

HUMAN HEALTH *LESSONS FROM INDIGENOUS PEOPLES*



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Seminars International

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Pre-Contact N. American Cultures

- ▶ Many hundred Pre-Columbian nations & peoples of North America, numbering over 1 million enjoyed varied cultures & ways of life adapted to their natural environments. Thus they maintained unique:

- ▶ Languages;
- ▶ Socio-Political Systems;
- ▶ Clothing Styles;
- ▶ Shelters;
- ▶ Foods;
- ▶ Art Forms;
- ▶ Musical Styles;
- ▶ Educational Methods;
- ▶ Spiritual Beliefs; &
- ▶ Healing Practices.



Health in the Pre-Contact Period

- ▶ Canada's first peoples traditionally lived in intimacy with nature & maintaining a system of life & healing based upon its laws. This way of life ensured balanced physical, mental & social well being.
- ▶ First Nation societies were without need for rehabilitation centers, mental hospitals or prisons. The first European contacts universally acclaimed the health, & vigour of the peoples they met.



Health in the Pre-Contact Period



- ▶ Canada's first peoples who practiced agriculture relied heavily on maize, tomatoes, beans, squashes, pumpkins, & melons of the fields, & peach orchards.
- ▶ The wild grass, seeds, nuts, fruits, roots, & products of the traps or chase supplemented their diet, or served as primary food sources for the more strictly hunter-gatherer peoples.

Health in the Pre-Contact Period



- ▶ Among Canada's first peoples there was an apparent practical knowledge of the body's needs for various vitamins & mineral elements, & how to obtain them.
- ▶ This included the employment of plant medicines, & foods rich in Vitamin C (for scurvy), Vitamin A (to prevent eye diseases), Vitamin D (for rickets), along with other nutrient supplements for increased fertility, improved gestation, & easy childbirth.

Health in the Pre-Contact Period



- ▶ Canada's first peoples recollect when: *"...there was then no sickness; they had no aching bones; they then had no high fever; ... no smallpox; ... no burning chest; ...no abdominal pain; ...no consumption; ...no headache."*
- ▶ In the 15th early 16th centuries as early explorers plied the Atlantic coast of Canada, no historical record refers to any disease or epidemics among the Indigenous inhabitants.

National Commission Inquiry on Indian Health's Historical Findings

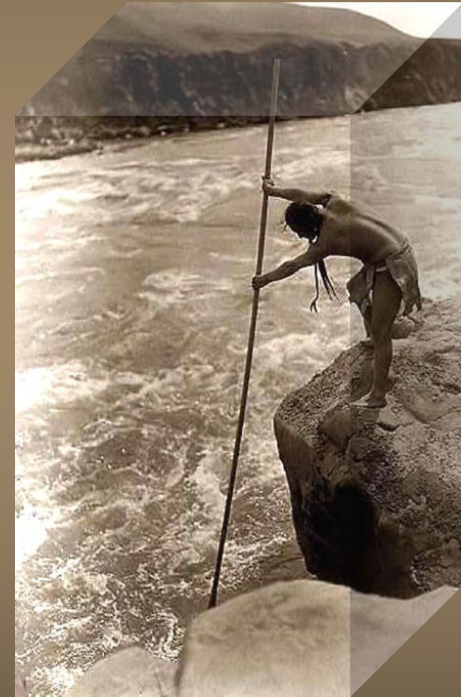


- ▶ Most infectious diseases were absent prior to European contact, including scarlet fever, typhoid, diphtheria, smallpox, measles, mumps, influenza, & venereal diseases.
- ▶ Infectious disease such as minor respiratory ills & intestinal parasites did not cause significant morbidity, or threaten their host's survival.

National Commission Inquiry on Indian Health's Historical Findings



- ▷ The chronic degenerative diseases, were infrequent
- ▷ Mental & neurological diseases, heart disease & arteriosclerosis were rare
- ▷ Some arthritis did occur amongst the elderly
- ▷ Cancer was very rare, if present at all
- ▷ Some eye disorders occurred, but myopia, was virtually absent



Early Historical Observations



“As my testimonies have told me, it is verie rare to see a sicke body amongst them, & they have further assured me, they never saw any man there either shaking with the palsie, toothlesse, with eies dropping, or crooked & stooping through age.”

Michel Eyquem de Montaigne
Late 16th century

Early Historical Observations



“In bodily proportions, colour, gesture, dignity of bearing, the race is incomparable. It was free from our infectious scourges, tuberculosis, & syphilis, & the resulting physical deformities & mental degeneracies. It was probably free from leprosy, scrofula, & cancer, & it is safe to say that nervous prostration was unknown to the Indian.”

**Edgar Lee Hewett - Researcher
on Pre-Columbian North America**

Early Historical Observations



“Loskiel examined a man whose face had been torn away, his rib cage crushed, limbs ripped & the abdomen disemboweled by a bear, yet had been able to crawl four miles to his village & in six months had completely recovered, except for extensive scarring. Such records could be continued almost indefinitely as all observers were so impressed by this ability to survive terrific wounds that hundreds have been reported.”

**Eric Stone – Author of:
American Indian Medicine**

Early Historical Observations



- ▶ In ancient Greece, Pheidippides famous 140 mile run (Athens to Sparta) took 46 hours. The historian Seton observed a young Cree who on foot had just brought in dispatches from Fort Qu' Appelle 125 miles distant in only 25 hours. *"I heard little from the traders but cool remarks like... 'pretty good run'. It was obviously a very usual exploit among Indians."*
- ▶ The well known Sioux chief *Running Antelope* was given this name by his people because in his youth he pursued & ran down an antelope in a *"straight-away race lasting 5 hours."*

Archeological & Paleopathological Evidence



Dental pathology is considered a trustworthy marker of “*disease loads & nutritional stress.*”

Archeological & paleopathological investigations show that Among North American Indigenous peoples in the pre-contact period, on average, dental caries affected ***less than 1 percent*** of all teeth.

Archeological & Paleopathological Evidence

“The skeletal remains of... pre-Columbian date are, barring few exceptions, remarkably free from disease. Whole important scourges were wholly unknown... There was no plague, cholera, typhus, smallpox or measles. Cancer was rare, & even fractures were infrequent. There was no lepra [leprosy]... there is as yet not a single instance of... pre-Columbian syphilis. There were, apparently no nevi [skin tumors]...”

Ales Hrdlicka - Paleopathologist



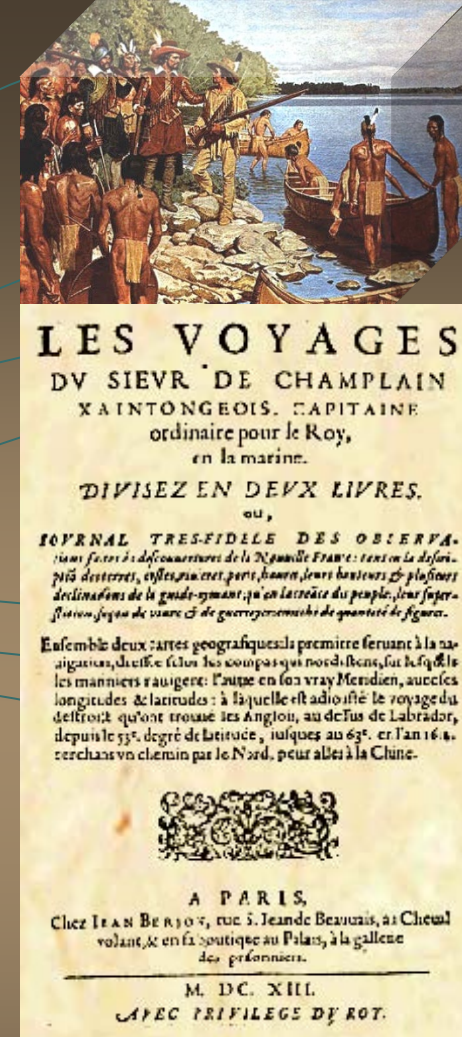
Fruitless Search for Cancer



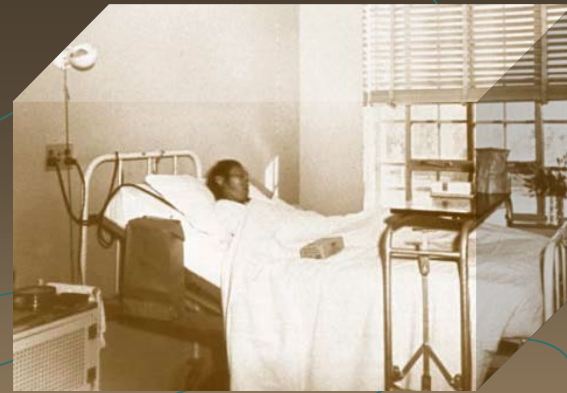
- ▶ Over the course of seventy five years extending from the mid 1800s to the first quarter of the 20th Century medical missionaries, ship surgeons, anthropologists, & others were challenged to undertake a search to ascertain whether cancer existed among North America's First peoples.
- ▶ Various reports on the Alaskan Inuit, northern Athapaskans of Canada & the Indian & Inuit peoples of Labrador revealed that not a single case of cancer was observed among the tens of thousands of people studied by competent medical examiners.

Health in the Post-Contact Era

- ▶ The first historically recorded outbreaks of infectious disease occurred among the Montagnais, Algonquins, & Hurons of the St. Lawrence & Ottawa Valleys between 1734 & 1741.
- ▶ Champlain's first settlement at Quebec on the St Lawrence River in the year 1608 preceded these infectious outbreaks by well over 100 years.



Health in the Post-Contact Era



It wasn't until the 1800s & into the 20th Century, that the unprecedented conditions of "*smallpox, measles, influenza, dysentery, diphtheria, typhus, yellow fever, whooping cough, tuberculosis, syphilis*" & various unidentifiable "*fevers*" became widespread among Canada's first peoples.

Health in the Post-Contact Era



- ▶ Trade centres often became the nucleus for disease outbreaks & central points of diffusion of epidemics along trading routes to the hinterland. This is because they represented points of convergence between Indigenous people & Europeans.
- ▶ Diseases struck specific populations over decades of commercial growth, gradually culminating in demographic catastrophe for Canada's First peoples.

Health in the Post-Contact Era



- ▶ Wide scale trading with settlers led to a rapid erosion of traditional “*whole food*” nutrition patterns & unhealthful dependency on alien disease-building foods, e.g. white sugar, white flour, white polished rice, sweetened jams, tinned milk, tinned meat, other processed goods, lard, & alcohol.
- ▶ Such radical changes precipitated a downward vicious cycle of physical degeneration, stress, immune system impairment & widespread infectious disease epidemics.

The Fear Factor in Epidemics

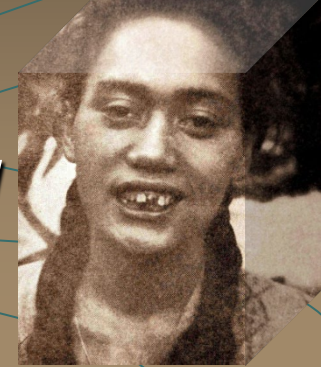
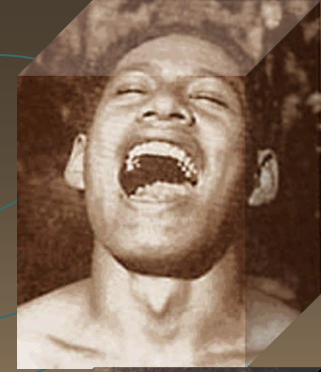
- During early infectious disease epidemics among Indigenous peoples mortality was worsened by sheer panic.
- Modern science has found an intimate connection between the neuroendocrine & immune systems, showing the powerful influence of mental emotions on the onset, course, & remission of disease.
- Some medical historians believe that more people have died of the fear of dreaded diseases like smallpox, than of the disease itself.



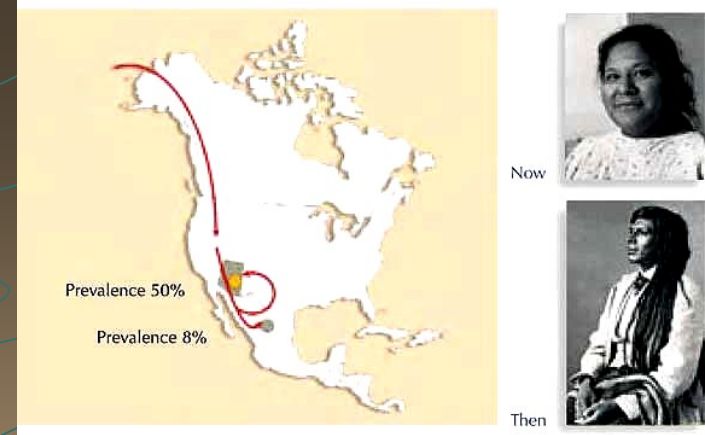
National Commission Inquiry on Indian Health's *Historical Findings*

“Once refined foods became a significant proportion of the diet, disease & deformity greatly increased in incidence [including] ...infections & [in time] degenerative disease, difficult labours, & birth defects.”

There is abundant historical & anthropological documentation that “the same pattern of [post-colonial] disease & physical degeneration shown by the Indian people has been exhibited by the Inuit to the north, & by indigenous peoples throughout the world.”



The Pima Experience



- ▶ In recent decades the Pima Indians of the U.S. southwest have lived on highly processed & high fat foods, while following a relatively sedentary lifestyle .
- ▶ By contrast, most of their Pima cousins living in rural northern Mexico still follow a “*traditional*” Pima lifestyle, enjoying a diet low in animal fats, high in whole foods (complex carbohydrates), & engage in abundant daily physical activity.
- ▶ The U.S. based Pimas, have possibly the world’s highest rates of obesity & diabetes, while over 90% of Pimas in Mexico are free of these diseases.

National Commission Inquiry on Indian Health's *Historical Findings*



The overall health of Indigenous peoples in Canada deteriorated due to:

- decline in accessibility to traditional foods & clothing sources from the land;
- the collapse of traditional economies;
- confinement to small plots of land with scarce resources & livelihood opportunities;
- limitations in natural sanitation; &
- long-standing norms, values, social systems & spiritual practices undermined or outlawed.

Traditional Health Systems & Taxonomies

- ▶ Traditional Indigenous health systems had well thought-out frameworks for classifying plants, animals, landscapes & climatic conditions relative to their effects on health & disease.
- ▶ Across varied first nations these taxonomies shared much in common with one another, & they represented culturally relevant empirical frameworks for assessing the uses of plants as healing foods & medicines.



Foods Considered to be Healing Agents

Traditional cultures generally viewed foods & medicines as interchangeable. Diet was highly regarded as a primary basis for sustaining & when required restoring health & well-being.

Thus, foods were carefully chosen for their distinctive medicinal or healing values.



Science's Meager Knowledge of Plants as Food & Medicine



Although all plant species contain complex & dynamic biological compounds, only a fraction of 1% of plants have been adequately investigated by western science. M. Balick, of the N.Y. Institute of Economic Botany noted that only 1,100 of the earth's 265,000 species of plants had been thoroughly studied by western scientists, but as many as 40,000 plants likely hold medicinal or nutritional value for humans.

Therapeutic Knowledge & Purpose

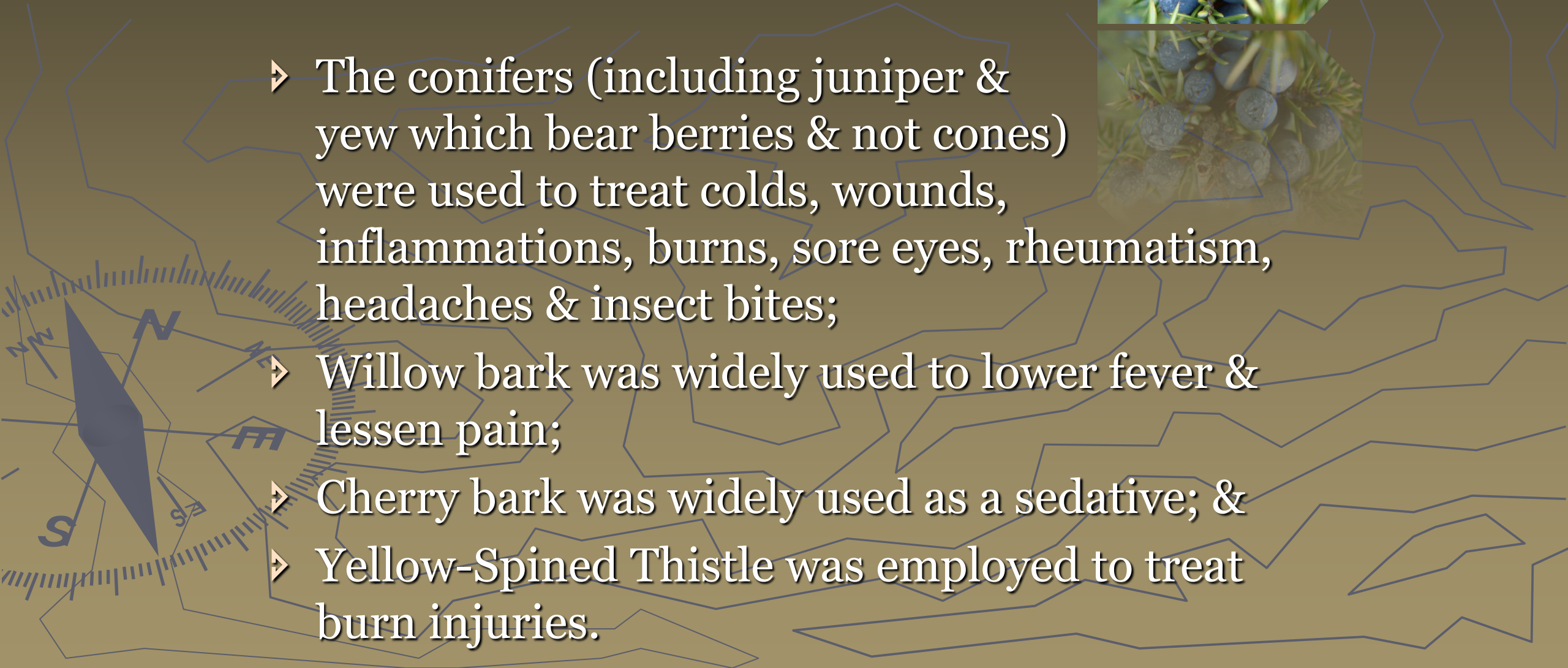


- ▶ When using plant medicines therapeutic decisions were based on a knowledge of the distinctive properties & synergistic action of whole plants & an understanding of the requisites of human physiology (a non-toxic, nutrient oriented approach).
- ▶ The goal was to attain individual biochemical balance as a means of restoring wellness, & it was normatively achieved.

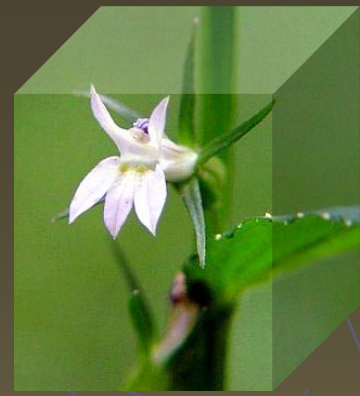
Sampling of Indigenous Medicines



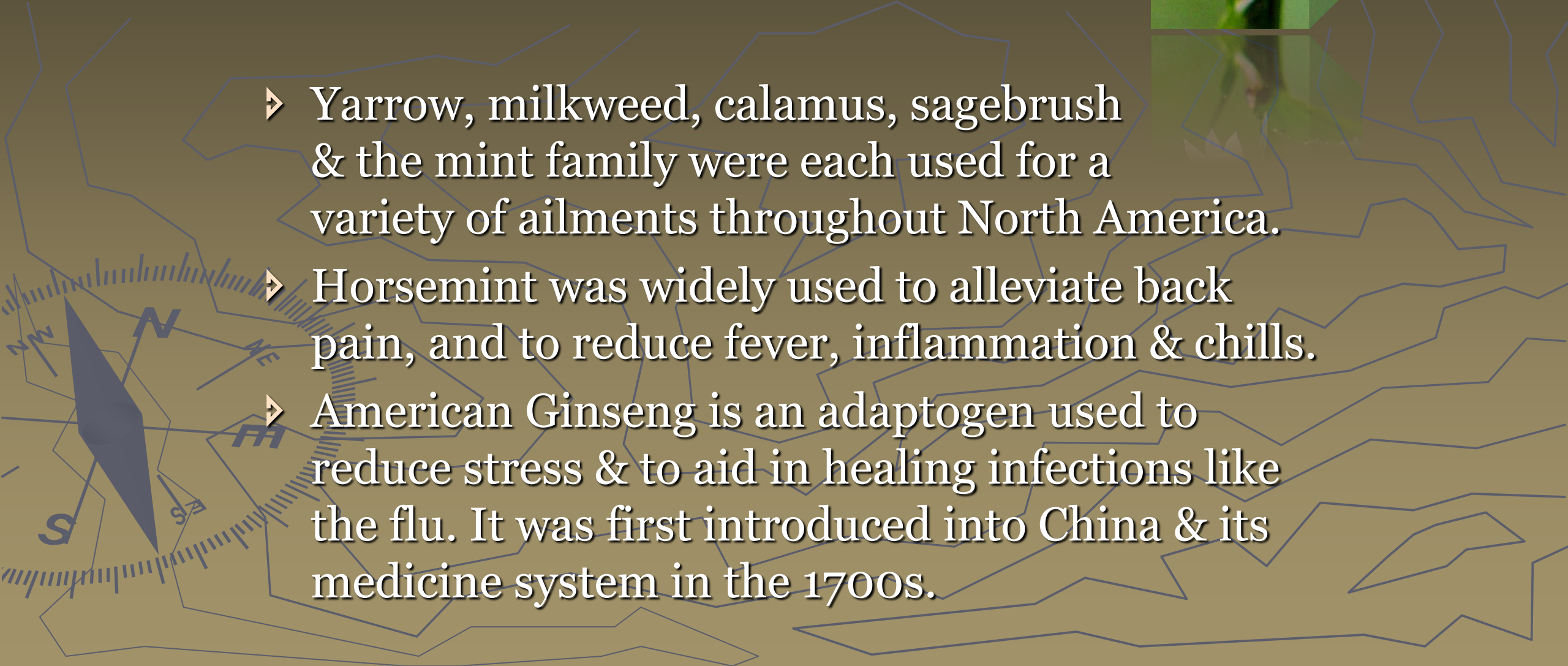
- The conifers (including juniper & yew which bear berries & not cones) were used to treat colds, wounds, inflammations, burns, sore eyes, rheumatism, headaches & insect bites;
- Willow bark was widely used to lower fever & lessen pain;
- Cherry bark was widely used as a sedative; &
- Yellow-Spined Thistle was employed to treat burn injuries.



Sampling of Indigenous Medicines



- Yarrow, milkweed, calamus, sagebrush & the mint family were each used for a variety of ailments throughout North America.
- Horsemint was widely used to alleviate back pain, and to reduce fever, inflammation & chills.
- American Ginseng is an adaptogen used to reduce stress & to aid in healing infections like the flu. It was first introduced into China & its medicine system in the 1700s.



Echinacea Miracle Agent for Aging & Cancer

Five years of In vivo research on mice (humans & mice are 97% genetically common with virtually all basic physiology being identical) has shown that daily consumption of whole Echinacea is highly prophylactic against infectious diseases & cancer; & is a powerful NK cell stimulant, greatly extending the life span of aging mice. It also *“significantly abates leukemia & extends the life span of leukemic mice”*..

“The therapeutic value of Echinacea.... indicates that herbal therapy may soon see its debut alongside, or indeed in place of conventional [cancer] therapy, especially since virtually all chemo-‘therapy’ is so toxic to all other renewing systems in the body.”



S.C. Miller; Echinacea: a Miracle Herb against Aging & Cancer? Evidence In vivo in Mice; Dept. of Anatomy & Cell Biology, McGill Univ., Montreal, Canada; eCAM; 2 (3); pp. 309–314; 2005.

Complementary Preventive & Therapeutic Methods

Besides plant medicines, therapies & practices were employed such as:

- ***Special Diets*** prescribed during gestation & nursing periods for easing childbirth, reversing infections, enhancing vision, increasing endurance, etc;
- ***Sweat Baths*** to eliminate toxins;
- ***Fasting*** to revitalize the vital force & normalize physiological properties & functions;
- ***Massage*** to increase blood flow & speed the healing of weak or damaged tissues;



- 
- ***Clay & Charcoal Poultices*** to neutralize wound infections & thus hasten the healing process;
 - ***Hydrotherapy*** to enhance &/or help to restore blood & lymph circulation;
 - ***Heliotherapy*** to restore bio-chemical balance & strengthen the body-mind complex;
 - ***Deep Breathing*** exercises to strengthen the lungs & remove metabolic waste; &
 - ***Abundant Water*** intake to increase endurance & when necessary ameliorate fever.



Other Specialized Healing Knowledge & Skills

- There is archaeological & historical evidence which indicates adeptness in the surgical care of wounds & fractures.
- Traditional healers also ably employed measures for handling both hemorrhages & asphyxia, & some practiced mouth-to-mouth resuscitation.



N. American Indian
Bone Surgery

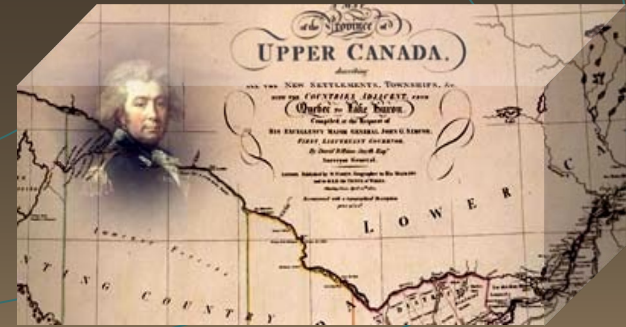
Transition to Allopathic Medicine



- ▶ Beginning in early post-contact period, traditional Indigenous medicine practices were progressively suppressed & significantly weakened by Euro-Canadian society influences.
- ▶ Indigenous groups in close contact with Euro-Canadian settlements increasingly accepted medical assistance from the now dominant society.



Officially Sanctioned Oppression



- Historically this transition to dependency on a foreign culture, including its goods & “healing” system was heavily influenced by a spirit of intolerance & arrogance on the part of increasingly dominant colonial communities.
- In time policies were adopted & laws were established to systematically destroy traditional knowledge & culture systems.

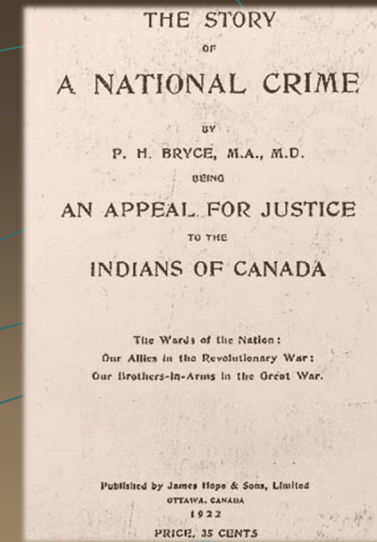
Dr. Bryce's Evaluation Findings



- Dr. Peter Bryce, was appointed in 1904 to serve as the first General Medical Superintendent in the federal *Department of Interior & Indian Affairs*. He launched a thorough examination of the status of Indian health.
- His tour of residential schools in the prairies found them to be breeding grounds for tuberculosis. He reported that in the recent 15 year period, 24% of all the pupils in the schools had died. In one school, 75% of students were dead by the end of 16 years of operation.

Dr. Bryce's Evaluation Findings

- ▶ His evaluation study on Indian health conditions demonstrated that the Canadian Indian population from 1904 to 1917 should have increased by 20,000, but instead showed a decline of 1,639 persons.
- ▶ The 1922 a publication The Story of a National Crime... documented how Indigenous peoples were experiencing “a death rate more than double that of the general population & in some provinces more than three times.”

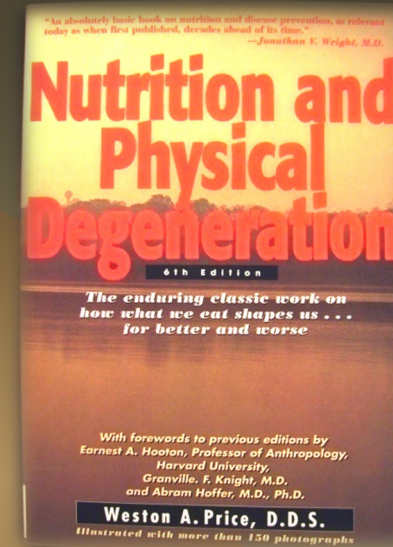


Dr. Weston Price's Global Research Findings

(Began 76 Yrs ago - Spanning Nine Years &
Covering Over 150,000 Miles)

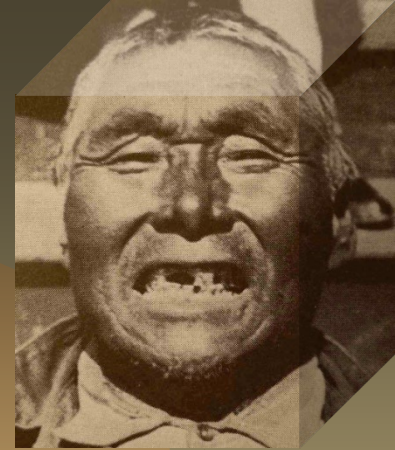
Whether Indigenous North or
South American, Australian Aboriginal,
East African native, or Pacific islander
wherever traditional lifestyles & dietary
patterns were followed was observed:

- superb physical development;
- undecayed teeth;
- absence of physical disease; &
- markedly less mental & social disease.



Dr. Price's Research

Key Observations

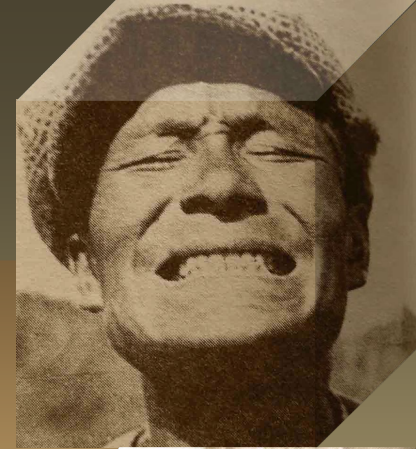


- With one or more generations living on highly processed foods (refined flour, sugars, tinned milk, etc.) a variety of infectious & degenerative diseases became prevalent, including pandemic dental decay & pyorrhea.
- Also noted was a marked increase in women experiencing complications during both pregnancy, & childbirth.

Dr. Price's Research

Key Observations

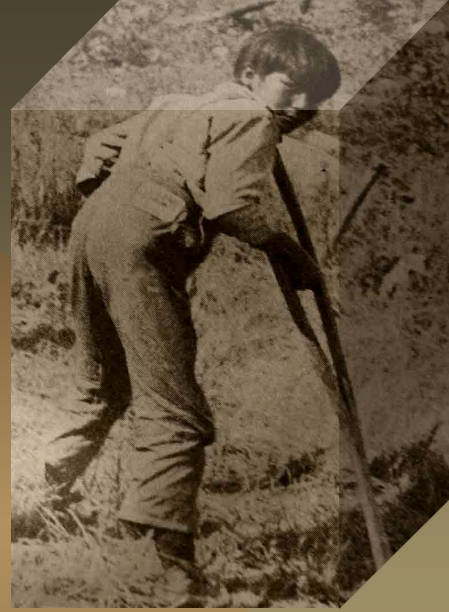
- In the Yukon's Pelly Mountain region out of 2,464 teeth of 87 native people, he found only 4 teeth with dental decay, i.e. a mere 0.16 percent. Also absent were degenerative & infectious diseases.
- However, in the Stikine River region of the Yukon where there was full access to processed foods, he found decay rates of 40 percent.



Dr. Price's Research

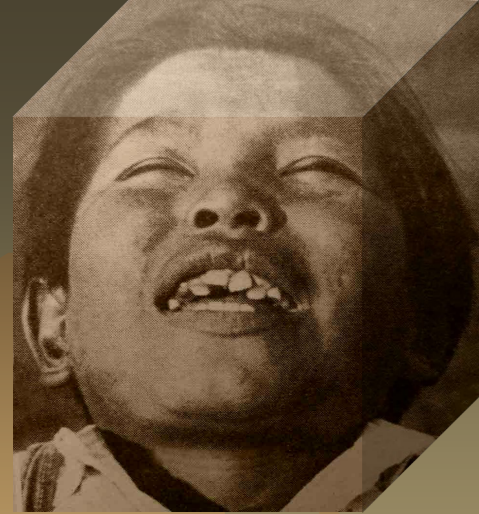
Key Observations

- In his words “At the point of contact with the foods of modern civilization” in the Yukon serious degeneration was noted, for in visiting about “twenty Indian homes” there were “ten bed-ridden cripples”.
- At the same location he also observed that tuberculosis was taking “*a very severe toll of the children who had been born at this center.*”



Dr. Price's Research

Key Observations



- As a dental surgeon he noted major increases in congenital anomalies, & facial deformities (narrowed arches crowding the teeth, & a narrowing of both the chin & nostrils).
- It was additionally found that this disturbed heredity & quality of life is to a great degree reversible by a simple return to traditional whole food diets.

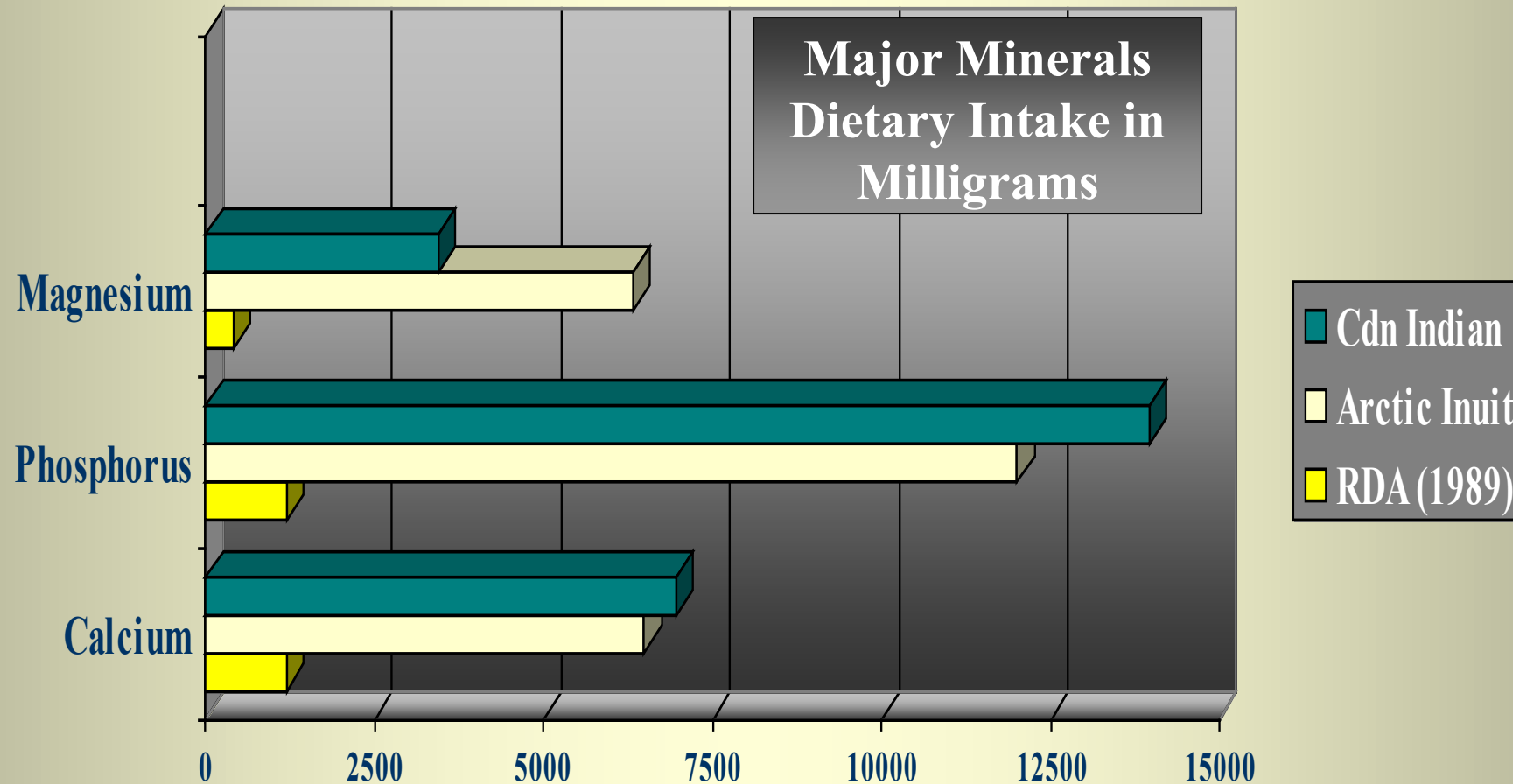
Dental & Facial Deformities



- An estimated 75 % of North Americans have distinct irregularities in the development of the dental arches & facial form, yet a 1930 study where 1,276 Inca skulls were systematically examined failed to find a single instance of dental arch deformity.
- It was concluded that this was the result of a system of living, using whole food nutrition in the early formative period, which is very closely in accord with nature's fundamental laws of reproduction.

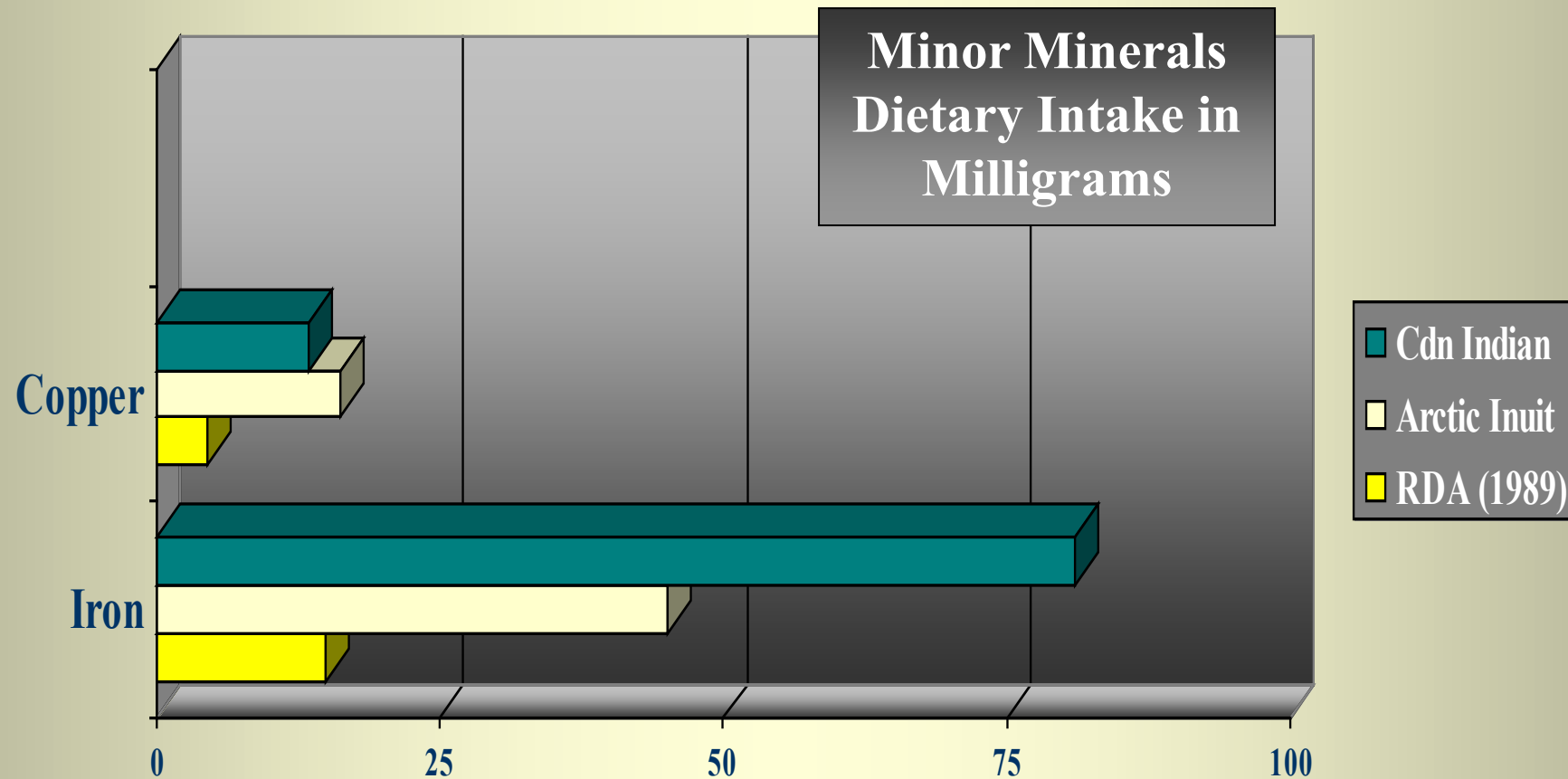
Pre-Contact Nutrient Intake

Based on field data from Price's research in remote regions of NW Canada & Alaska



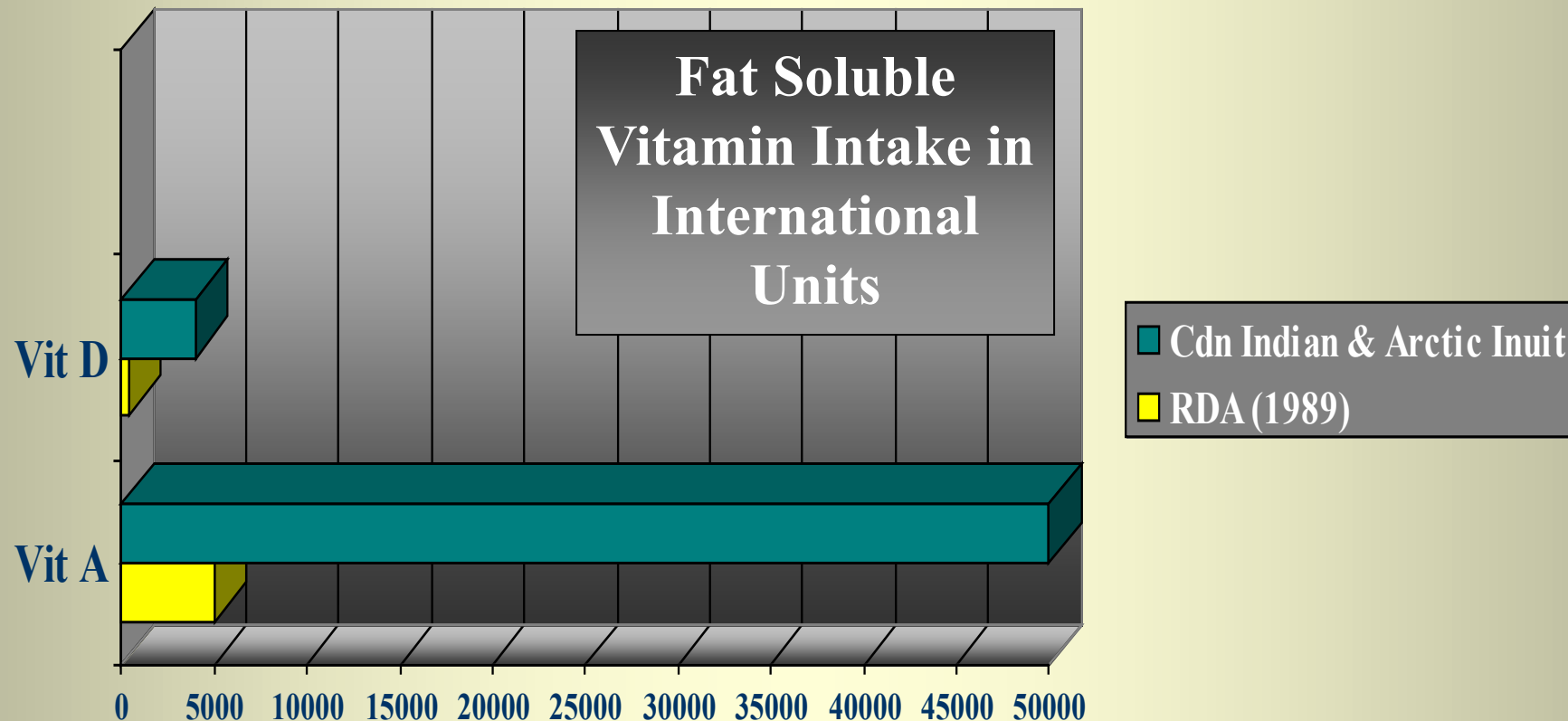
Pre-Contact Nutrient Intake

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Pre-Contact Nutrient Intake

Based on field data from Price's research in remote regions of NW Canada & Alaska



A Growing Epidemic of Degenerative Disease



- ▶ By the **mid 20th Century** was seen the emergence of a new epidemic of degenerative diseases traditionally unknown to Indigenous peoples.
- ▶ These degenerative conditions include: obesity, hypertension, diabetes, arthritis, peptic ulcers, gall bladder disease, heart disease, cancer, etc.
- ▶ Today these diseases are being experienced by Indigenous peoples at even greater rates than among the mainstream population.

Health & Disease Disparities American Indians



Although the *U.S. Indian Health Service* expends over three billion dollars annually for conventional medical care for American Indians & Alaska Natives they are:

- ▶ 770% more likely to die from alcoholism;
- ▶ 650% more likely to die from tuberculosis;
- ▶ 420% more likely to die from diabetes;
- ▶ 280% more likely to die from accidents; &
- ▶ 52% more likely to die from pneumonia or influenza than other citizens of the U.S.

Health & Disease Disparities



By the year 2005 Assembly of First Nations National Chief Phil Fontaine observed that:

“Our people die five to eight years earlier than the average Canadian. Our infant mortality rate is double the Canadian average... We experience a burden of infectious disease, with eight times the rate of tuberculosis & six times the rate of HIV infection. The First Nations health gap continues throughout the spectrum of diseases, with three to five times the diabetes, twice the cancer, & five times the unintentional injury rates compared to the average Canadian.”

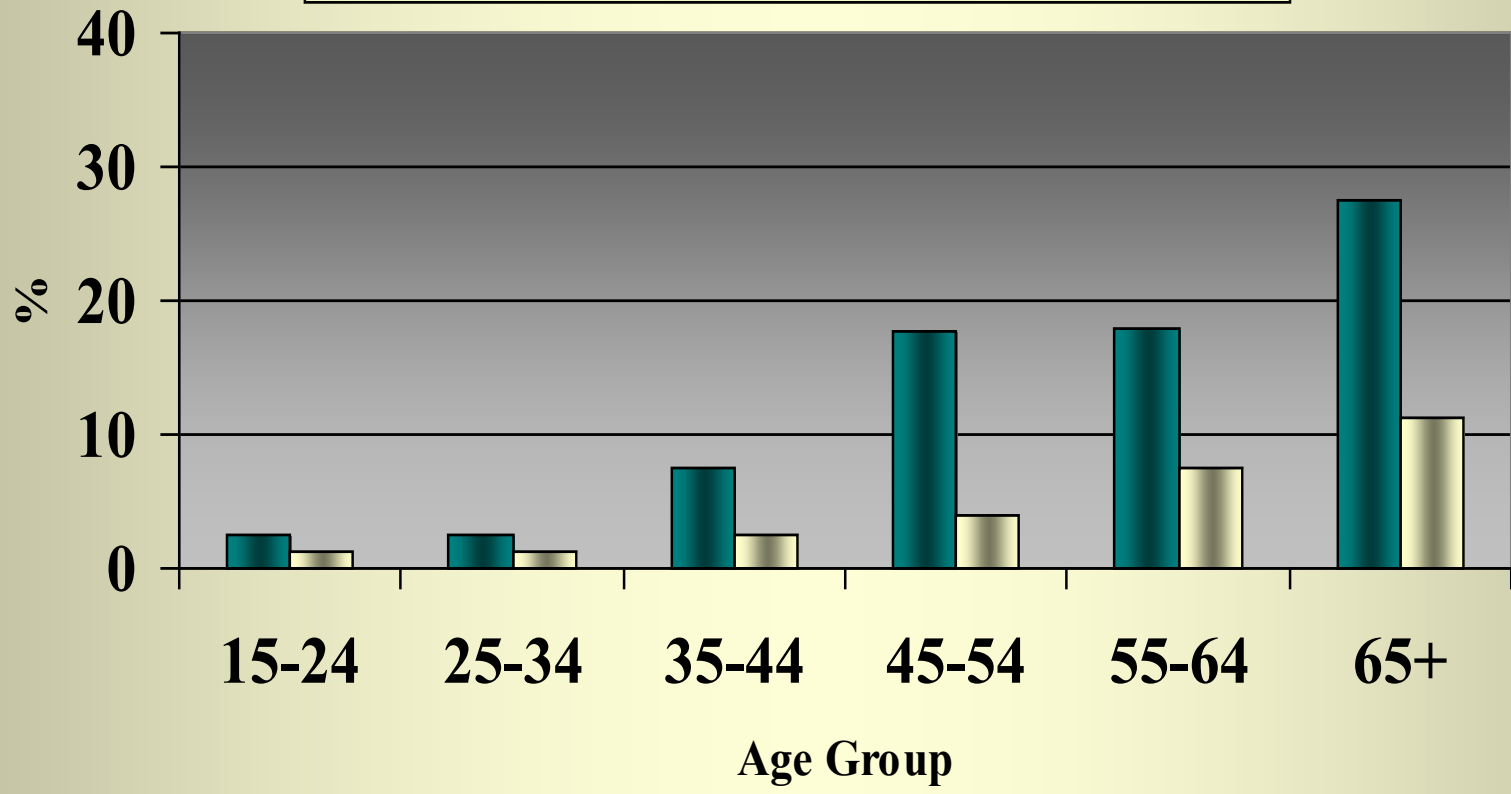
Why the High Tuberculosis Rates?



- A mid 20th century nutrition survey conducted in a northern Manitoba First Nation found an alarming Vitamin C, deficiency rate. On average dietary intake was less than **1/71** the recommended ***Required Daily Allowance***.
- The tuberculosis death rate in this community then stood at **1,400** per 100,000 in comparison to **27** per 100,000 in the mainstream Canadian population (i.e. over **50 times** the general population rate.)

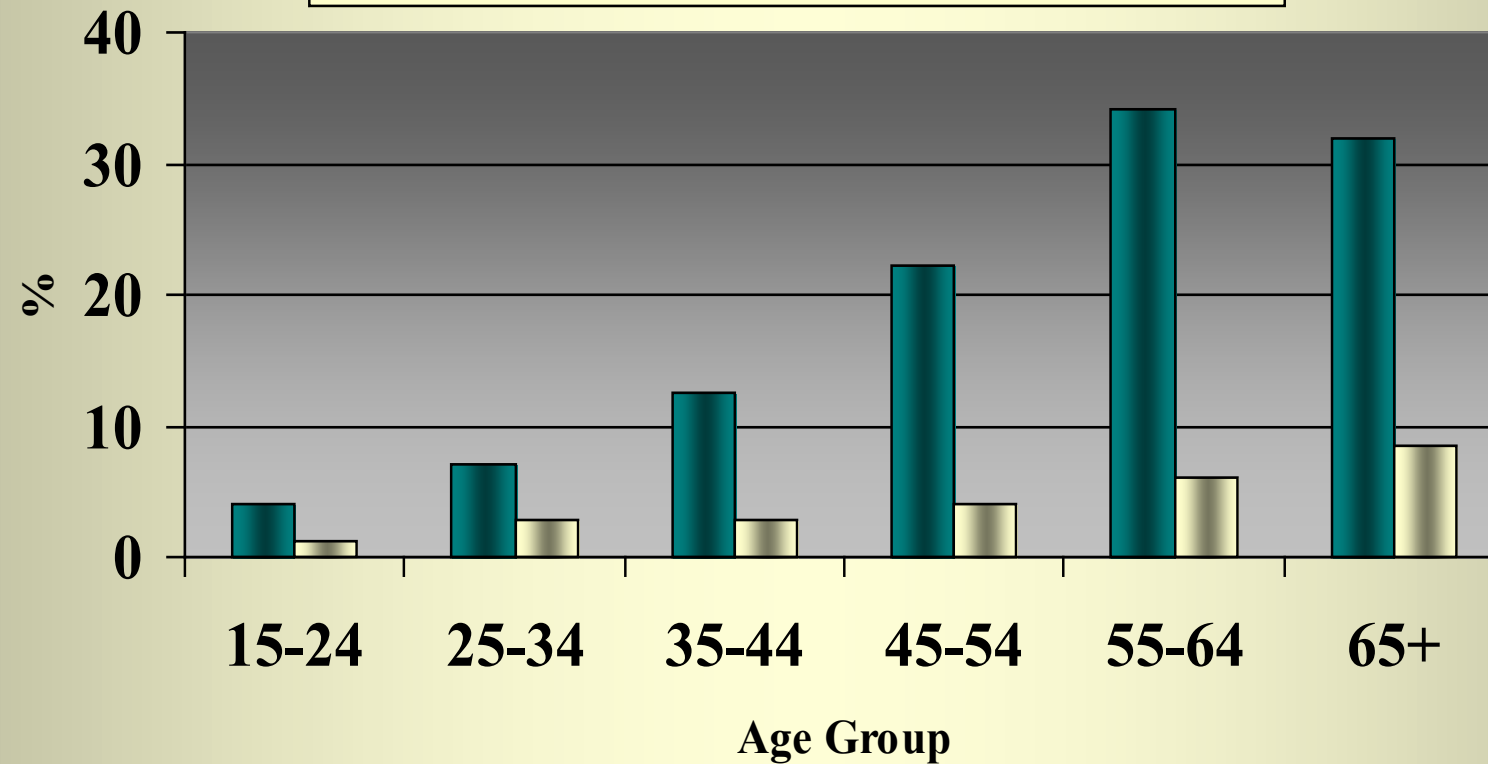
Age Adjusted Prevalence of Diabetes (Self-Reported)

■ First Nations Men (On-Reserve)
■ Canada Men



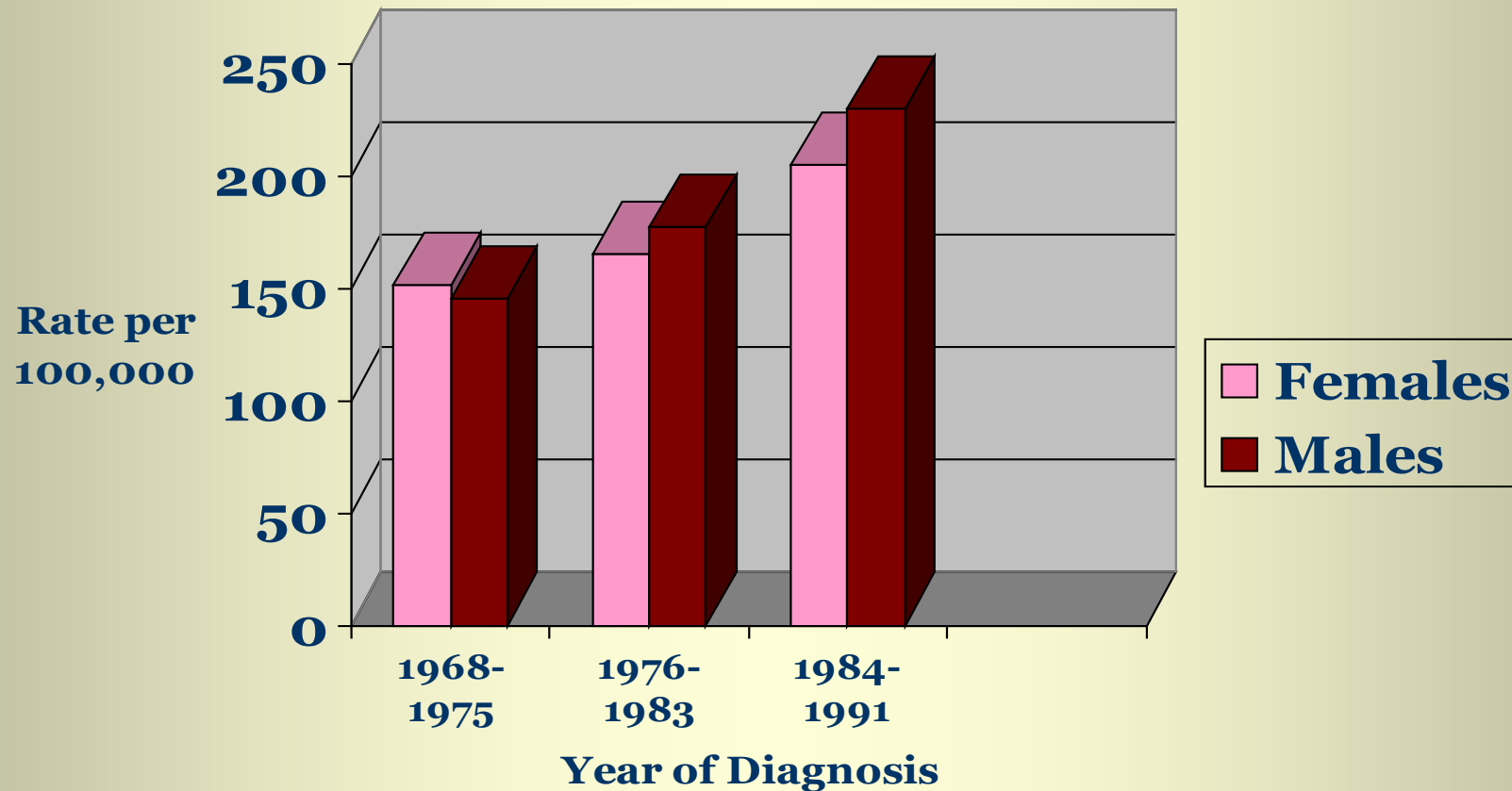
Age Adjusted Prevalence of Diabetes (Self-Reported)

■ First Nations Women (On-Reserve)
■ Canada Women

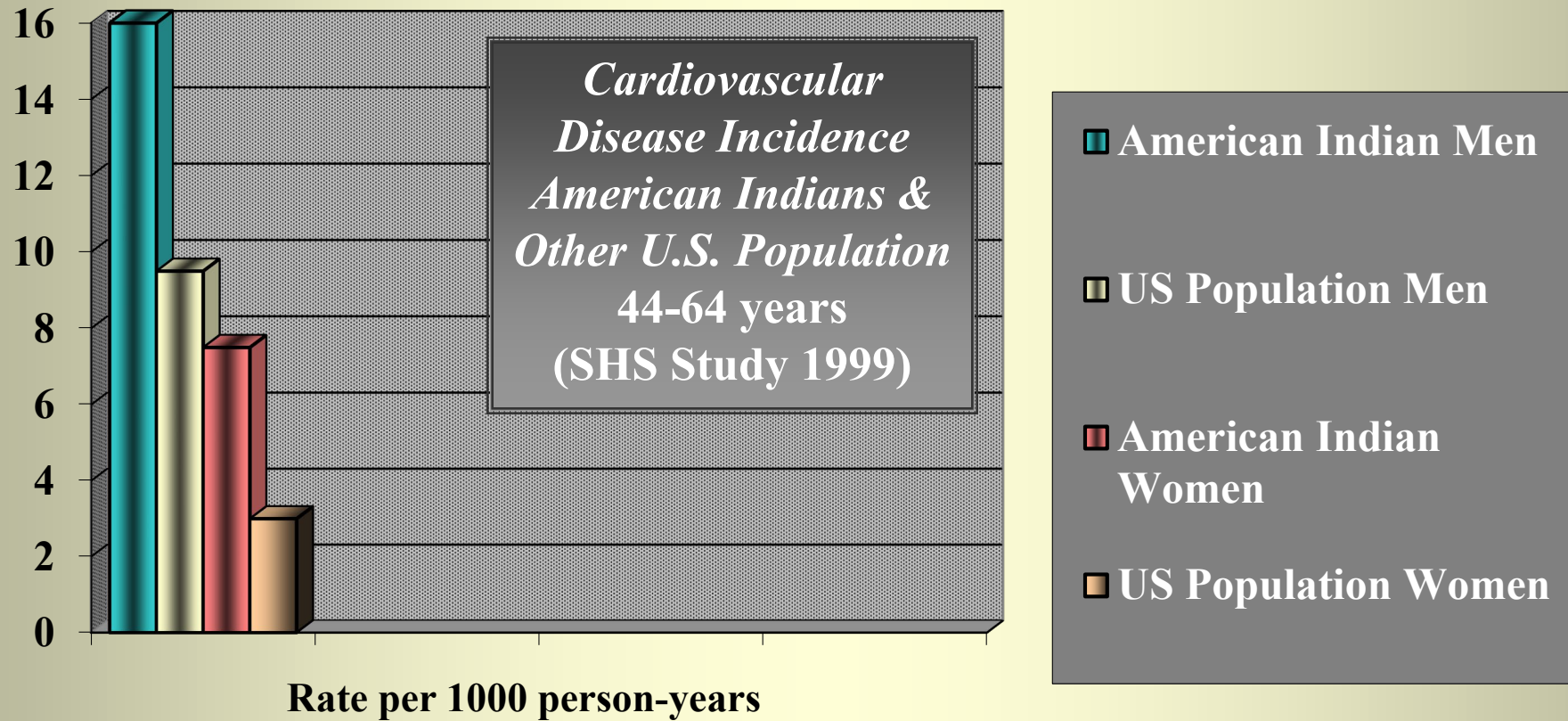


Rapid Escalation of Cancer

First Nations (Ontario 1968 to 1991)

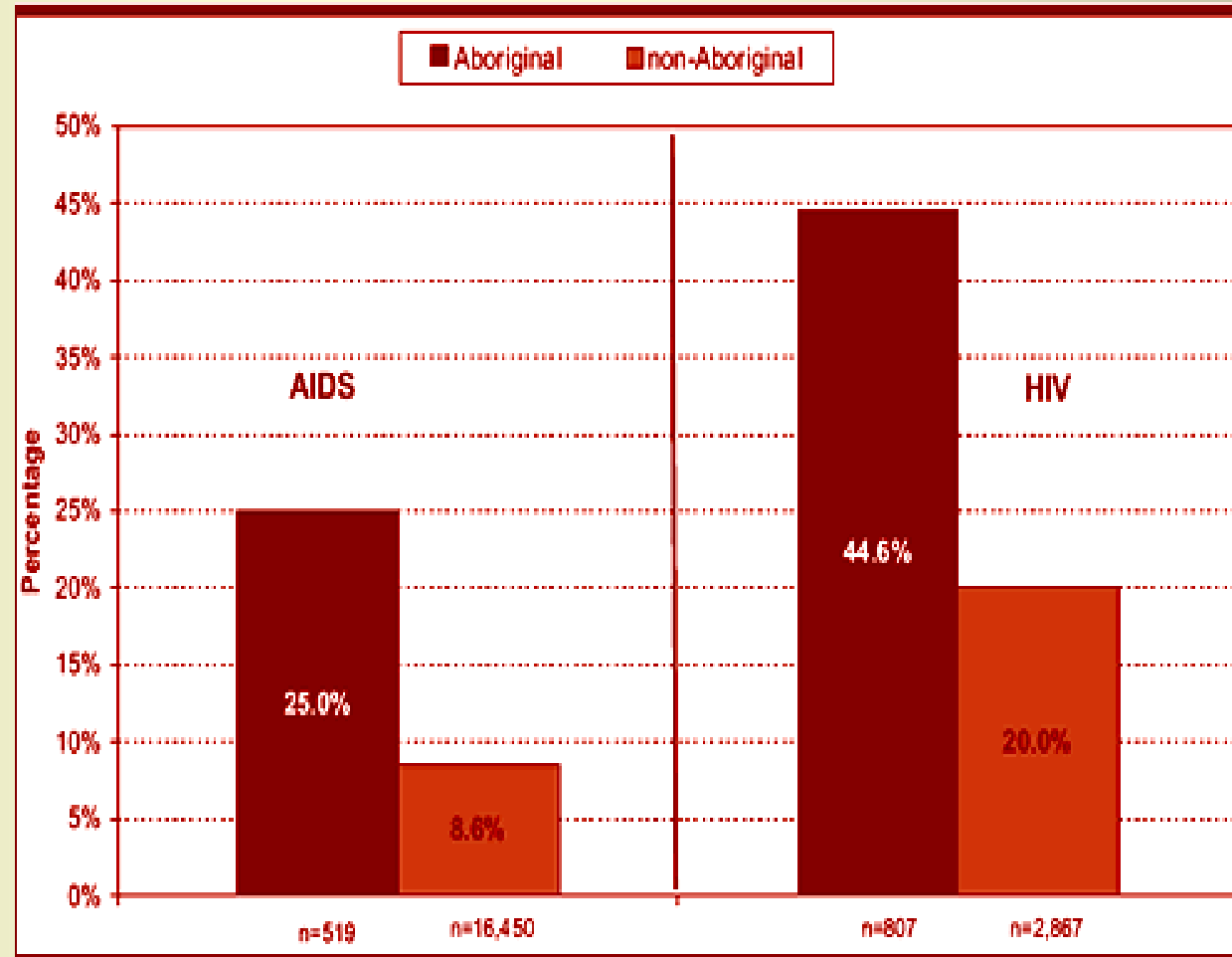


American Indian Double Rate of Cardiovascular Disease



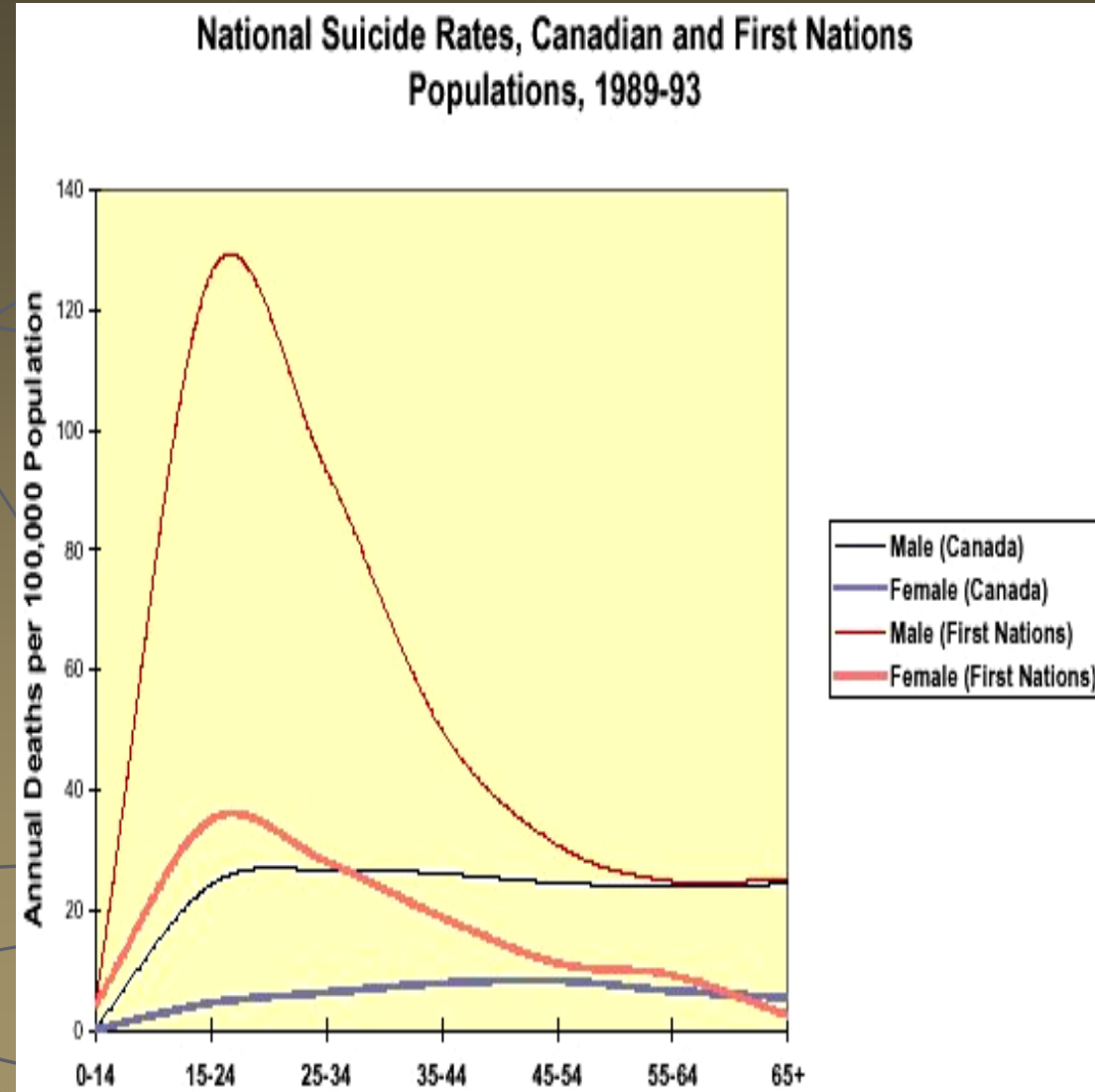
Reported AIDS Cases & Positive HIV Tests

AIDS cases,
includes data
from 1979 to
Dec. 31, 2003.
HIV test results,
includes data
from 1998 to
Dec. 31, 2003



Suicide Among First Nations

The suicide rate among First Nations of all ages is between three & four times higher than among the mainstream population. This rate is the highest reported for any culture group in the world.



Are High Suicide Rates Reversible?



Optimal nutrition appears to play a significant role in reversing behavioral pathologies.

- In a 1983 study of 3,000 incarcerated teenagers, highly refined & junk foods were replaced with natural whole foods. During the year in which the teenager's diets were changed, violent & anti-social incidents decreased significantly. This included a:
 - 75 % reduction in use of restraints &
 - 100 % reduction in suicides.

Health & Disease

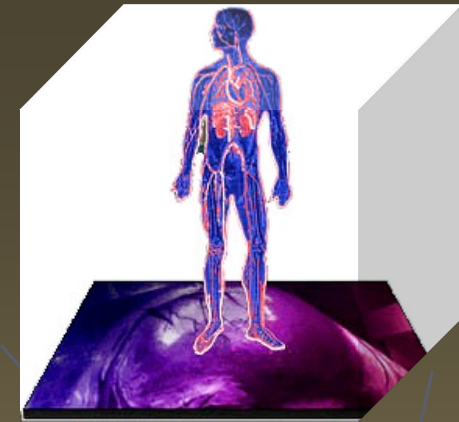
Where Lies the Answer?



Despite the many billions of dollars already expended in the expansion & delivery of medical services to Canada's First peoples, chronically significant health disparities continue to persist, with a worsening of degenerative disease incidence.

It seems self-evident that more extensive investments in medical services is not the primary answer to preventing disease, or restoring & maintaining health.

Disease Wars



- The popularized idea that infectious disease is solely due to bacterial invasion is a medical half-truth that has historically permitted politicians & physicians to side-step more controversial issues in health & disease causation.
- As long as the “*enemy*” only a germ or virus then profitable “*disease wars*” can be launched using the costly toxicological weaponry of selective medicine, i.e. drugs & vaccines, while leaving untouched prevailing social inequities, political & economic injustices which underlie human disease.

Inter-Sectoral Prerequisites of Health

- Uncontaminated Natural Environment
- Outdoor Exercise
- Potable Water
- Organic Whole Foods
- Adequate Housing
- Sound Sanitation
- Practical Education of Mind, Body & Spirit
- Meaningful Employment.



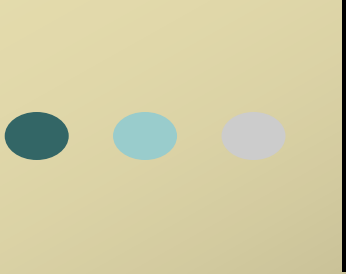


Photo Credits:

Most early period (1800s) photos of First Peoples taken
from Edward S. Curtis archives (public domain)
<http://curtis.library.northwestern.edu/toc.cgi>