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NAWVO NEWS

What is Indigenous Health?

Indigenous health is more than just a physical condition. Indigenous health includes the mental, emotional, spiritual, and physical aspects of human beings.

Spirituality and health are intertwined in Indigenous world views, and therefore ceremonies at sacred sites are vital to the health of Indigenous Peoples.

The Jeffers Petroglyph site in Southwestern Minnesota is one of the world's oldest continuous practice Indigenous ceremonial sacred sites. Some of the oldest glyphs of atlatls, or spear throwers, date back 9,000 years.

Sacred sites are often in remote, rural or wilderness locations. The protection and defense of sacred sites, and by extension Mother Earth is at the center of Indigenous health. Indigenous reverence of the land is not separate from reverence for other living beings. We are all relatives, because we all have the same mother.

Horned Serpent Jeffers petroglyphs
Autumn Equinox 2011
(c) Tyler Crocker





RED MULBERRY
MORUS RUBRA L.
ODATAQAGOMIN

Red mulberry is native to North America. There are two other varieties, white mulberry, *Morus alba* L., which is native to eastern and central China, and black mulberry, *Morus nigra* L. which is native to western Asia. Mulberries have been used by people for over 5,000 years.

Mulberry leaves are the primary food supply for silk worms in China, India and Japan. The mulberry is also used as food (jams, juice, dried and fresh fruit, teas) for humans and for animals including berries, leaves and stems. Stems were also made into tools, used by some Indigenous Peoples to make bows, walking sticks, canes, and basketry frames for coil woven baskets. The fibrous inner bark of young shoots has been used to make fabric, and to make paper by the Southeast Asian Nation of Myanmar's Hill Tribe. Mulberries are the nectar source and larval host for the Mourning Cloak (*Nymphalis antiopa*) butterfly.

Mulberries have superfood status. A Superfood is a nutrient-rich food considered to be especially beneficial for human health and well-being. Mulberry contains large amounts of Vitamins C and K as well as Vitamins A, B1, B2, beta carotene, flavonoids, minerals including magnesium, phosphorus, potassium, calcium and iron, glucose and fructose, free acids (tartaric and malic), fatty acids (linoleic, stearic, and oleic), protein, pectin and fiber.

Mulberries contain antioxidants called anthocyanins. Cultivated varieties of mulberries range in anthocyanin content between 148 and 2,725 milligrams per liter. Anthocyanins, the dark pigments in the berries, have anti-cancer properties. Mulberries contain another antioxidant called resveratrol which has anti-aging properties, is cardio protective, antiviral, and also has anti-cancer properties. Resveratrol also alleviates chronic inflammation and postpones Alzheimer's and Parkinson's disease. The antioxidant content in mulberries is 79% higher than blueberries.

Mulberry juice suppresses appetite and thus is helpful in controlling weight and reducing the incidence of obesity. The leaves of the mulberry help flush out excess sugars that have built up in the blood and are therefore helpful to diabetics. Indigenous Peoples use the sap as a worming agent and to treat ringworm. The leaves were used to treat dysentery, weakness and difficulty urinating.



AMERICAN ELDERBERRY

SAMBUCUS CANADENSIS L.

BIBIGWEMIN

Elderberry is considered a sacred tree and can live up to 100 years. It is used to soak corn seed before planting, and has ceremonial use as clapper sticks in the Round House to accompany singing and dancing. Elder twigs are used for twirling sticks to start a fire, and the pith in the stems is used as fire starter kindling. The stems are used as arrow shafts, flutes, blow guns, medicine tubes, and squirt guns. A very deep black dye for basket making is obtained from twigs and the fruit.

Medicinally, elderberry is used to treat colds, influenza, asthma, upper respiratory infections, fever, migraine, arthritis, and rheumatism. Elderberry has shown an ability to treat diabetes, cancer and a medicine chest worth of other conditions. Roots, bark, twigs, flowers, leaves, and berries are all used for medicine. A tribal healer should be consulted for medicinal use. Seeds, bark, leaves, flowers, and unripened fruit of elderberries contain cyanide and can cause poisoning.

Elderberry is antiviral, antibiotic and antibacterial. The berries are effective in the inhibition of the Herpes Simplex-1 (cold sores) virus and have also been shown to reduce the level of infectivity of the HIV virus in scientific studies.

Elderberries are strong antioxidants and contain flavonoids (anthocyanins and quercetin) in higher concentration than cranberry or raspberry, but are lower than blueberry in these antioxidants. The berries also contain Vitamins A, B, C, folate, iron, potassium, protein and fiber. The problem of cyanide can be resolved by cooking the fruits and flowers before consuming them. Stone Age evidence shows that elderberries have been used globally by humans for a very long time. The berries and flowers are used to make pies, bread, cakes, syrups, jams, jellies, teas, wine and beer.

Folklore tells us that elderberry has mystical properties, brings us good luck, and that planting an elderberry by our homes wards off evil and promotes happy marriages, prosperity and healthy children. Other folklore tales warn against cutting down the trees to prevent incurring the wrath of spirits that live in the branches.

Three hundred attendees at the *State of the Plate Conference* held at the Earle Browne Center on January 5, 2012, sponsored by Blue Cross and Blue Shield of Minnesota, the Institute for Agriculture and Trade Policy, and the Center for Disease Control and Prevention, were encouraged to rebuild our food systems with interconnections of agriculture and health interests.

Keynote

Soft drinks were identified by keynote speaker, Dr. Kelly Brownell, as the greatest source of added sugar and completely empty calories in the American diet. This contributes to an epidemic of obesity in our children. Food marketing that targets children was identified by Dr. Brownell as powerful, relentless and exploitative. Dr. Brownell directed conference participants to take action and work with their State Attorneys' General, to curb junk food marketing to children and advocate for a tax on all sugary soft drinks.

Dr. Brownell's website for further information is:

<http://www.yaleruddcenter.org>

Health Professionals as Policy Change Agents

Education and medical treatment are not enough to cure obesity and diabetes. We have to change food policy and public opinion. Food subsidies for specific crops ensures that those crops are included in all surplus food products distributed to low income and poverty programs like food stamps (SNAP), commodity foods, Women Infants and Children (WIC), and all the junk food products marketed primarily to children. Food subsidies pour wheat, corn, barley, oats, rice, oil seed, sorghum, soybeans, lentils, garbanzo beans, and other pulse crops into government programs because of corporate control over our food choices.

To be healthy, human beings need five to seven servings of fruits and vegetables a day. Only 25% of the US population eats these healthy foods at the recommended level. However, in the words of Mr. Monte Fox, Director of Health for the White Earth Nation, "It is hard to worry about eating healthy when people are just struggling to make it through the day, it's hard to relate to prevention of obesity and diabetes."

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Growing Healthier Futures through the Food System

Panelist Mary Jo Forbord, a farmer, registered dietitian, and program coordinator for University of Minnesota Morris Healthy Eating, gifted the conference participants with an elegant stream of consciousness of how different her community would be if...

- "Healthy food choices were as easy to make as unhealthy food choices,
- Nutrient dense, minimally processed whole foods were as affordable as high calorie, highly processed foods,
- The rate of nutrition-related diseases was dropping instead of escalating,
- A wide variety of colorful, fresh fruits and vegetables was easily accessible during each school day."

Ms. Forbord shared her story of growing up on a farm, marrying a farmer, and in the 1990s, at long last, despite being female, **becoming** a farmer in her own right. She said, "My identity as a farmer is deeper yet intertwined with my 32 year registered dietitian roots. Farming is more than an occupation, and it is more than tilling the soil. Farming is managing a landscape and humbly maintaining student status forever." Ms. Forbord said, "Through the years, I have grown to be a part of my landscape,

and lately it has helped me to grieve and to heal. It also causes me to wonder immensely about this food system we have evolved. Maybe you have wondered too...there is plenty to wonder about."

To start she says:

"What if the average number of food miles from farm to plate was 150 instead of 1500? What if everyone who wanted to garden had access to land and a mentor, and if everyone who wanted to cook had access to healthy food and someone to teach them? What if agriculture, food science and nutrition were taught in our schools?

What if we knew the people who raise our food...personally, and the average age of Minnesota farmers was 38 instead of 58? Would having health insurance help increase gender and ethnic diversity among Minnesota farmers? What if we offered farmers incentives to grow a diverse array of healthy foods?

What if we employed the precautionary principle before approving pesticides and hormones? Or if pesticide users were required to have buffers around their fields rather than requiring organic farmers to have buffers and sell crops grown on the buffers conventionally? What if protecting children from pesticide exposure had begun in the 1950s, and my dad had not dusted the milk cows with DDT, or my mother hadn't dusted our garden with Chlordane? What if a long term study was seven generations?

What if we knew the life cycle effects of arsenic used to speed poultry weight gain, burning the poultry waste to make electricity to light up Chicago, and spreading the residual ash on Minnesota farm fields...green energy? End of the story?

What if we banned antibiotic use to promote growth in food animals, preserving the effectiveness of antibiotics for treatment in animal and human disease?

What if bovine growth hormone had not been added to the U.S. milk supply in the mid-1990s, and the U.S. was not the only developed nation out of 28 to not ban it more than 10 years ago? What if I hadn't injected it into our dairy cattle? What if all genetically engineered foods were labeled so?

What if we knew almost anything about the combinations of pesticides, hormones, antibiotics, pharmaceuticals, in our aquifers, rivers, lakes and streams? What if we took a stand to stop contributing to the hypoxia zone in the Gulf of Mexico and began to reduce the number of impaired waterways in our state?

What if we banned soil erosion, and never saw another thick drift of rich black topsoil on top of road ditch snow? Or if we stopped the loss of native prairie at 99.5%, and never saw another acre of it plowed to plant corn? What if we made certain that the meat we eat is from, as Wendell Berry said, "an animal that has lived a pleasant, uncrowded life outdoors, on bountiful pasture, with good water nearby and trees for shade"?

What if young people gained internships, apprenticeships and jobs growing, processing and distributing food and creating health-promoting food systems in every community in Minnesota? What if we valued the wealth that disease **prevention** brings more than the wealth disease treatment brings? What if we valued the wisdom of our nation's first people who would have taught us, and still could teach us...that food is medicine? What if farm policy worked synergistically with public health policy?

What if we measured the natural resource and energy inputs of farming systems as carefully as we measure yields? If we focused less on "feeding the world our way" and focused more on helping communities worldwide feed themselves, including feeding all Minnesota children a secure and adequate amount of healthy food?

What if we joined a CSA, frequented the farmers market, asked for a farm tour, taught people to farm and garden, cook and preserve, choose healthy foods, and help bring in and share the harvest?

What if remaking our food system for health was a hotter topic than the location of a stadium? What if we, as Minnesotans, worked together with intensity and perseverance in ways we never have before, to create food systems that yield good HEALTH? What if we led the nation and the world going forward, with healthy food as a human right? **WHAT IF?"**

<http://www.morris.umn.edu/healthyeating/>

Ms. Forbord has granted us permission to reprint her speech.

5 TO 7 SERVINGS A DAY



HUMAN BEINGS NEED TO EAT FIVE TO SEVEN SERVINGS OF FRUITS AND VEGETABLES EVERY DAY TO BE HEALTHY. ONLY 25% OF THE AMERICAN POPULATION EATS THE RECOMMENDED NUMBER OF SERVINGS EACH DAY.

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Health Professionals as Policy Change Agents

“Dollars are directly related to calories. Mr. Fox continued, “The foods with more calories for the least amount of money are those that low-income people choose.”

The White Earth Nation is in a food desert and tribal members must travel 50 miles to access a full service grocery store. The distance is not the only barrier, as many do not have their own vehicles, or gas money.

Mr. Fox described an innovative problem solving program implemented by the White Earth Tribal Transportation Department to provide bus service across the Nation to enable grocery and other shopping for tribal members in Detroit Lakes, Minnesota. Other programs initiated by Tribal Health include school gardens, farmers markets, wellness centers and nutritionists available for tribal members.

(NAWO has been in partnership with WE Tribal Health for the last five years, conducting a nutrition

survey and a mercury awareness and Traditional wild foods education project funded in part by the Blue Cross/Blue Shield of Minnesota Foundation).

Fresh fruits and vegetables that are required for healthy living do not receive government crop subsidies. Consequently, a major policy change needs to occur that shifts the support to healthy foods like fresh fruits and vegetables now considered specialty crops. This “systems change” was identified as a major challenge by the Healthy Foods Movement advocates at the Conference. Compared to the policy change victory Blue Cross enjoyed with the Tobacco Industry, winning a war on obesity will be much more difficult. Many industries are involved, not just one, and these corporations have a firm control on the food choices that are supported by US Federal Government subsidy programs. Many professional societies are not willing to criticize corporations who are sources of funding for many.

“Vote with your fork!”

Break out Session A

It’s hard to eat healthy if you don’t know how to cook. The lack of basic homemaker skills in the general population is a major problem identified during break out session *Big Levers for Confronting Childhood Obesity* with Dr. Brownell.

A series of levers identified for policy change by advocates included:

- Tax on sugary beverages,
- Childcare and school meals menu changes,
- Menu and food labeling for calorie content,
- Policy regulation to eliminate unhealthy foods in the SNAP (food stamps) program,
- Zoning policies to prohibit fast food or corner stores without a minimum of 5 fresh fruits and vegetables on sale.

Other breakout sessions addressed getting healthy foods into health institutions, food justice for all Americans, and local initiatives for food policy reform.

REFERENCES

Brij Kishore Singhal I, Mohammad Ashraf Khan, Anil Dhar I, Farooq Mohammad Baqualand Bharat Bushan Bindroo
APPROACHES TO INDUSTRIAL EXPLOITATION OF MULBERRY (Mulberry sp.) FRUITS. Journal of Fruit and Ornamental Plant Research
Vol. 18(1) 2010: 83-99.

Brown, Charlotte Erichsen (1989). *Medicinal and Other Uses of North American Plants. A Historical Survey with Special Reference to Eastern Indian Tribes*. Toronto, Ontario: General Publishing Company.

Moerman, Daniel E. (1998). *Native American Ethnobotany*. Portland, Oregon: Timber Press.

<http://www.amazonconcepts.com/mulberry.htm>

<http://naturalactives.com/category/phytoactives/berries>http://www.wildflower.org/mobile/plants/result.php?id_plant=moru2

http://www.wildflower.org/mobile/plants/result.php?id_plant=moru2

<http://medicinalherbinfo.org/herbs/Mulberry.html>

<http://www.nutrition-and-you.com/mulberries.html>

http://www.life-enhancement.com/article_template.asp?ID=992

<http://www.drugs.com/npp/elderberry.html>

http://plants.usda.gov/plantguide/pdf/cs_san14.pdf

<http://www.kcweb.com/herb/elderberry.htm>

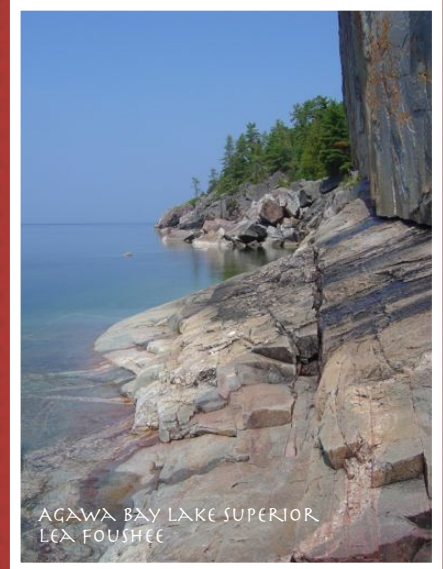
http://findarticles.com/p/articles/mi_m0FKA/is_n4_v58/ai_18178309/

<http://www.dickcontino.com/elder-flower-berry-herb.htm>

<http://www.ncbi.nlm.nih.gov/pubmed/10613759>

<http://www.ncbi.nlm.nih.gov/pubmed/15080016>

<http://www.ncbi.nlm.nih.gov/pubmed/17201636>



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NAWO celebrates 30 years in 2012!

