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Traditional Native American Foods: Stories from Northern Plains Elders

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DATA NOTES

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ABSTRACT

An understanding of traditional Native American food patterns is needed to develop efforts for decreasing chronic disease that include traditional Native American foods in culturally relevant ways. Via oral history-focused in-depth interviews, I explored traditional food and dietary practices among Native American Elders in the Northern Plains. In addition to staple foods discussed, five primary themes included hunger, sharing, gathering, medicine, and religion. Barriers to use of Native foods primarily concerned knowledge, convenience and availability.

BACKGROUND

Obesity and diabetes are a major concern in the United States (U.S.) (World Health Organization 2008). The acculturation process of immigrants is also associated with the development of obesity and diabetes. Minority populations in the U.S. experience disproportionately higher rates of obesity and diabetes (Ogden et al. 2006). The majority of Native American populations have higher rates of these diseases than non-Native counterparts (Liao et al. 2004). Common U.S. dietary intake patterns (high fat, high sugar, high protein, and low complex carbohydrate) are associated with the development of obesity and diabetes (Fung et al. 2004; Shulz et al. 2006; van Dam et al. 2002).

Despite differences between the circumstances and experiences of immigrants who have acculturated to the U.S. and Native Americans who were forcibly assimilated into the U.S., there may be an opportunity to apply lessons learned from current acculturated immigrant disease outcomes. Acculturation has been associated with increases in diabetes, obesity, coronary heart disease, gastrointestinal problems, hypertension, stroke, depression, and cancer (Bermudez et al. 2000; Dixon et al. 2000; Satia-Abouta et al. 2002; Singh and Siahpush 2002). However, retention of traditional cultural food practices result in immigrants experiencing diseases at more similar rates to the disease rates observed in their home

country (Bermudez et al. 2000; Lin et al. 2003). Nonetheless, the ability to justify promoting a traditional Native American diet as a mechanism for chronic disease prevention is limited due to lack of historical epidemiological evidence linking changes in traditional Native American diets to increases in chronic disease rates.

One complication in the identification of traditional Native American foods is that some foods now considered to be traditional in Native American communities, such as fry-bread, were actually developed after the forced introduction of non-Native American food sources. Ingredients, such as lard, sugar, and flour, were provided to Native Americans who had been relocated from their homelands and restricted to living on reservations. Of course, in any given geographic location there may have also been many different independent tribes each with their own unique traditional foods and dietary practices (although many Native Americans living on reservations were also restricted from engaging in traditional hunting and gathering practices).

Research was developed and implemented by an in-depth interviewing team that consisted of two Native American students (one younger adult and one older adult) and one non-Native American researcher. The two Native American students were trained in qualitative research methodology (in-depth interviewing techniques) by the non-Native American researcher. The students conducted a literature review on traditional Native American foods. The research team developed an in-depth interviewing

TABLE1. In-depth interview questions.

1. What foods do you think of as traditional American Indian foods?
2. When you are talking about traditional foods, when were these foods eaten?
    a. Were they foods you ate when you were young?
    b. Where they foods your parents ate when they were young?
    c. Where they foods your grandparents ate when they were young?
    d. Where they foods your tribe ate for hundreds of years?

3- 7. Participants were asked about specific foods of interest including: Cattails shoots, Stinging Nettles, Prairie Turnips, Wild onions, Lambs quarters, and Curly dock.
    a. When were they harvested?
    b. How often were they eaten?
    c. How were they prepared?
    d. Do you eat them now?

8. What other traditional foods do you still cook today?
9. Why do you think American Indians don't eat as much traditional American Indian foods today?
10. How often do you still cook traditional foods?
11. How have the foods changed from then to now?
12. How were the foods preserved seasonally then and now?
13. What types of traditional foods are used in ceremonies?
    (If respondent is a female ask questions #14, if not skip to question #15)
14. Were there any specific nutritional foods that women ate when they were pregnant or nursing?
15. Is there anything else you can think of that we didn't talk about today that would help us learn more about traditional foods?

guide containing a series of open-ended questions (Table 1.). The questions were developed based on the literature review and the cultural perspectives and experiences of the Native American students. The Institutional Review Board at the University of North Dakota approved this study.

Eight Elders were recruited using snowball sampling techniques. The Native American students began by asking known Elders (by phone and/or in-person) if they would like to participate and/or would recommend another Elder for participation. Recommended Elders were contacted by phone and/or in-person and asked if they were interested in participating in the study. Individuals were considered Elders if the individual was recognized as an Elder by the Native American community and if they identified themselves as an Elder. Elders historically passed down language, values, and culture through oral traditions and storytelling; therefore, asking Elders to share their stories regarding traditional dietary practices is a culturally appropriate research methodology to use when seeking to identify traditional foods and foodways of Native Americans.

The research team conducted interviews at locations chosen by the Elders. A culturally appropriate gift was presented at the beginning of each interview. The research study was explained and written consent obtained prior to the start of the interview. The interviews were electronically recorded with permission and lasted approximately two hours. One Native American student acted as a primary interviewer and asked questions from the guide. Non-verbal behaviors were observed and recorded by the other Native American student who acted as the note taker (recorder). At the end of the interview, the note taker revisited any questions that had been missed and/or any answers that needed clarification. The non-Native American researcher asked for clarification of answers that contained culturally specific details potentially unclear to a non-Native American.

Interviews were initially transcribed by non-Native American research assistants. The narrative was checked for accuracy by one Native American research assistant reading the transcripts and listening to the recorded interviews. Any errors were corrected. The second Native American student rechecked the transcripts for accuracy. In-depth interviews were conducted following the funneling approach, where open-ended questions were followed by more focused and specific questions (DeLaine, 1997). In-depth interviews and field notes were documented using a narrative analysis approach (Riessman, 1993) and McCabe and Peterson's (1991) "working definition of narratives" was applied. Manual open coding was used to analyze interview transcriptions (Yin, 2002).

RESULTS

Traditional Dietary Components:

Elders were asked what foods they considered to be traditional Native American foods. Foods primarily identified as being staples in the traditional Native American diet by the Elders included: prairie turnips, fruits (chokecherries, June berries, plums, blueberries, cranberries, strawberries, buffalo berries, gooseberries), potatoes, squash, dried meats (venison, buffalo, jack rabbit, pheasant, and prairie chicken), corn, teas (spearmint, peppermint, bergamot), and wild rice (see Table 2). All of the identified plants were perennial, primarily grew and were harvested in summer and early fall, and were dried for use over the winter. These foods were reported to have been eaten for generations. Additional information on harvesting, preparation, storage, and frequency of consumption was collected.

Harvesting:

Elders were asked what harvesting techniques were commonly used by Native Americans. Prairie turnips were reportedly gathered in the summer. They were reported to be difficult to harvest because of being buried deep in hard soil. They were located by the flower on the plant and then a tool was required to dig deep into the ground next to the plant before pulling them up. A yam similar in color to a sweet potato (not as sweet in flavor) was also gathered in summer. Cattail shoots were gathered in June or July. Chokecherries and other berries were gathered in the fall.

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Preparation:

Elders were asked how common traditional Native American foods were often prepared. Prairie turnips, carrots, squash, corn and dried meat were reportedly used in soups. Tipsila or washtunkala soup consisted primarily of dried meat, turnips and corn. Herbs, spices and salt were not used in traditional dishes; however, wild onions were used frequently for flavoring in many types of dishes. Ground prairie turnips were used as a thickening agent. Breads were made out of corn, turnips, and later, wheat. Meat, corn, crushed berries, sliced turnips, and sliced squash were all often dried on roof tops. Children attended to the drying foods on roof tops by turning the foods over and defending the foods from animals. Meats were sliced thinly to avoid spoilage. Berries were also made into syrups and jams. Wasna was made from dried meat (traditionally buffalo), crushed dried berries (often chokecherries) and rendered animal fat. Corn balls were made with crushed dried corn, crushed dried berries, and rendered animal fat. Rice was used in many ways as it could be popped like popcorn or it could be cooked and later used like oatmeal. Rice was also added to breads.

Storage:

Elders were asked how many traditional foods were stored. Although prairie turnips were also eaten raw, most were dried. Whole turnips with roots intact would be braided by the root into a circle (necklaces) and hung to dry. The turnips were also sliced into circles and threaded into a "necklace" and hung to dry. Dried foods were used throughout winter. Teas were consumed green (fresh) or they were dried for storage (black teas).

Frequency of consumption:

Elders were asked how often different types of traditional foods were consumed. Soup and tea was reported to be consumed almost daily. Teas mentioned included: a variety of mint (including peppermint), sage, yarrow, bergamot, anise, blueberry bark, bitterroot, licorice root, and chamomile. Teas were often flavored with berries. Wasna was often consumed daily and throughout winter.

THEMES

Five primary themes were identified during thematic open-ended coding including: hunger, sharing, gathering, medicine, and religion. All five of the themes were identified as primary elements of the stories the Elders shared. All major story elements of the Elders' stories were included within a theme. Representational quotes are provided for each identified theme.

Hunger:

Periods of hunger were reported to be common occurrences with dietary intake adjustments during times of food shortage. Hunger was related to income and seasonal factors.

> *I think learning about food, and the foods that we had, was very strong for survival. We did not have a lot; we did not have the monetary gifts to buy everything that we needed. We had to grow things. A lot of times we lived without food. We just relied on tea, wild mint tea, maybe some bread, and that was all we had for supper for 2 or 3 days. Our mom and grandma would always make sure that we had something, even if it was just a slice of bread or little piece of fry bread and some tea. ..Then when we did get some food like meat and other things, then we treasured it and we honored that food because it was something to make us grow. Today, the food is easier to get and this is why a lot of our people are not very healthy.*

Sharing:

Sharing was an important fundamental component of the traditional Native American home. When visitors would come to the home food was always shared even in times of food shortages. Guests were given priority to the food available in the home.

> *Indian women had something cooking all day. It is still a tradition that we carry on today. You go into almost any Native American home and you won't have to be asked if you're hungry or anything. Traditionally, anybody comes into your home, it's just natural to feed them. So there was something cooking all the time.*

Gathering:

Gathering of foods was reported to be an important physical, social and spiritual part of the Native American lifestyle.

> *Indian people believe that there is power in the gathering process and that there are mental benefits, physical benefits—there is a way of taking things that were in a cycle. One of the things that puzzled me as a kid, when I was picking berries was: I would say 'this tree is full, lets pick them all.' My grandparents would say, 'no we don't do it that way.' …We would pick some, we would leave some for others, and we would leave some for so the tree would come back next year. They would say prayers, leave tobacco, and meditate. They were never in a hurry, it seemed. It was always interesting to me how non-Indians, if you will, or people who didn't practice traditional ways, would just come in and clean off the trees.*

Medicine:

Food was used as medicine in traditional Native American homes.

> *Tea was for health. Especially in the winter time, when you had a cold, fever, headaches, upset stomach, we would drink a lot of the mint tea. There were a couple of others that they would use, like sage tea, bergamot tea. We had different Elders then that knew how to use different teas to help with health issues. My grandma taught me other plants to use to fight off infection, to stop bleeding if you had a cut, or whatever you could use to help heal.*

Religion:

The introduction of Christianity impacted dietary patterns. Food was supplied to Native Americans under conditions of religious conversion. The foods that were supplied were not traditional Native American foods.

> *Religion really had a lot to do with foods on the reservation when we became Christianized and baptized. One way to get the people to come to church was to feed them. The nuns and the priests would feed the people. If you would not get baptized, they would not feed you. It was always a threat.*

BARRIERS TO NATIVE FOODS

Barriers to including more traditional Native American foods in the diet today were coded as themes of knowledge and convenience/accessibility. Representational quotes are provided for each identified theme.

Knowledge:

Elders reported diminishing knowledge of how to find, gather, and prepare traditional foods.

> *I think today,* [the reason Native Americans don't eat as much traditional Native American foods is] *probably not knowing how to prepare the foods. As the years go by, I think a little bit was lost because of the commodities. It is probably easier just to read a recipe with the commodities or food that you get and do it that way. I think today some of the younger people have kind of lost the connection on how to prepare these older foods, especially as our elders pass on.*

Convenience /Accessibility:

Reasons Elders reported for decreased consumption of the traditional foods today included the ease and convenience of locating non-traditional foods, increased time and physical effort to grow, gather and harvest traditional foods, limited space for growing and drying foods, and constraints on accessing wild foods (land, rights, etc.).

> *We lived way out in the country and the only water we had was a well. My mom, grandma and sisters would have their garden. They would grow all their food. Now days you just go to the grocery store and buy whatever you need… We had to run to the pump and get buckets and walk over to the garden and water it and go back. That was the boy's job to haul the water buckets over... We learned responsibility -how to get your food and how to take care of your food. We had to go out and hunt food. We had to grow it and then we had to take care of it. Nowadays you just run to a fast food place and go hunting for a burger.*

DISCUSSION OF SAMPLE AND METHODOLOGY

Although this study began the process of identifying traditional Native American foods and gaining

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TABLE 2. Ecological and life history characteristics

Common Name ***(Scientific Name)***	**Ecology, Life History, and Phenology**
prairie turnip *(Pediomelum esculenta*)	A perennial forb that grows up to 6 inches tall throughout the central region of North America from Canada to Mexico mostly in dry plains. Its flowers bloom early to mid summer and ripen into a bean/pod July through late August.
chokecherry *(Prunus virginiana*)[3]	Shrub or sometimes small tree that grows throughout most of U.S. and Canada growing in woodlands along streams and ravines. The flowers of this perennial bloom in spring and ripen into small berry-sized fruits with pits mid-summer through late summer.
wild plum (*Prunus americana*)	Large shrub or small tree that grows throughout most of the U.S. and Canada in woodlands, riparian areas, and occasionally in open prairie. The flowers of this perennial emerge during the spring and ripen into fruits from mid to late summer.
June berry *(Amelanchier alnifolia*)[3]	Shrub to small tree that grows on the central to northern plains west to the coast and throughout Canada in woodlands, forests, prairie, and edge habitats. This perennial blooms in the spring and produces small berry-sized pitless fruits mid through late summer.
blueberries (*Vaccinium* spp.)	Several species of this perennial shrub grow throughout the U.S. and Canada in a diversity of habitats ranging from bogs to woodlands to open meadows. Flowers bloom spring through early summer and mature into pitless fruit mid-summer through fall depending on plant's location.
cranberry bush (*Viburnum opulus*)	Shrub that grows throughout northern U.S. and Canada along streams and in moist to wet well-drained woodlands. This perennial blooms early to mid-summer and produces small berry-sized fruit August up to October.
strawberry (*Fragaria virginiana* & *Fragaria vesca*)	A low, running, perennial forb that grows low to the ground in habitats ranging from moist woodlands to fields and other open areas throughout the U.S. and many other areas of the world. Flowers bloom April to June and produce small berry-sized pitless fruit mid- to late summer depending on location.
buffalo berry *(Shepherdia argentea)*[3]	Shrub to small tree that grows in moist woodlands, meadows, and floodplains from the upper midwestern U.S. and Manitoba west to the coast and the southwestern U.S. and south through the central plains. This perennial's flowers bloom late spring, and its fruits ripen late summer.

of plants traditionally eaten by Native Americans.[1, 2]

Common Name ***(Scientific Name)***	**Ecology, Life History, and Phenology**
gooseberries *(Ribes* spp.*)*	Small, often low and spreading shrubs found throughout North America and elsewhere in woodland openings, meadows, and wetlands. This perennial's flowers bloom late spring through summer and mature into small purple berry-sized pitless fruit mid through late summer depending on location.
spearmint *(Mentha spicata)*	A perennial forb growing throughout most of North America and elsewhere most commonly in moist, open areas. Flowers bloom early summer through fall.
peppermint *(Mentha piperita)*	A perennial forb growing throughout most of North America (though not as broadly as spearmint) and elsewhere most commonly in moist, open areas. Flowers bloom early summer through fall.
bergamot *(Monarda fistulosa)*	A large forb growing throughout most of North America and elsewhere in woodlands, thickets, and prairies. Vegetation arises each spring from the plant's perennial rhizome. Flowers bloom throughout summer.
potato *(Solanum* spp.*)*[4]	Over 200 of these perennial forbs and subshrubs in the Petota section of the genus Solanum have been cultivated for millennia from domesticated populations native to the Americas.[4]
squash *(Cucurbita* spp.*)*[5]	Four or a few more species of this annual vine/forb have been cultivated in the Americas for millennia, being domesticated and then spreading from their probable origins in South America and possibly Mesoamerica.[5]
wild rice *(Zizania aquatica & Zizania palustris)*	Annual grasses found through much of North America and elsewhere in wetlands and riparian areas with shallow standing water. Shoots appear mid to late spring, with seed set mid to late summer depending on location.

Sources:

[1] USDA Natural resources Conservation Service Plants Database (http://plants.usda.gov/java)

[2] USDA Forest Service Fire Effects Information System (http://www.fs.fed.us/database/feis/plants)

[3] Herman, Dale E. and Larry J. Chaput. 2003. Trees and Shurbs of North Dakota. North Dakota State University Extension Service, Fargo ND. Also online (http://www.ag.ndsu.edu/pubs/plantsci/trees/eb38-1.htm)

[4] Simon, Reinhard, Conghua H. Xie, Andrea Clausen, Shelley H. Jansky, Dennis Halterman, Tony Conner, Sandra Knapp, Jennifer Brundage, David Symon, and David Spooner. 2010. Wild and cultivated potato (Solanum sect. Petota) escaped and persistent outside of its natural range. Invasive Plant Science and Management 3:286-293.

[5] Saade, R. Lira and S. Montes Hernandez. 1994. Neglected Crops: 1492 from a Different Perspective. J.E. Hernándo Bermejo and J. León, Eds. Plant Production and Protection Series No. 26. FAO, Rome, Italy. Pages 63-77. (available at http://www.hort.purdue.edu/newcrop/1492/1492.html)

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understanding of traditional dietary practices and associated issues with Native American Elders, there are several limitations important to consider before applying or drawing conclusions from the results of this study. This study involved a very small sample, and the purpose of this paper is to share descriptive results. These Elders were only from tribes in the Northern Plains area, but not representative of all five area tribes. There are cultural and dietary variations between area tribes not represented in these interviews. Although participants were asked to reflect on what they knew (knowledge that had been passed on from their grandparents) of the traditional Native American diet from hundreds of years ago, the findings are most representative of the participant's diet from 1930 to 1955. Elders interviewed in this research were also all living off the reservation. There was insufficient time to obtain tribal permission for research to occur on any reservation.

Information provided by Elders may also be influenced by the presence of a non-Native American researcher. However, it may have been culturally inappropriate and impacted the rest of the interview for Native American students to ask for more detail or clarification. Information may have been biased because there is a negative historical record of Native Americans being misused and harmed during research. Some Elders informally discussed the concerns they had about any research involving Native Americans. Also, information provided may have also been limited because the information was going to be shared with non-Native Americans; some Elders discussed the need to protect valuable cultural wisdom from further destruction. Additionally, the use of a tape recorder is not a traditionally culturally acceptable form of listening to Elders. Informally, some Elders discussed the practice of oral tradition and how the use of tape recorders violated the spirit of that tradition and implied that the youth who were asking the questions did not value the information enough to remember what is spoken. These same Elders also expressed their understanding of the need for a recording device in a research setting. Many Elders shared more personal information after the tape recorder was turned off.

More research is needed to continue the process of identifying traditional Native American foods and gaining understanding of traditional dietary practices and associated issues. Additionally, a retrospective interviewer-assisted food frequency questionnaire of traditional foods could be developed allowing for a more representative and diverse sample to be surveyed.

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REFERENCES CITED

Bermudez, O.I., L.M. Falcon, and K.L. Tucker.
2000 Intake and food sources of macronutrients among older Hispanic adults: Association with ethnicity, acculturation, and length of residence in the United States. *Journal of the American Dietetic Association* 100(6):665-673.

DeLaine, M.
1997 *Ethnography: Theory and applications in health research.* Sydney, Australia: Maclennan & Petty.

Dixon, L.B., J. Sundquist, and M. Winkleby.
2000 Differences in energy, nutrient, and food intakes in a US sample of Mexican-American women and men: Findings from the Third National Health and Nutrition Examination Survey, 1988-1994. *American Journal of Epidemiology* 152(6):548-557.

Fung, T.T., M. Schulze, J.E. Manson, W.C. Willett, and F.B. Hu.
2004 Dietary patterns, meat intake, and the risk of type 2 diabetes in women. *Archives of Internal Medicine* 164(20):2235-40.

Liao, Y., P. Tucker, C.A. Okoro, W.H. Giles, A.H. Mokdad, and V.B. Harris.
2004 REACH 2010 Surveillance for Health Status in Minority Communities—United States, 2001-2002. *MMWR. Surveillance Summaries* 53(6):1-36.

Lin, H., O.I. Bermudez, and K.L. Tucker.
2003 Dietary patterns of Hispanic elders are associated with acculturation and obesity. *The Journal of Nutrition* 133(11):3651-3657.

McCabe, A. and C. Peterson, Eds.
1991 *Developing narrative structure.* Mahwah, NJ: Lawrence Erlbaum.

Ogden, C.L., M.D. Carroll, M.A. McDowell, C.L. Tabak, and K.M. Flegal.
2006 Prevalence of overweight and obesity in the United States, 1999-2004. *Journal of the American Medical Association* 295(13):1549-55.

Riessman, C.
1993 *Narrative analysis. Qualitative research methods series, No. 30*. Newbury Park, CA: Sage.

Satia-Abouta, J., R.E. Patterson, M.L. Neuhouser and J. Elder.
2002 Dietary acculturation: Applications to nutrition research and dietetics. *Journal of the American Dietetic Association* 102(8):1105-1118.

Schulz, L.O., P.H. Bennett, E. Ravussin, J.R. Kidd, K.K. Kidd, J. Esparza, and M.E. Valencia.
2006 Effects of traditional and western environments on prevalence of type 2 diabetes in Pima Indians in Mexico and the *U.S. Diabetes Care* 29(8):1866-71.

Singh, G.K. and M. Siahpush.
2002 Ethnic-immigrant differentials in health behaviors, morbidity, and cause-specific mortality in the United States: An analysis of two national data bases. *Human Biology* 74(1):83-109.

World Health Organization.
2011 Obesity and overweight. Factsheet No. 311. Retrieved January 3, 2008, from http://www.who.int/mediacentre/factsheets/fs311/en/index.html.

Van Dam, R.M., W.C. Willett, E.B. Rimm, M.J. Stampfer, and E.B. Hu.
2002 Dietary fat and meat intake in relation to risk of type 2 diabetes in men. *Diabetes Care* 25(3):417-24.

Yin, R.K.
2002 *Case study research: Design and methods (applied social research methods).* Newbury Park, CA: Sage.

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