Indigenous Foods Improve Health

Dr. Gary Ferguson, CEO
Rural Alaska Community Action Program, Inc.
September 18, 2017

Healthy People, Sustainable Communities, Vibrant Cultures
RurAL CAP Vision and Mission

RurAL CAP
Rural Alaska Community Action Program, Inc.

Vision
Healthy People, Sustainable Communities, Vibrant Cultures

Mission
To empower low-income Alaskans through advocacy, education, affordable housing and direct services that respect our unique values and cultures
Concept of Morbidity Line
Domains of Health Influence

Health Behaviors 30%
- Tobacco Use
- Physical Activity
- Healthy Eating
- Safe Sexual Practice

Clinical Care - 20%
- Access to care
- Quality of Care

Social and Economic Conditions - 40%
- Education
- Employment
- Income
- Family & social supports
- Community Safety

Physical Environment - 10%
- Built Environment
- Environmental Quality

http://www.countyhealthrankings.org
MASLOW’S HIERARCHY OF NEEDS (INFORMED BY BLACKFOOT NATION (ALTA))

Western Perspective

Physiological needs
Safety needs
Belongingness and love needs
Esteem needs
Aesthetic needs
Self actualization
Transcendent freedom

Individual rights privileged one life time scope of analysis

First Nations Perspective

Self Actualization
Community Actualization
Cultural perpetuity

Expansive concept of time and multiple dimensions of reality

Huitt, 2004; Blackstock, 2008; Wadsworth,
1933...travelled to remote Alaskan villages

- ...examples of physical excellence and dental perfection such as has seldom been excelled by any race in the past or present.

https://price-pottenger.org/about-us/history
"...strong rugged babies"
Virtually NO dental decay, until...

...villages with trading posts...”store grub” ...

“A typical effect of modernization on a growing girl was shown in a case in which the central incisors and 16 other teeth were attacked by dental caries. Sixty-four per cent of her teeth had tooth decay.”
1st generation of children born after adoption of ‘store grub’

- Dental arch deformities
- Crooked Teeth
- Changed facial form

“We have few problems more urgent or more challenging than reversing these trends.”

Weston A. Price, 1933
Loss of ancestral diet: dental health plummeted, with defects in next generation with switch to processed foods
The Store Outside Their Door
Can Natives Sustain the Subsistence Lifestyle?
A Changing Picture....
136% increase in diabetes in Alaska Native people.⁴
Helping Ourselves to Health: Addressing Factors that Contribute to Obesity Among Alaska Native People

Tim Gilbert, MPH
Desiree Jackson RD, LD
Gary Ferguson BS, ND

This research was supported by the National Research Initiative of the USDA National Institute of Food and Agriculture, grant #2007-55215-17923
Dietary patterns and nutritional adequacy among rural Yup'ik women in western Alaska

- The majority of women (90-100%) fell below the recommendations for dietary fiber, vitamin D, vitamin E and calcium. More than 50% of women fell below the recommendations for vitamin A and more than one-third were below for zinc, and vitamins C and B-6.
- Store-bought foods, such as juices/pop and coffee, were the most frequently reported food items. Sweetened beverages and pop were the main contributors to energy, carbohydrate and sugar intake.
- Traditional foods provided 34% of protein, 27% of iron, 23% of vitamin A, 21% of zinc, 6% of carbohydrate intake and <5% of total energy intake.

Dietary Adequacy among Rural Yup’ik Women in Western Alaska
Sangita Sharma, Erin Mead, Desiree Simeon, Gary Ferguson, and Fariba Kolahdooz
Journal Of The American College Of Nutrition Vol. 34, Iss. 1, 2015
Lower Prevalence of Impaired Glucose Tolerance and Diabetes Associated With Daily Seal Oil or Salmon Consumption among Alaska Natives

1. Amanda I Adler, MD, PHD,
2. Edward J Boyko, MD, MPH,
3. Cynthia D Schraer, MD and
4. Neil J Murphy, MD
Researchers identify cause of gastrointestinal disorder affecting Inuit

ANDRÉ PICARD - PUBLIC HEALTH REPORTER
THE GLOBE AND MAIL.
Last updated Monday, Dec. 01 2014, 6:48 PM EST

Congenital Sucrase-isomaltase Deficiency (CSID)
CPT1A Arctic Variant

Photo Credit: American Renaissance
Obesity is a key link to soaring health tab

Report: Costs double to $147B in a decade

By Nanci Hellmich
USA TODAY
How Big Business Got Brazil Hooked on Junk Food

As growth slows in wealthy countries, Western food companies are aggressively expanding in developing nations, contributing to obesity and health problems.

Fry Bread and Spam

By Dr. Sioux
Vis Medicatrix Naturae
“Let foods be your medicine”

-Hippocrates
Store Outside Your Door

Hunt • Fish • Gather • Grow

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www.youtube.com/anthcstoreoutside

Like us on Facebook!
www.facebook.com/storeoutside
SAVE-the-DATE June 21-24, 2015
Alaska Pacific University, Anchorage, AK

ALASKAN PLANTS AS FOOD & MEDICINE SYMPOSIUM
“Coming Together to Promote Traditional Plant Knowledge and Ethical Harvesting”

Strengthening Our Roots ~ Growing Our Future
www.alaskanplants.org : apfm@anthc.org : 907.729.3639
Alaska Native Tribal Health Consortium, HPDP Program
DENAI'NA PLANTS AS FOOD AND MEDICINE CONFERENCE

September 17 @ 8:00 am - 3:00 pm
<table>
<thead>
<tr>
<th>Resolution</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-1</td>
<td>A resolution supporting protections, including a community fishing association, for Gulf of Alaska fishery dependent coastal communities from the North Pacific Fisheries Management Council as the council develops the Gulf of Alaska trawl groundfish bycatch management program (rationalization program)</td>
</tr>
<tr>
<td>14-2</td>
<td>Call for Alaska Native self-determination in the management of their hunting, fishing, trapping, and gathering rights and resources</td>
</tr>
</tbody>
</table>

### 2014 AFN Convention Resolutions

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-6</td>
<td>To support the swift enactment of regulations governing the procedures for the federal subsistence board to determine rural/tribal community status under Title VIII of the Alaska National Interest Lands Conservation Act</td>
</tr>
<tr>
<td>14-41</td>
<td>Subsistence rights priority over commercial and sports uses for fish and game</td>
</tr>
<tr>
<td>14-42</td>
<td>Protection of Alaska Native traditional resource management practices</td>
</tr>
<tr>
<td>14-43</td>
<td>Re-establish indigenous subsistence rights in Alaska</td>
</tr>
</tbody>
</table>
Decolonizing Healthcare
Traditional Foods Infant Feeding

Patti Kanayurak and her boy Connor (Barrow, Alaska). Photo used with permission.
Prenatal and Postnatal Flavor Learning by Human Infants

Julie A. Mennella, PhD, Coren P. Jagnow, MS, Gary K. Beauchamp, PhD

ABSTRACT

Background. Flavors from the mother's diet during pregnancy are transmitted to amniotic fluid and swallowed by the fetus. Consequently, the types of food eaten by women during pregnancy and, hence, the flavor principles of their culture may be experienced by the infants before their first exposure to solid foods. Some of these same flavors will later be experienced by infants in breast milk, a liquid that, like amniotic fluid, comprises flavors that directly reflect the foods, spices, and beverages eaten by the mother. The present study tested the hypothesis that experience with a flavor in amniotic fluid or breast milk modifies the infants' acceptance and enjoyment of similarly flavored foods at weaning.
Traditional Food Guide

FOR ALASKA NATIVE CANCER SURVIVORS

Alaska Native Tribal Health Consortium
Cancer Program
FIREWEED NUTRITION INFORMATION

Fireweed is an excellent source of Vitamins A & C, and a good source of fiber.

1 Cup

HEART FRIENDLY
- Fat free
- Very low in sodium

NUTRITION INFORMATION
Per serving - 1 cup: raw
Calories 24
Protein 2 g
Carbohydrate 3 g
Fat 0
Calories from fat 0 %
Saturated fat NT*
Dietary Fiber 3 g
Cholesterol NT*
Sodium 28 mg
Vitamin A 3146 IU
Vitamin C 55 mg
Iron 1 mg

*Not Tested
PLANTS
THAT WE EAT

Nauriat Niɡiñaqtuat

From the traditional wisdom of the Inupiat Elders of Northwest Alaska

Anore Jones
Country food is good for you and your family.

IRON

how many hotdogs?
Comparison of berries

The diagram compares the ORAC scores of various berries. The following berries are listed in order of decreasing ORAC score:

1. Lingonberry
2. Highbush Cranberry
3. Blue huckleberry
4. Pomegranate (Lower 48)
5. Crowberry
6. Dwarf Blueberry
7. Red Bearberry
8. Bog Blueberry
9. Alaska Blueberry
10. Wild blueberry (Lower 48)
11. Northern Black Currant
12. Nagoonberry
13. Kinnikinnick
14. Red Raspberry
15. Bog cranberry
16. Cloudberry
17. Cult. blueberry (Lower 48)
18. Red currant
19. Watermelon berry

The ORAC scores range from 19 to 203 uMTE/g.
Traditional Foods Program and Map

The stories here highlight the CDC NDWP Traditional Foods Program grantee partner programs. These communities represent diverse cultures and geographies across Indian Country.

Traditional Foods Partners:

CDC Native Diabetes Wellness Program
Qaqamiigux
“to hunt or fish for food and collect plants; subsistence”

Traditional Foods and Recipes from the Aleutian and Pribilof Islands
nourishing our mind, body and spirit for generations

Suanne Unger
ALEUTIAN PRIBILOF ISLANDS ASSOCIATION, INC.

http://www.apiai.org/product/traditional-foods-recipes/
The Head Start Traditional Foods Preschool Curriculum, prepared by the Aleutian Pribilof Islands Association, is being used starting this month in communities in the Unangax region from Sand Point to St. Paul. (Loren Holmes / Alaska Dispatch News)
Igiugig residents take on 6-week traditional food challenge as a health experiment

Every month in 2017 they have taken their weight, blood pressure, blood sugar and heart rate. They will compare the results from before and after the challenge.
Yes, Your Diet Can Raise (or Lower) Your Risk of Colon Cancer

By Sara G. Miller, Staff Writer  |  April 5, 2017 03:25pm ET

Health without the hype: Subscribe now to stay in the know.
Fat, Fiber and Cancer Risk in African Americans and Rural Africans

Stephen J.D. O'Keefe¹, Jia V. Li⁵, Leo Lahti⁶, Junhai Ou¹, Franck Carbonero⁷, Khaled Mohammed¹, Joram M Posma⁵, James Kinross⁵, Elaine Wahl¹, Elizabeth Ruder⁴, Kishore Vipperla¹, Vasudevan Naidoo⁸, Lungile Mtshali⁸, Sebastian Tims⁶, Philippe G.B. Puylaert⁶, James DeLany³, Alyssa Krasinskas², Ann C. Benefiel⁷, Hatem O. Kaseb¹, Keith Newton⁸, Jeremy K. Nicholson⁵, Willem M. de Vos⁶, H. Rex Gaskins⁷, and Erwin G. Zoetendal⁶

¹Department of Medicine, Divisions of Gastroenterology, University of Pittsburgh, PA, USA
²Pathology, University of Pittsburgh, PA, USA
³Endocrinology, University of Pittsburgh, PA, USA
⁴Sports Medicine and Nutrition, School of Health and Rehabilitation Sciences, University of Pittsburgh, PA, USA
⁵Department of Surgery and Cancer, Imperial College London, UK
⁶Laboratory of Microbiology, Wageningen University, The Netherlands
⁷(LL and WMdV also affiliated with Department of Veterinary Bioscience, University of Helsinki, Finland; WMdV also with the Department of Bacteriology and Immunology, University of Helsinki, Finland); University of Illinois at Urbana-Champaign, USA
⁸University of KwaZulu-Natal, Durban, South Africa
What's so healthy about a Mediterranean diet?
Extra-virgin olive oil preserves memory, protects brain against Alzheimer's

Date: June 21, 2017
Source: Temple University Health System
Summary: The Mediterranean diet is associated with a variety of health benefits, including a lower incidence of dementia. Now, researchers have identified a specific ingredient that protects against cognitive decline: extra-virgin olive oil. In a new study, the researchers show that consumption of extra-virgin olive oil protects memory and learning ability and reduces the formation of amyloid-beta plaques and neurofibrillary tangles in the brain -- classic markers of Alzheimer's disease.
1991: Waianae Diet promotes Native Hawaiian culture, well-being

The Waianae Diet is based on the traditional Hawaiian diet, which is high in complex carbohydrates and fiber and low in fat. A study published in the *American Journal of Clinical Nutrition* in 1991 involves 19 Native Hawaiians, who had an average weight loss of 17 pounds after three weeks on the diet. Other benefits noted in the study include decreases in cholesterol and blood sugar after using Native Hawaiian foods and ancient Hawaiian cooking methods. Participants are taught by Native Hawaiian healers about practices that promote well-being.

The principle foods in the diet are taro, poi, sweet potatoes, yams, breadfruit, greens, seaweed, fruit, and small amounts of fish cooked using ancient cooking methods. Cooking includes steaming, though most foods are served raw. A major motivation for people who use this diet is the revival of Native Hawaiian culture.
Food for thought: A traditional Okinawan diet may help prolong life

BY STEPHEN MANSFIELD

SPECIAL TO THE JAPAN TIMES
There are too many people counting calories and not enough people counting chemicals.
Food preservatives linked to obesity and gut disease

Mouse study suggests that emulsifiers alter gut bacteria, leading to the inflammatory bowel condition colitis.

Sara Reardon

25 February 2015
The doctor of the future will give no medicine but will interest his patients in the care of the human frame, in diet and in the cause and prevention of disease.

~Thomas Edison
Culture is Medicine
“We are free to be who we are – to create our own life out of our past, and out of the present. We are our ancestors. When we heal ourselves, we also heal our ancestors – our grandmothers, our grandfathers, and our children. When we heal ourselves, we heal Mother Earth.”

~Dr. Rita Pitka Blumenstein
Addressing Nutrition Insecurity, Reinforcing Food Sovereignty

Dr. Gary Ferguson, CEO
Rural Alaska Community Action Program, Inc.
gferguson@ruralcap.com

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