Diabetes and Aboriginal Canadians

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Saskatchewan Senator

Prince Albert, May 6, 2010
# Canada’s Aboriginal Population

<table>
<thead>
<tr>
<th>Aboriginal Group</th>
<th>Numbers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian</td>
<td>698,025</td>
<td>60%</td>
</tr>
<tr>
<td>Métis</td>
<td>389,785</td>
<td>33%</td>
</tr>
<tr>
<td>Inuit</td>
<td>50,485</td>
<td>4%</td>
</tr>
<tr>
<td>Multiple Abor ID</td>
<td>(34,500)</td>
<td>(3%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,172,790</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Canada’s Aboriginal Population: Regional Distribution

<table>
<thead>
<tr>
<th>Region</th>
<th>% of Aboriginal Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>3%</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>15%</td>
</tr>
<tr>
<td>Nunavut</td>
<td>85%</td>
</tr>
<tr>
<td>Ontario</td>
<td>2%</td>
</tr>
</tbody>
</table>
## Aboriginal Population in various cities

<table>
<thead>
<tr>
<th>City</th>
<th>% of Aboriginal Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regina</td>
<td>9%</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>9%</td>
</tr>
<tr>
<td>Prince Albert</td>
<td>34%</td>
</tr>
<tr>
<td>Toronto</td>
<td>0.5%</td>
</tr>
</tbody>
</table>
Diabetes in the Aboriginal Community

- 20% of the Aboriginal population lives with diabetes.
- Prevalence of type 2 diabetes is 3-5 times higher in Aboriginal communities.
- Aboriginals living with diabetes have a higher risk of heart disease, kidney disease, blindness, amputations and infectious diseases.
Diabetes and Aboriginal Women

- Diabetes rates in Aboriginal women are **four** times higher than non-aboriginal women.
- A higher rate of gestational diabetes → increased risk for type 2 diabetes for mother and child.
- Aboriginal women develop diabetes at a younger age → between ages of 20 – 49.
- By age 60, almost half of the female aboriginal population will have diabetes.
Diabetes in the Aboriginal Community is on the rise

- The rate of increase of diabetes in aboriginal women from 1980-2005 was 9.5%.

- The rate of increase in diabetes in aboriginal men from 1980-2005 was 4.9%.

- Medical experts say that diabetes in the aboriginal community “is likely to continue increasing in the foreseeable future,” unless there are serious intervention projects.
Why is the incidence high?

- Genetic pre-disposition
- The Modern Lifestyle → obesity
- Modern foods are high in sugar
What causes obesity?

- Calories consumed are greater than calories expended.

Causes of over-eating:

- Fats and sugars are thought to stimulate the brain’s DA reward system.
- Emotional factors – stress induced
- Spiritual factors – loss of ‘sweetness’
The modern lifestyle

- Sedentary lifestyle
- TV, computer games
- Remote controlled TV, escalators, etc
- Calorie dense, sugary foods that require no output of energy to obtain
- Abundance of refined, prepared foods
- Microwave and eat ad libitum
The urban, modern diet

- Fast food
- Convenient, instant gratification
- Super sized portions
- Simple, fresh foods less common than refined, prepared foods
- Less availability of fresh foods in remote areas (costlier too)
Gradual changes in the way we eat

- With less time to cook, convenience foods become more attractive and satisfying.

- Over time, we forget how to eat in a healthy manner.
Food labeling is hard to decipher and understand

- Canada’s food guide is not something that we have memorized by heart!
- So it is difficult to interpret food labels in the grocery store.
Cautionary tales about expert advice on foods

- Margarine is better for you than butter. (trans fats in margarine are toxic)
- Artificial sweeteners are better for you than sugar.
- Vitamins are harmless.
Conflicting expert advice vs eating naturally

- Vitamins and Supplements
  - increased intake recommended, but high doses of B vitamins have been shown to increase existing kidney impairment, and increase heart attack and stroke in diabetics.

- Sugar substitutes
My cupboard – teas, coffees, spices & supplements
Diabetes and children

- The incidence of type 2 diabetes is increasing in children in N. America.
- The Aboriginal population has a greater proportion of children.
- Targeted programming? Increased physical activity and greater attention to food choices.
Only 12% of children are physically active enough. (90 mins/day)

25% of children are overweight.
Lifestyle changes & diabetes

- Medications
- Exercise
- Blood glucose monitoring
- Eating different foods
- Drinking different fluids
- Checking food labels
Choosing foods based on their Glycemic Index

<table>
<thead>
<tr>
<th>LOW GI (55 OR LESS) **†</th>
<th>MEDIUM GI (56-69) **†</th>
<th>HIGH GI (70 OR MORE) **†</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choose most often ✓✓✓</strong></td>
<td><strong>Choose more often ✓✓</strong></td>
<td><strong>Choose less often ✓</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BREADS: 100% stone ground whole wheat</th>
<th>BREADS: Whole wheat</th>
<th>BREADS: White bread</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEREAL: All Bran™</td>
<td>CEREAL: Grapenuts™</td>
<td>CEREAL: Bran flakes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRAINS: Barley Bulgar Pasta/noodles Parboiled or converted rice</th>
<th>GRAINS: Basmati rice Brown rice Couscous</th>
<th>GRAINS: Short-grain rice</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHER: Sweet potato Yam</td>
<td>OTHER: Potato, new/white Sweet corn</td>
<td>OTHER: Potato, baking (Russet) French fries</td>
</tr>
</tbody>
</table>
Carb Counting – no easy way to comply!

- Carbohydrate counting requires doing some **math**.
- Have an updated meal plan created by you and a **registered dietitian**.
- Try to keep your **calculations to within five grams** of the total carbohydrate per meal; note that if you are on insulin, you may have to calculate more closely.
- Remember healthy eating means getting plenty of vegetables and fruits, while limiting fat - so don’t change all your carbohydrate into chocolate bars.
- When reading labels, **subtract grams of fibre** from the total grams of carbohydrate (fibre is a carbohydrate, but does not affect blood glucose levels). Note that for serving sizes listed in the BTB meal planning guide, the fibre has already been subtracted.
- **Check labels** and recipe books; you may be surprised to find how many of your favourite foods (sweets, cookies, cereals, crackers, TV dinners, beverages) list grams of carbohydrate per serving.
- Monitor and **record blood glucose regularly** to learn if your technique for carbohydrate counting needs polishing (i.e., more caution with portion sizes).
- Discuss advanced carbohydrate counting with your registered dietitian to learn how to determine how much extra insulin you would need to cover eating extra carbohydrate at a specific meal time.
Diabetes in the Aboriginal Community

- 20% of the Aboriginal population lives with diabetes.
- Prevalence of type 2 diabetes is 3-5 times higher in Aboriginal communities.
- Diabetes rates in Aboriginal women are four times higher than non-aboriginal women.
- By the age of 60, almost half of the female aboriginal population will have diabetes.
- Diabetics have a higher risk of heart disease, kidney disease, blindness, amputations and infectious diseases.
What is your reaction to those facts?

- Shock?
- Despair?
- Anger?
- Feelings of helplessness?

And what if you have been diagnosed?
Would you go into a tailspin?
Finding out you have diabetes

“you may feel scared, shocked, angry or overwhelmed. These are all normal emotions. Learning as much as you can about diabetes will reduce your fears.”

(Canadian Diabetes Association)
“Fear” can start a cycles of over-eating

TRIGGERS

“Fear”

Learned helplessness
Giving up, victim mode

Self-hatred
Self-blaming

Anxiety, Confusion
Self-doubt

Tension, Stress

Over-eating
Over-consumption
Over-reactivity to everything!
Frustration can lead to over-eating
Examples of triggers
(problems that can overwhelm us and lead to over-eating)

- **Family problems**
  - diabetes, ‘failures’

- **Piles of work**
  - no end in sight!

- **Difficult people**
  - who take advantage
  - who act irresponsibly
Negative behavioural patterns

1. Figure out your behavioral patterns.
2. Identify what triggers the pattern.
3. Stop/break the behavioral cycle.
4. Identify what you can do to interrupt and stop the cycle.
5. Praise yourself for doing so!
Breaking the Frustration cycle of over-eating

TRIGGERS

Act ASAP to reduce the ‘size’ of the trigger
Say “No” more often
Say “No” even if you’ve already said “yes”

“Frustration”

Do something

Learned helplessness (colonization)

Praise yourself

Self-hatred

Don’t eat the rest
Drink water
Leave the room
Say “no” to dessert

Express your frustration

Swallowing anger

Express your anger

Tension - Stress

Exercise hard
Relax – yoga
Walk the dog
Have fun

Over-eating

Over-consumption

Over-reactivity to everything!
Step away from the fridge and nobody gets hurt!
Concluding comments

- Prevention – ‘better’ eating & more exercise
- Treatment – meds, weight loss, etc
- Behavioral changes
- Targeted programs for at-risk groups – children and Aboriginals
Breaking the “fear” cycle of over-eating

TRIGGERS
Act ASAP to reduce the ‘size’ of the trigger

“Fear”

Do something

Express - honor your fear

Learned helplessness
Giving up, victim mode

Anxiety, Confusion
Self-doubt

Praise yourself
Be gentle to yourself

Express your anxiety
Get calm - pray

Self-hatred, Self-blaming

Tension, Stress

Don’t eat the rest
Drink water
Walk away
Say “no” to dessert

Exercise hard
Relax
Walk the dog
Have fun

Over-eating
Over-consumption
Over-reactivity to everything!