



# Diabetes among North American Indians

Student's Name

Institution

Course name

Date

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# Background Information

- Diabetes that distresses the majority of North American Indians is known as non-insulin dependency diabetes mellitus.
- The type 2 diabetes is a prolonged illness that normally requires:
  - a permanent medical care;
  - an ongoing self-management education;
  - support of patients in order to evade the acute difficulties and complications, and reduce the risk of long-term complications.
- Diabetic care requires such intervention procedures as glycemic monitoring and control.





## The Spread of Diabetes

- The following population is at a high-risk group:
    - population in the disadvantaged and minority communities in the developed countries;
    - population in the less developed countries.
  - Diabetes was detected in the Choctaw Indians in 1965 and afterward in other tribes.
  - The prevalence of diabetes among North American Indians exploded in early 1970's.
  - In 1990's, almost every North American Indian was directly or indirectly involved with diabetes (Swisher 2008).
  - Today the type 2 diabetes is a pandemic phenomenon.
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# Factors of the Prevalence of Diabetes

- The prevalence of the type 2 diabetes had dramatically increased when the North American population abandoned their traditional lifestyle in favor of westernization.
  - In its turn, western civilization promotes a poor diet and physical inactivity (Swisher 2008).
  - In addition, the genetics and the entire family lifestyle predispose a person to non-insulin dependency diabetes mellitus.
  - Thus, the following factors increase the prevalence of diabetes among North American Indians:
    - the increase of calories;
    - diminished physical activity;
    - the increase of obesity because of the excessive intake of fat;
    - genetic factors (Swisher 2008).
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# North American Indians' Nutrition Leads to Diabetes



- Influenced by western civilization, the diet of North American Indians has significantly changed.
  - Instead of eating healthy food, North American Indians consume fat, carbohydrates, calories and sodium.
  - In addition, mineral and vitamin contents have changed dramatically, since the majority of the population has left agricultural activities in favor of sedentary occupations (Dixon 2001).
  - Thus, modern high fat content diets lead to the deterioration of the carbohydrates metabolism in the North American Indian population.
  - As a result, high waist to hip ratio significantly increases the risk of developing non-insulin dependency diabetes among North American Indians (Parker 1992).
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# Consumption of Non-nutritive Sweeteners by North American Indians

- Due to the westernization, North American Indians eat various non-nutritive sweeteners instead of traditional stevia and honey.
- Non-nutritive sweeteners include aspartame, cyclamates, alitame, acesulfame, stevioside, thaumatin and sucralose.
- As a result of consumption of these sweeteners, the fat content increases in the body.
- This leads to the vulnerability of the North American Indian people to non-insulin dependency diabetes mellitus (King 2002).



# North American Indians' Physical Inactivity Leads to Diabetes

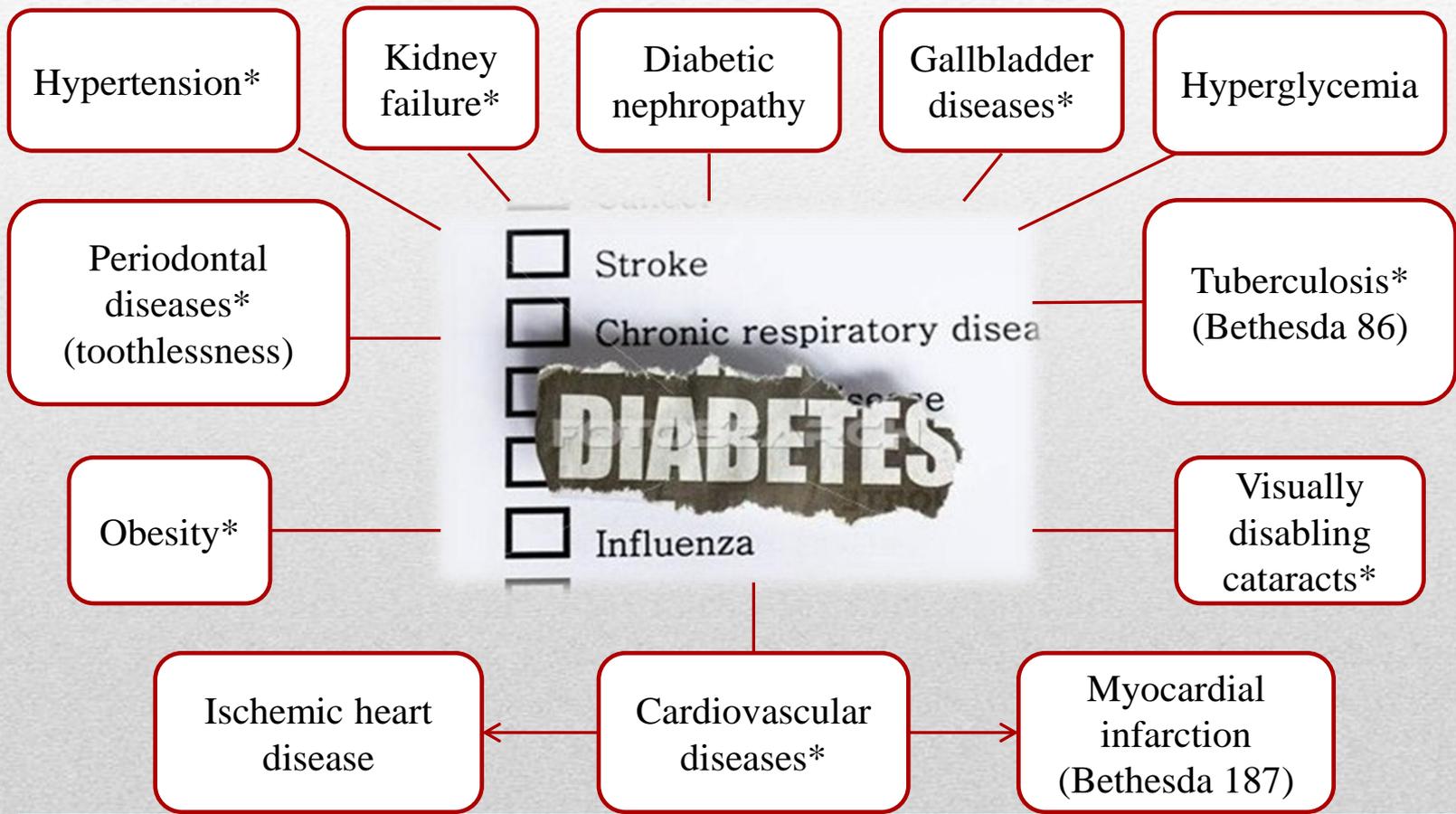
- Diabetic Northern American Indians do remarkably less physical activity in comparison to non-diabetic individuals.
- The main contributory factor to the occurrence of diabetes in the North American Indian population is the lack of body exercises because of sedentary lifestyle.
- In addition, physical activity among the North American Indian population has reduced significantly, when people have resorted to a motorized transportation mode.
- Moreover, most of North American Indians are involved in such activities that require little muscle movement. Such inactivity includes watching television and playing computer games (King 2002).



# Analysis

- Diabetes rate is the highest in full-blooded Native American Indians.
  - According to national outpatient records of the Indian Health service:
    - 63,400 of American Indians who received the medical care at the Indian Health Service had diabetes;
    - 98.3 percent among them were in the age category of 20 years and above;
    - 49.7 percent of patients were within the age bracket of 45-64 years; out of this population 59.0 percent were women;
    - diabetes increased from 3.5 percent for those within the age bracket of 20-44 years to approximately 21.5 per cent for those aged 65 years and above.
  - The diabetes rate among the American Indian clannish groups:
    - plains tribes – 12.7 percent of diabetics;
    - woodland tribes – 9.3 percent;
    - southwestern tribes – 10.3 percent;
    - pacific tribes – 4.5 percent.
  - Diabetes mortality for North American Indians was 3.6 times higher than the diabetes death cases among the whites (Albuquerque 1989).
  - From 1984 to 1986, there were approximately 708 death from diabetes being the underlying cause and about 1252 death from diabetes being a contributing cause of death.
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# Health Complications that Stem from Diabetes among the North American Indians



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