pressure—link these changes to their improved diet.

- Have empathy. Changing behavior is hard—even when it comes to food. The important thing is to encourage your patients and clients to keep trying. Try offering personal examples of how you overcome challenges to make healthy changes.

  - [https://www.choosemyplate.gov/](https://www.choosemyplate.gov/)
How Insulin Works

• Your body breaks down the food you eat into basic elements. One of these elements is an important sugar called glucose.

• Glucose is your body’s main source of energy.

• Your pancreas makes insulin. Insulin helps glucose enter the body’s cells.

• Insulin resistance makes it more difficult for glucose to enter the cells. In response, the pancreas makes even more insulin. But the body’s cells do not respond to the presence of insulin.
Creating Access to Healthy Foods

Make Shifts Throughout the Day

• You have a chance to make a healthier choice whenever you:
  • Open your fridge for a snack
  • Shop in the grocery store
  • Stand at a vending machine
  • Pack a lunch
  • Order from a menu in a restaurant
  • Cook a favorite recipe

• Take advantage of these everyday opportunities to make a shift. Everything you eat and drink matters. Over time, little changes in the foods and drinks you choose can have big health benefits.
Who’s Cooking?

- **Ask: “Who does the grocery shopping in your home? Who cooks?”**
  - Find out what they’re buying and how much they’re cooking. You might be able to make suggestions for new foods to try or goals for cooking at home more often.

- **Ask: “What’s your family’s favorite dinner?”**
  - Meet your patients or clients where they are. Once you have an idea of how they’re eating now, you can make suggestions for shifts and substitutions, ways to adapt their favorite dishes to make them healthier.
Choose and Fix Meals with Less Salt and Sodium

- One teaspoon of salt contains 2,300 milligrams of sodium.
Meals Made at Home Can Be Lower in Sodium

They say: “I don’t have the time to cook healthy meals.”

- Suggest cooking a healthy dinner just once a week—that’s a great first step. Or have them cook meals in batches on the weekend, so they can heat up dinners during the week.

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Shift to Healthier Beverage Choices

- Almost 50% of all added sugars in the American diet are in beverages like soft drinks, fruit drinks, and energy drinks.
- Almost 50% of added sugars in the American diet comes from sodas, fruit drinks, and other sweetened beverages. See if you can steer them toward healthier options, like water.
Thank You

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