

# Nutrition Fact Sheet Series

## *Inuit Traditional Foods*







# Nutrition Notes

Throughout the fact sheets, the daily nutrient needs were based on the 1997 2005 Dietary Reference Intakes.

Serving sizes for most traditional foods are based on 100 grams, even though this is likely to be smaller than the ‘usual’ serving. Serving sizes for blubber are estimated to be slightly smaller (80 grams, except for walrus blubber, which is estimated to be 100 grams) and are based on the 2000 CINE dietary survey report “Assessment of Dietary Benefit/Risk in Inuit communities”, a document which should be available in all Nunavut communities.

About the traditional food nutrient values: If there was discrepancy between the published value for a traditional food and the value for a comparable southern food in the Canadian Nutrient File, the value representing the largest number of samples was used. The iron value for clams is an example of this.

Revised in 2013

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- **Fact Sheet Working Group:**
- **Amy Caughey**, Health Promotion Specialist, Nutrition, Government of Nunavut
- **Joan Killulark**, CHR, Baker Lake
- **Leanne Webb**, ADI/CPNP Territorial Coordinator, 2004/2005
- **Pitsiula Kilabuk**, Territorial CHR Coordinator, Government of Nunavut
- **Julia Ogina**, Wellness Coordinator, Kitikmeot Region
- **Melissa Guyot**, ADI/CPNP Territorial Coordinator, 2005/2006
- **Sue Hamilton**, Nutrition Consultant and Fact Sheet Editor

## Illustrations:

- Germaine Arnaktauyok**, Yellowknife
- Mark Kalluak**, Arviat
- Bart Hanna**, Igloolik
- Michelle Clusiau**, Whitehorse
- Tina Nawrocki**, Montreal
- Benni Hodkin**, Montreal
- Northern Contaminants Program**



## Special thanks to:

- Elsie Deroose**, Nutritionist, Health Promotion Team Leader, GNWT
- Jennifer Wakegijig**, Baffin Regional Clinical Dietitian
- Andrew Tagak, Sr.**, IQ Coordinator, Government of Nunavut
- Bruce Trotter**, Department of Environmental Health, Government of Nunavut
- Leah Otuk**, researcher, Igloolik Research Centre
- Lucy Macdonald**, graphic artist, Igloolik

# Beluga

*For healthy hearts and fighting infection*

Here are just some of the nutrients you can find in beluga:

**Vitamin A:**

Helps us see well in the dark and fight infection.

**Vitamin C:**

Keeps our gums, teeth and skin healthy. It also helps wounds heal, fights infection and is an antioxidant.

**Vitamin D:**

Is needed for building strong bones and for preventing rickets.

**Vitamin E:**

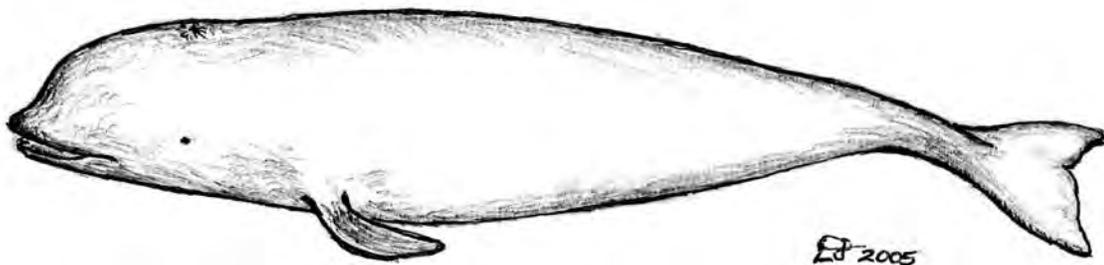
Prevents cells in the body from being damaged (is an antioxidant).

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Omega-3 fatty acids:**

Healthy fats that help the heart and blood work properly. They are also important for the developing brain.



The chart below shows where these nutrients can be found in beluga:

Nutrient Rating				
	<b>Maktaaq*</b>	<b>Skin</b>	<b>Blubber**</b>	<b>Dry Meat</b>
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Fat Vitamin A Vitamin D Vitamin E Omega-3 fatty acids Selenium Zinc	Protein Vitamin A Vitamin C Omega-3 fatty acids Selenium Zinc	Fat Omega-3 fatty acids Vitamin A Vitamin D Vitamin E	Protein Iron Zinc
<b>Nutrients found in lower amounts</b>	Vitamin C	Vitamin E	Selenium	Omega-3 fatty acids

This table is based on what has been measured in narwhal and beluga; they have similar nutrients.

\* assumes a piece that is 1/2 blubber and 1/2 skin

\*\*assumes a serving size of 80 grams or approximately 5 tablespoons

## Did you know?

- The parts of beluga that are eaten most are: maktaaq, blubber, flippers and meat.
- Beluga maktaaq and blubber help Nunavummiut get vitamin A, vitamin E, and omega-3 fatty acids.
- Nunavummiut get important amounts of vitamin C, protein and zinc from beluga maktaaq. These nutrients are found in the skin part.



## Prepare Beluga Safely!

When preparing igunaq, make sure to follow the traditional ways, to avoid poisoning from botulism. Botulism can make people very sick. They can even die from it. Botulism is not what makes the good flavour of igunaq. In fact, the botulism bacteria produces no flavour or smell, so meat can be poisoned and you would never be able to tell.

Beluga and other country foods **should not** be put into plastic pails with closed lids.

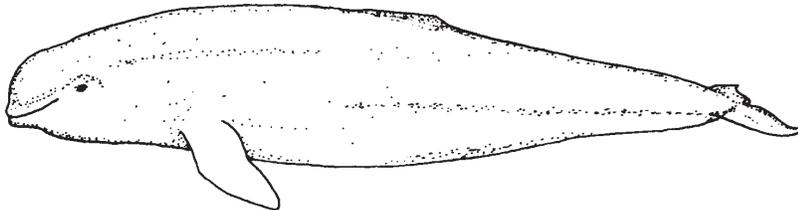
Beluga should be aged in a cool place that lets air in. If you are not sure how to prepare igunaq or other country foods, ask an elder who has this knowledge, or contact the HTO.

## Take a guess!

Which vitamin prevents rickets?

**Hint:** It can be found in beluga blubber.

**Answer:** Vitamin D. Rickets can occur when babies and young children do not get enough vitamin D. It is a painful disease that causes weak bones that bend easily.

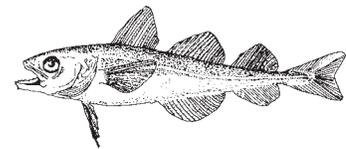


## More about Beluga...

Beluga eat fish and other animals on the sea bottom, especially squid and arctic cod.

Gestation lasts 12 months; most calves are born in June and July.  
Lactation lasts 2 years.

A large beluga can provide 44 pounds of meat, 110 pounds of maktaaq, and 66 gallons of oil.



*“You really get the satisfaction beyond imagination; you cannot enjoy a good meal more than eating the ones that I mention (narwhal or beluga maktaaq).”* Abraham Ulaajuruluk, Igloodik, 1999

# Narwhal

*For healthy hearts and fighting infection*

Here are just some of the nutrients you can find in narwhal:

**Vitamin A:**

Helps us see well in the dark and fight infection.

**Vitamin C:**

Keeps our gums, teeth and skin healthy. It also helps wounds heal, fights infection and is an antioxidant.

**Vitamin D:**

Is needed for building strong bones and for preventing rickets.

**Vitamin E:**

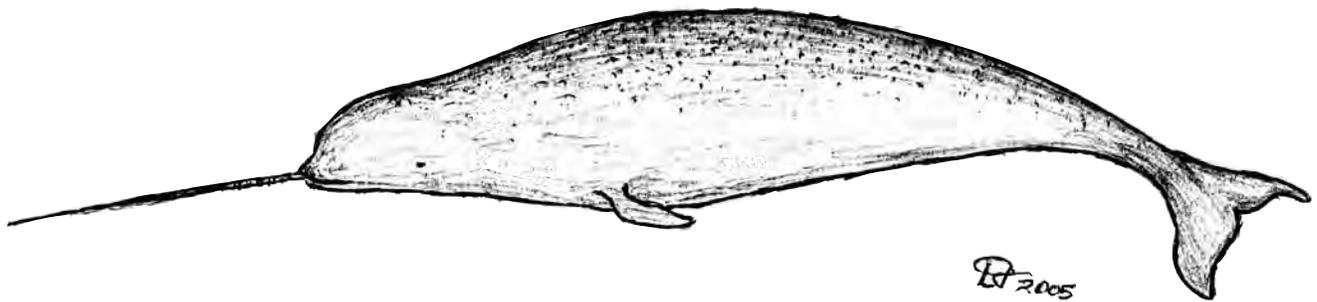
Prevents cells in the body from being damaged (is an antioxidant).

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Omega-3 fatty acids:**

Healthy fats that help the heart and blood work properly. They are also important for the developing brain.



The chart below shows where these nutrients can be found in narwhal:

Nutrient Rating				
	<b>Maktaaq*</b>	<b>Skin</b>	<b>Blubber**</b>	<b>Dry Meat</b>
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Fat Vitamin A Vitamin D Vitamin E Omega-3 fatty acids Selenium Zinc	Protein Vitamin A Vitamin C Omega-3 fatty acids Selenium Zinc	Fat Omega-3 fatty acids Vitamin A Vitamin D Vitamin E	Protein Iron Zinc
<b>Nutrients found in lower amounts</b>	Vitamin C	Vitamin E	Selenium	Omega-3 fatty acids

This table is based on what has been measured in narwhal and beluga; they have similar nutrients.

\* assumes a piece that is 1/2 blubber and 1/2 skin    \*\*assumes a serving size of 80 grams or approximately 5 tablespoons

## Did you know?

- Of all country food, narwhal dry meat has the most iron.
- The parts of narwhal that are eaten most are: maktaaq, blubber, flippers and meat.
- Narwhal maktaaq and blubber help Nunavummiut get vitamin A, vitamin E, and omega-3 fatty acids.
- Important amounts of vitamin C and protein and zinc are provided by narwhal maktaaq. These nutrients are found in the skin part.



## Prepare Narwhal Safely!

When preparing igunaq, make sure to follow the traditional ways, to avoid poisoning from botulism. Botulism can make people very sick. They can even die from it. Botulism is not what makes the good flavour of igunaq. In fact, the botulism bacteria produces no flavour or smell, so meat can be poisoned and you would never be able to tell.

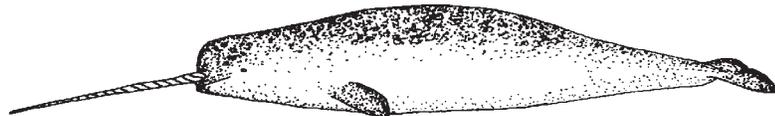
Narwhal and other country foods **should not** be put into plastic pails with closed lids.

Narwhal should be aged in a cool place that lets air in. If you are not sure how to prepare igunaq or other country foods, ask an elder who has this knowledge, or contact the HTO.

## Take a guess!

Which vitamin prevents scurvy?  
Hint: It can be found in narwhal skin.

**Answer:** Vitamin C. Scurvy is the disease many Arctic explorers got because they did not eat the locally harvested food.



## More about Narwhal...

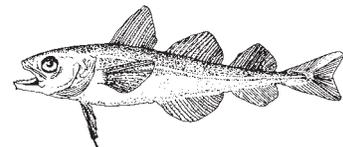
Narwhal eat fish and shellfish, especially squid, shrimp and arctic cod.

Most narwhal are found in Lancaster Sound and off the coast of northeastern Baffin island.

Gestation lasts 15 months; most calves are born late June to mid-July. Lactation lasts 2 years.

*"You really get the satisfaction beyond imagination; you cannot enjoy a good meal more than eating the ones that I mention (narwhal or beluga maktaaq)."*

**Abraham Ulaajuruluk, Igloolik, 1999**



# Seal

*For strong blood and keeping warm*

Here are just some of the nutrients you can find in seal:

**Vitamin A:**

Helps us see well in the dark and also helps fight infection.

**Vitamin D:**

Is needed for building strong bones and for preventing rickets.

**Omega-3 fatty acids:**

Healthy fats that help the heart and blood vessels work properly. They are also important for the developing brain.

**Zinc:**

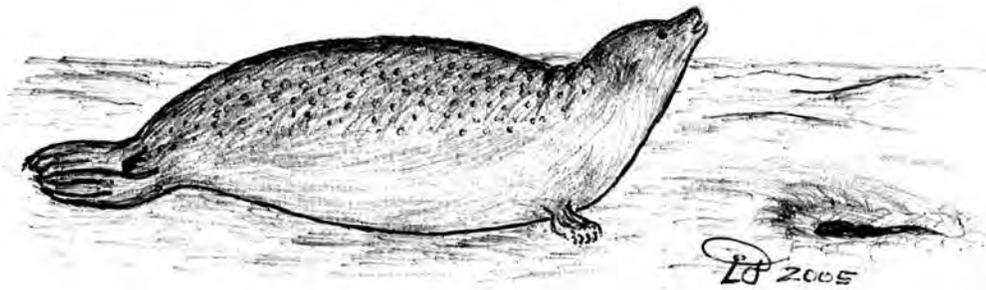
Is needed for fighting infection and for healing wounds.

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).



The chart below shows where these nutrients can be found in seals:

					
<b>Nutrient Rating</b>	<b>Meat</b>	<b>Blubber*</b>	<b>Liver*</b>	<b>Heart</b>	<b>Intestine</b>
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Iron Selenium Omega-3 fatty acids	Omega-3 fatty acids Vitamin D	Protein Iron Vitamin A Zinc Selenium Folate Vitamin D	Protein Iron Zinc Omega-3 fatty acids	Protein Iron Selenium Omega-3 fatty acids
<b>Nutrients found in lower amounts:</b>	Zinc Vitamin C	Vitamin A Vitamin E	Vitamin C		Vitamin C Calcium Vitamin E

This table is based on what has been measured in ringed and bearded seal.

\* assumes a serving size of 80 grams or approximately 5 tablespoons

♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Did you know?

- Seal meat is low in fat. It contains around 2% fat compared to 12 -27% fat in store-bought meats.
- Seal is eaten in all of Nunavut, but Baffin residents eat the most.
- The parts of the seal that are eaten most are: meat, liver\*, broth, blubber, heart, intestines, brain and kidney.
- Seal blubber and meat contain fats that are good for the heart and blood - they are called omega-3 fatty acids.



## Prepare Seal Safely!

When preparing igunaq, make sure to follow the traditional ways, to avoid poisoning from botulism. Botulism can make people very sick. They can even die from it. Botulism is not what makes the good flavour of igunaq. In fact, the botulism bacteria produces no flavour or smell, so meat can be poisoned and you would never be able to tell.

Seal and other country foods **should not** be put into plastic pails with closed lids.

Seal should be aged in a cool place that lets air in. If you are not sure how to prepare igunaq or other country foods, ask an elder who has this knowledge, or contact the HTO.

## Take a guess!

Which part of the seal contains the most vitamin C?

**Answer:** The liver\*. Next comes the brain and intestines. There is even a little bit in raw meat.

### More about Seal...

*"Although we might get just as full eating animals that graze, they don't generate as much body warmth. When you eat animals from the sea you can start sweating, even when you are not exerting yourself."*

**Ilisapi Ootoova, Pond Inlet**

*"Seal broth makes mothers produce more milk."*

**Sarah Qaqaq, CHR, Qikiqtarjuaq**

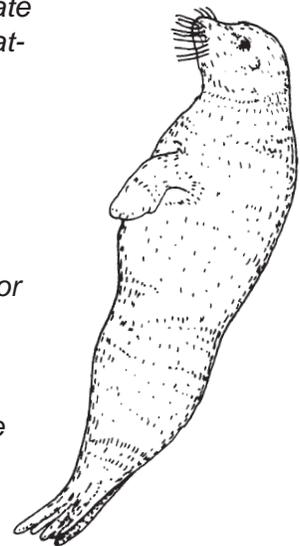
*"We would rub bearded seal oil with water on sore nipples. It was very good for sore nipples. This was our medicine when there were no pills"*

**Saulu Nakashuk, Pangnirtung and Uingut Seporah, Igloolik**

*"Bearded seal oil was the best to apply to wounds or infected areas... because animals have different diets, there is a difference in the oil from their blubber."*

**Ilisapi Ootoova, Pond Inlet**

*"The only thing I know is the gall bladder (the only part of the seal not used for human consumption) we could eat any other part of the seal including the hind flippers, which would be cooked until they were really soft, they are good to eat. By cooking the fore and hind flippers of the seal until they are soft, head could also be eaten."* **Rachel Uyurasuk, Igloolik**



\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# Walrus

*For strong blood and healthy hearts*

Here are just some of the nutrients you can find in walrus:

**Zinc:**

Is needed for fighting infection and for healing wounds.

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Omega-3 fatty acids:**

Healthy fats that help the heart and blood work properly. They are also important for the developing brain.

**Vitamin A:**

Helps us see well in the dark and fight infection.

**Vitamin E:**

Prevents cells in the body from being damaged (is an antioxidant).



The chart below shows where these nutrients can be found in walrus:

Nutrient Rating		
	<b>Meat</b>	<b>Blubber</b>
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% of the recommended amount)	Protein Iron Zinc Omega-3 fatty acids Selenium	Omega-3 fatty acids Vitamin A Vitamin E
<b>Nutrients found in lower amounts:</b>		

This table is based on the nutrients that have been measured in walrus.

## Did you know?

- Walrus meat is low in fat. It contains around 2% fat compared to 12 - 27% fat in meat from the store.
- According to a 1998 dietary survey, aged walrus meat and blubber were two of the 20 most commonly eaten country foods.
- The parts of the walrus that are eaten most are: meat, blubber, liver, intestines, heart, flippers, broth and kauk.



## Prepare Walrus Safely!

Walrus may carry the roundworm that causes a sickness in humans called **Trichinosis**. It can make people very sick. To prevent *Trichinosis*, make sure the meat is well cooked. If you want to make igunaq or eat raw meat, you should have the tongue tested for *Trichnella*. Ask the HTO officer in your community about the testing.

### Igunaq

When preparing igunaq, make sure to follow the traditional ways, to avoid poisoning from botulism. Botulism can make people very sick. They can even die from it. Botulism is not what makes the good flavour of igunaq. In fact, the botulism bacteria produces no flavour or smell, so meat can be poisoned and you would never be able to tell.

Walrus and other country foods **should not** be put into plastic pails with closed lids.

Walrus should be aged in a cool place that lets air in. If you are not sure how to prepare igunaq or other country foods, ask an elder who has this knowledge, or contact the HTO.

## Take a guess!

Which part of the walrus provides a nutrient that can help prevent heart disease.

**Answer:** Both blubber and meat. Walrus blubber and meat are rich in omega-3 fatty acids. These healthy fats help the heart beat properly and make blood flow smoothly.

## More about Walrus...

Walrus can dive 300 feet to the sea bottom to find clams and can eat as many as 4,000 clams in a feed!. They will also eat worms, snails, sea cucumbers, squid and crabs.

Walrus are hunted at the floe edge and from boats in open water.

Adult walrus can be dangerous; hunters have reported being stalked by walrus at the floe edge.

Some walrus are even known to feed on seal, but Inuit hunters say this is usually only true for older, rogue males.



# Caribou

*Eating all parts of the caribou provides people with excellent nutrition*

Here are just some of the nutrients caribou can provide:

**Vitamin A:**

Helps us see well in the dark and fight infection.

**Vitamin C:**

Keeps our gums, teeth and skin healthy. It also helps wounds heal, fights infection and is an antioxidant.

**Iron:**

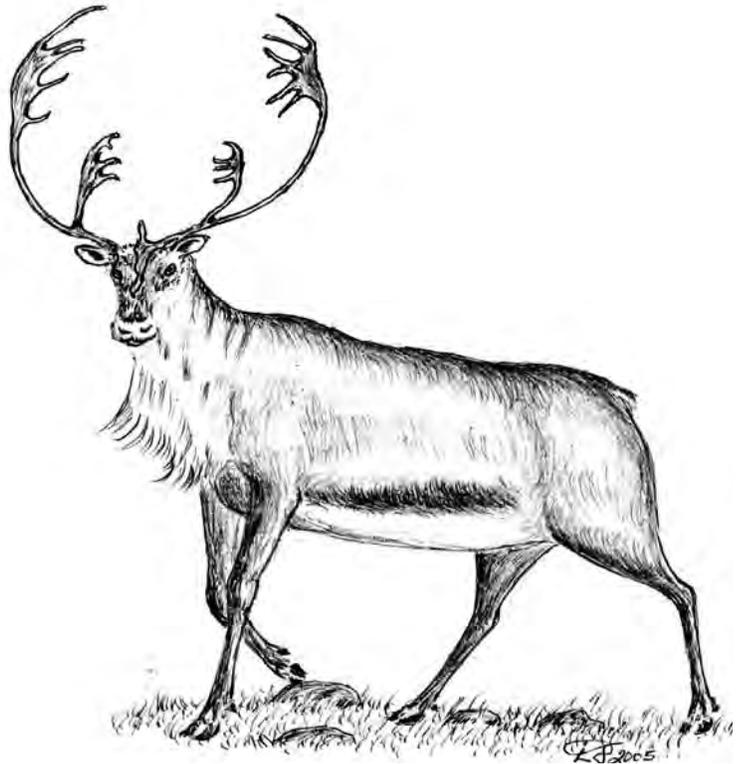
Gives us healthy blood and keeps us from getting tired.

**Zinc:**

Is needed for fighting infection and for healing wounds.

**Protein:**

Helps us build and repair muscles, skin and blood.



The chart below shows where these nutrients are found in caribou.

Nutrient Rating						
	Meat	Liver	Bone Marrow	Stomach	Tongue	Heart
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Iron Zinc	Protein Iron Zinc Vitamin A Folate	Fat	Protein Iron Zinc	Protein Fat Selenium	Protein Iron Selenium
<b>Nutrients found in lower amounts</b>	Selenium	Vitamin C	Protein Iron Zinc	Calcium	Iron Zinc	Zinc Vitamin C

## Did you know?

- Just 1 serving of caribou liver will give you all the vitamin A you need for many days.
- Caribou meat is very low in fat compared to beef, pork and poultry. Having low fat meat is good for heart health and for having a healthy body weight.
- Caribou meat is the most important source of protein, iron, zinc and vitamin E for Nunavummiut.



## Take a guess!

How many hot dogs would you have to eat to get as much iron as you would find in one serving of caribou?



**Answer:** You would have to eat around 25 hot dogs to get as much iron as in a piece of caribou dry meat the size of your palm!

## Prepare Caribou Safely!

Some bacteria that are found in food can make us sick. We can do things to lessen our chances of becoming sick from bacteria in food.

- Try to gut caribou right away on as clean a surface as possible. The guts may contain harmful bacteria.
- When gutting animals, try to remove the gut with as little damage as possible to prevent the spread of harmful bacteria.
- Clean work surfaces and knives with soap and water after preparing food, especially raw meat.
- Wash hands with soap and water before and after touching food.
- Keep raw food cold (less than 4 degrees C or 40 degrees F). Most bacteria need warmer temperatures to grow.



## More about Caribou...



It's good to make dry meat in early spring and fall. When you dry meat out on the land, it takes on the flavor of the fresh air and the smells of the tundra.

The flavour of caribou meat changes through out the year, depending on what the caribou have been eating, what they have been doing, how much fat they have and from which part of the animal the meat comes.

*"If my only diet was caribou meat and maktaaq throughout the winter, I would have no difficulty surviving it. Even in my older age I was able to confidently say the thing."*

**Abraham Ulaajuruluk, Igloodik**

*"Every time I get hungry when I was butchering a caribou, I would make a fire and fry liver on a pan."* **Nellie Hikok, 1999, Thunder on the Tundra**

# Muskox

*For strong blood and muscles*

Here are just some of the nutrients muskox can provide:

**Vitamin A:**

Helps us see well in the dark and fight infection.

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Protein:**

Helps us build and repair muscles, skin and blood.

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Zinc:**

Is needed for fighting infection and for healing wounds.



The chart below shows where these nutrients are found in muskox:

Nutrient Rating				
	Meat	Bone Marrow	Tongue	Heart
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Iron Zinc	Fat	Protein Fat Selenium	Protein Iron Selenium
<b>Nutrients found in lower amounts</b>	Selenium	Protein Iron Zinc	Iron Zinc	Zinc Vitamin C

This table is based on what has been measured in muskox and caribou; they contain similar nutrients.

## Did you know?

- Muskox meat provides protein, iron and zinc for Nunavummiut. Kitikmeot residents eat the most muskox.

- Muskox meat is very low in fat compared to beef, pork and poultry. Having low fat meat is good for heart health and for having a healthy body weight.

- Parts of the muskox that are eaten most often are: meat, soups, stews and broth, fat, bone marrow, tongue and heart.



## Take a guess!

Which part or parts of the muskox can provide a nutrient that gives us healthy blood and keeps us from getting tired?

**Answer:** Meat, bone marrow, tongue and heart all contain iron, a nutrient that gives us strong blood. Of these, heart has the most iron, followed by meat, tongue and bone marrow.

## Prepare Muskox Safely !

Some bacteria that are found in food can make us sick. We can do things to lessen our chances of becoming sick from bacteria in food.

- Try to gut muskox right away on as clean a surface as possible. The guts may contain harmful bacteria.
- When gutting animals, try to remove the gut with as little damage as possible to prevent the spread of harmful bacteria.
- Clean work surfaces and knives with soap and water after preparing food, especially raw meat.
- Wash hands with soap and water before and after touching food.
- Keep raw food cold (less than 4 degrees C or 40 degrees F). Most bacteria need warmer temperatures to grow.

### More about Muskox...

Muskoxen eat plants such as willow, sedge, grasses, crowberry and bilberry.

When threatened by a wolf, muskoxen will form a circle around their young to protect them.

The inner layer of wool on a muskox (quiviut) is used for knitting and crafts. It is very soft and warm and is considered to be more valuable than cashmere.

Muskoxen are found on the arctic islands in the Baffin and northern Kitikmeot regions. Unlike caribou, they do not have long migrations.



# Polar Bear

*Polar bear meat and fat provide people with tasty food good for health*

Here are just some of the nutrients you can find in polar bear:

**Protein:**

Helps us build and repair muscles, skin and blood.

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Zinc:**

Is needed for fighting infection and for healing wounds.

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Omega-3 fatty acids:**

Healthy fats that help the heart and blood work properly. They are also important for the developing brain.



The chart below shows where these nutrients are found in polar bear:

Nutrient Rating		
	Meat	Fat*
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% of the recommended amount)	<b>Protein</b> <b>Iron</b> <b>Zinc</b> <b>Omega-3 fatty acids</b> <b>Selenium</b>	<b>Omega-3 fatty acids</b>
<b>Nutrients found in lower amounts:</b>		<b>Vitamin A</b>

This table is based on what has been measured in polar bear.

\* assumes a serving size of 80 grams or approximately 5 tablespoons

## Did you know?

- Polar bear meat is low in fat. It contains 3-6% fat compared to 12-27% fat in store-bought meats.
- Polar bear fat is tasty when eaten with dry meat. It is also tasty to cook polar bear meat in polar bear fat.
- Polar bears are the only land animal whose meat and fat are rich in the healthy fats called omega-3 fatty acids.



## Prepare Polar Bear Safely

Polar bears can contain worms that cause a sickness called **Trichinosis**. People can get trichinosis from eating raw or undercooked polar bear meat.

To prevent trichinosis, make sure the polar bear meat is well cooked. Aging or freezing do not destroy the worms in meat.



## Take a guess!

Inuit have long known that polar bear liver should not be eaten. Do you know why it is not good to eat polar bear liver?

**Answer:** Polar bear liver contains dangerous amounts of vitamin A. Very high amounts of vitamin A taken at once can cause headaches, confusion, nausea and peeling of the skin!

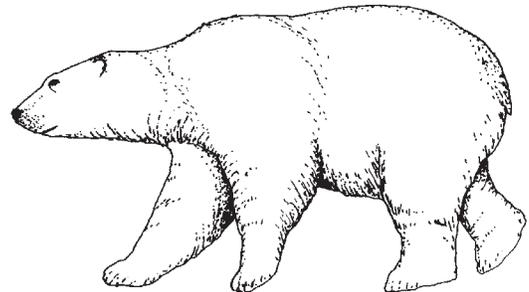
## More about Polar Bear...

Polar bears eat mainly ringed and bearded seal. Seals are rich in iron, protein and healthy fats and so are polar bears.

Polar bear milk is very rich - it contains about 35% fat (human milk contains around 4% fat). It is the richest milk of any kind of bear and is what makes the cubs grow so quickly.

Polar bear cubs learn everything they know about hunting from their mothers. They spend around 2-3 years with her before they are ready to survive on their own.

Polar bears are clever hunters - they cover their black noses with their paws when they are hunting seal!



# Rabbit (or Arctic Hare)

*For strong blood and muscles*

Here are just some of the nutrients rabbit can provide:

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Zinc:**

Is needed for fighting infection and for healing wounds.

**Protein:**

Helps us build and repair muscles, skin and blood.

**Potassium:**

Helps us have health blood pressure.



The chart below shows where these nutrients are found in rabbit:

<b>Nutrient Rating</b>	
	<b>Meat</b>
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% of the recommended amount)	Protein Iron Zinc
<b>Nutrients found in lower amounts</b>	Potassium

This table is based on what has been measured in arctic hare (rabbit).

## Did you know?

- Arctic hare have very little fat on their bodies and in their meat. The meat is around 1% fat (compared to around 12 - 27% for store-bought meats).
- Arctic hare are eaten more in Kitikmeot and South Baffin than in other Nunavut regions.
- Arctic hare is usually eaten baked, boiled or cooked in a stew.



## Prepare Rabbit Safely

To prevent the spread of bacteria such as *Salmonella*, wash your hands **after** working with raw meat **and before** handling cooked meat.

To store meat, use only clean containers or bags made for FOOD storage. Garbage bags should not be used. Try using freezer paper or wax paper instead.



Store raw and cooked foods separately.

Rabbit meat can be stored in the refrigerator for 1-2 days and can be frozen for 6 months.

### More about Arctic Hare...

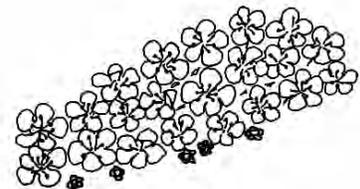
Arctic hare has never been a main food for Nunavummiut, but they are harvested for food whenever a hunter has the chance. Adult animals weigh 9 - 11 pounds (4-5 kg).

Hunters have been saved from starvation thanks to the tameness of the Arctic hare. They often feed in large groups of 10-60 animals and are relatively easy to shoot, even with a bow. In summer their camouflage is not as effective and they become less tame.

They eat plants like willow twigs and roots, purple saxifrage, sedges, mosses and berries.

“ I know rabbit a lot.....It's easy to see them in the afternoon, like between three and six. 'Cause that's the feeding time for them, eh? So, that's what I know". **David Oolooyuk**

To learn more about arctic hare, visit the excellent website produced by the Canadian Museum of Nature: <http://www.nature.ca/ukaliq/>



# Ducks and Geese

*For strong blood and muscles*

Here are just some of the nutrients ducks and geese can provide:

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Zinc:**

Is needed for fighting infection and for healing wounds.

**Protein:**

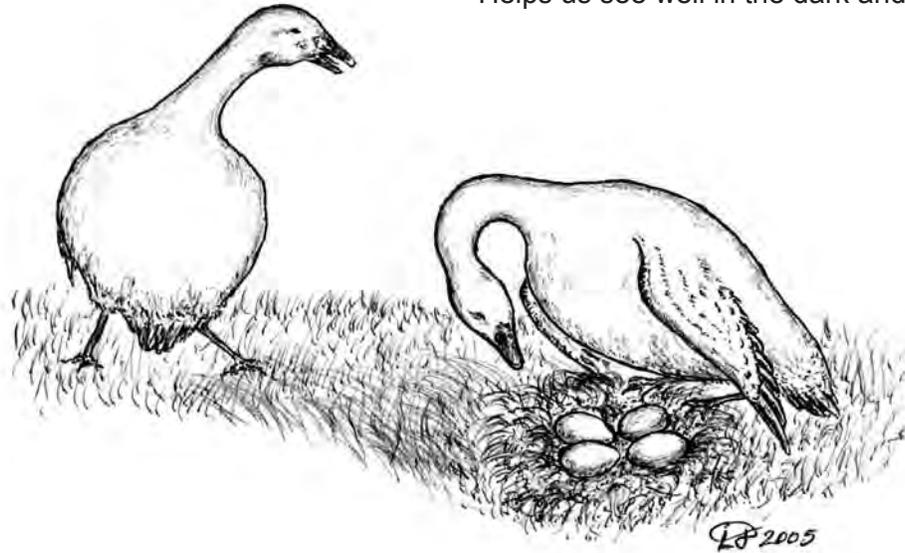
Helps us build and repair muscles, skin and blood.

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Vitamin A:**

Helps us see well in the dark and fight infection.



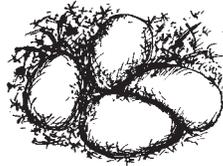
The chart below shows where these nutrients are found in ducks and geese:

Nutrient Rating				
	Meat	Eggs*	Gizzard	Liver
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Iron Zinc Selenium	Protein	Protein Iron Zinc	Protein Iron Zinc Vitamin A Selenium Folate
<b>Nutrients found in lower amounts</b>		Iron Zinc Vitamin A		Vitamin C

This table is based on what has been measured in wild goose and duck.  
\* A 100 gram serving is 2 eggs

## Did you know?

- Duck and goose meat is rich and dark; this is a sign that the meat contains a lot of iron.
- The kind of fat found in ducks and geese is good for the heart and blood vessels.
- Parts of ducks and geese that are eaten most are meat, eggs, heart and gizzards.



## Prepare Duck & Geese Safely !

- To prevent the spread of bacteria such as *Salmonella*, wash your hands **after** working with raw meat **and before** handling cooked meat.
- To store meat, use only clean containers or bags made for FOOD storage. Garbage bags should not be used. Try using freezer paper or wax paper instead.

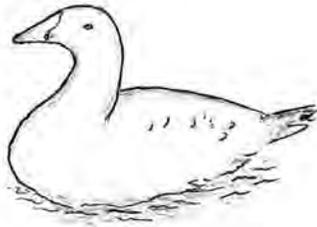
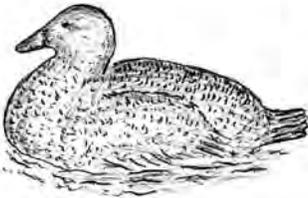


- Fresh duck and goose meat can be stored in the refrigerator for 1-2 days and can be frozen for 6 months.

## Take a guess!

Which parts of ducks and geese can provide vitamin A?

**Answer:** Both the liver and eggs contain vitamin A.



## More about Ducks and Geese...

Most ducks and geese begin arriving in Nunavut around May and stay to breed and raise their young until September.

Common Eiders can spend the whole winter in the North, wherever there is open water. At night they tend to gather in large groups packed so tightly together it is difficult to count them all.

Bylot Island, near Pond Inlet, is home to the world's largest breeding colony of Greater Snow Geese.

# Ptarmigan

*For strong blood and muscles*

Here are just some of the nutrients ptarmigan can provide:

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Zinc:**

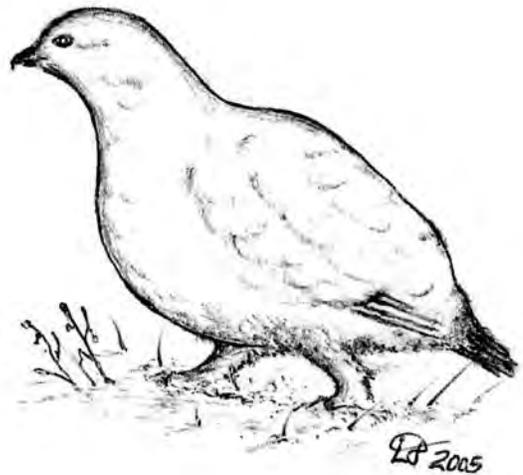
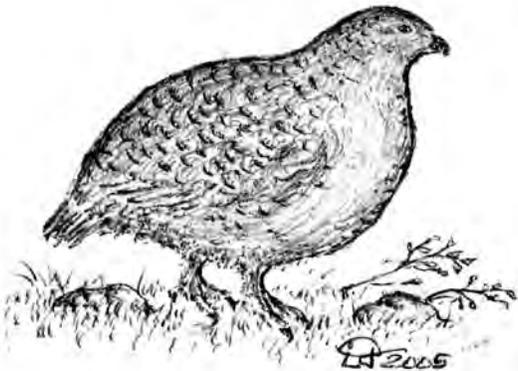
Is needed for fighting infection and for healing wounds.

**Protein:**

Helps us build and repair muscles, skin and blood.

**Potassium:**

Helps us have healthy blood pressure.



The chart below shows where these nutrients are found in ptarmigan:

<b>Nutrient Rating</b>	
	<b>Meat</b>
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% of the recommended amount)	Protein Iron Zinc
<b>Nutrients found in lower amounts</b>	Potassium

This table is based on what has been measured in ptarmigan.

## Did you know?

- Ptarmigan meat is rich and dark; it has much more iron than chicken meat.
- Ptarmigan meat is very low in fat. It has only around 3% fat; baked chicken has around 11% and fried chicken has 15%.
- Parts of the ptarmigan that are eaten most are meat, heart, gizzards and liver.
- Ptarmigan is good to eat baked, in soup, fried and boiled.



## Take a guess!

Ptarmigan meat has twice as much iron as caribou meat. True or False?

Answer: True! Ptarmigan meat has around 10 milligrams of iron in piece the size of your palm and caribou meat has around 5 milligrams.



## Prepare Ptarmigan Safely!

- To prevent the spread of bacteria such as Salmonella, wash your hands **after** working with raw meat **and before** handling cooked meat.
- To store meat, use only clean containers or bags made for FOOD storage. Garbage bags should not be used. Try using freezer paper or wax paper instead.



- Store raw and cooked foods separately.
- Fresh ptarmigan meat can be stored in the refrigerator for 1-2 days and can be frozen for 6 months.

## More about Ptarmigan...



Unlike most ducks and geese, ptarmigan live year round in the North.

Their plumage changes with the season - white when there is snow on the ground and darker in the summer.

Adult ptarmigan eat mostly plant food - mosses, lichen and berries, but young chicks feed on insects, spiders and snails.

They can be hunted with shot guns or snared.

# Clams, Mussels and Shrimp

*For strong blood and fighting infection*

Here are just some of the nutrients clams, mussels and shrimp can provide:

**Selenium:**

Prevents cells in the body from being damaged (is an antioxidant).

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Zinc:**

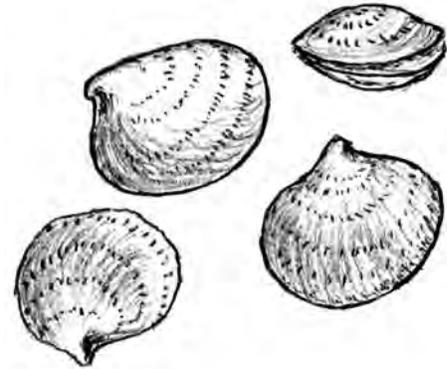
Is needed for fighting infection and for healing wounds.

**Vitamin A:**

Helps us see well in the dark and fight infection.

**Vitamin C:**

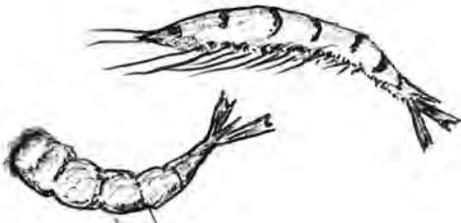
Keeps our gums, teeth and skin healthy. It also helps wounds heal, fights infection and is an antioxidant.



Clams



Mussels



Shrimp

The chart below shows where these nutrients are found in mussels, clams and shrimp:

	Clams	Mussels	Shrimp
<b>Nutrient Rating</b>			
<b>Excellent ways to get:</b> (a 100 g serving provides at least 25% (50% for vitamin C) of the recommended amount)	Protein Iron Zinc Selenium Magnesium Omega-3 fatty acids	Protein Iron Zinc Selenium Magnesium Omega-3 fatty acids	Protein Selenium
<b>Nutrients found in lower amounts</b>	Vitamin C Vitamin A	Vitamin C Vitamin A	Iron Zinc Magnesium Omega-3 fatty acids

This table is based on what has been measured in mussels, clams and shrimp.

## Did you know?

- Clams and mussels are good eaten raw, fried, steamed or boiled.
- They are low in fat and rich in nutrients.
- Clams and mussels are considered a delicacy.
- Although not as tasty as fresh clams, canned clams also provide excellent nutrition.

## Take a guess!

True or False? Clams contain more iron than seal meat.

**Answer:** True! A 100 gram serving of clams contains around 28 milligrams (mg) of iron; a 100 gram serving of seal meat contains around 19 mg of iron.



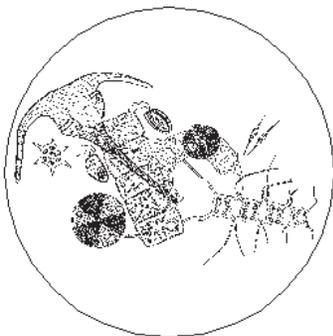
## Prepare Seafood Safely!

- To prevent the spread of bacteria such as Salmonella, wash your hands **after** working with raw meat **and before** handling cooked meat.
- To freeze seafood, use only clean containers or bags made for FOOD storage. Garbage bags should not be used.



- Mussels and clams in the shell should be kept in the refrigerator for no more than 2-3 days. Store in open containers that allow for draining.
- For best quality, seafood should only be kept frozen 2-4 months.

## More about Seafood...



*plankton*

Clams and mussels are harvested locally in some Nunavut communities. They are dug out of the sand in summer and fall. They can also be caught with a net through a hole in the ice year round.

Some types of clams can live to be 150 years old!

Mussels and clams are filter feeders that feed on tiny organisms called plankton.

# Fish

*For healthy hearts and strong bones*

Here are just some of the nutrients you can find in fish:

**Zinc:**

Is needed for fighting infection and for healing wounds.

**Vitamin D:**

Is needed for building strong bones and for preventing rickets.

**Selenium:**

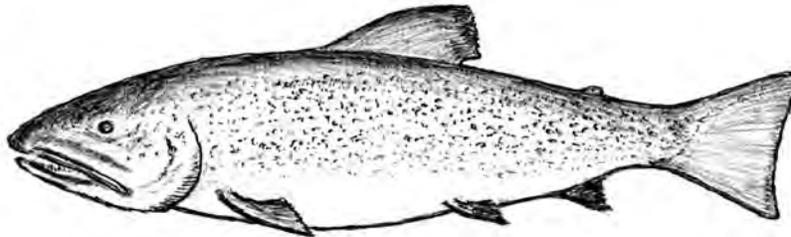
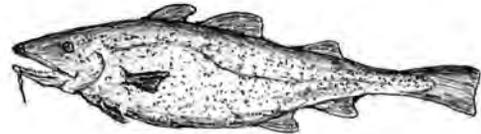
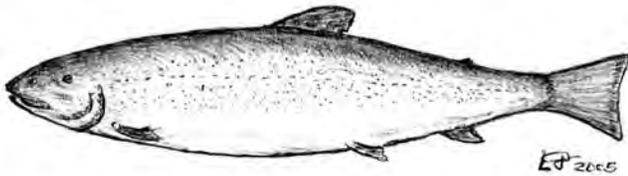
Prevents cells in the body from being damaged (is an antioxidant).

**Calcium:**

Works with vitamin D for building strong bones and teeth.

**Omega-3 fatty acids:**

Healthy fats that help the heart and blood work properly. They are also important for the developing brain.



The chart below shows where these nutrients can be found in fish:

Nutrient Rating			
	Fish fillet with skin	Dried char	Eggs*
<b>Excellent sources:</b> (a 100 g serving provides 25% or more of the recommended amount)	Protein Omega-3 fatty acids Vitamin D	Protein Omega-3 fatty acids Vitamin D	Protein Omega-3 fatty acids Zinc Selenium
<b>Nutrients found in lower amounts:</b>	Iron Zinc Calcium Selenium	Iron Zinc	Vitamin C

Values based on what has been measured in arctic char and lake trout.

\* Fish egg values based on cisco and salmon

## Did you know?

- Arctic char is the most important source of omega-3 fatty acids for Nunavummiut.
- Just one serving of Arctic char provides people with all the vitamin D they need for the day.
- Fish eggs are a special treat that come with spring fishing. They are rich in zinc, selenium and omega-3 fatty acids.
- Well cooked fish with bones is thought to be a good source of calcium, but we are not sure exactly how much. More studies need to be done.



## Prepare Fish Safely!

Some fish may carry worms that can be harmful to humans. These worms are killed by freezing the fish for 24 hours or by cooking the fish.

It is best to keep fatter fish such as char and lake trout frozen for only 2 months.

Fresh fish will stay safe in the refrigerator for 1 to 2 days.

### Inuit Recipe for Health

Walk a mile to the good fishing spot  
Catch a few char  
Walk home  
Bake the fish, make some fish head soup  
Enjoy your feast!

**There are 4 things in this recipe good for bones and the heart. Do you know what they are?**

**Answer:**  
1. Being active is good for strong bones and healthy hearts.  
2. Omega-3 fatty acids from the fish are good for the heart  
3. Well-cooked fish with bones, such as fish head soup provides calcium, which is good for our bones.  
4. Fish is a great way to get vitamin D, which is needed for strong bones

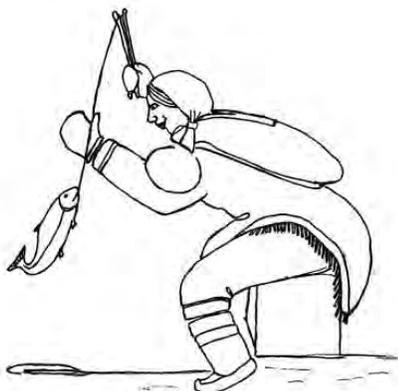
### More about Fish...

The Inuit traditional diet is the richest you can find in the healthy fats called omega-3 fatty acids. These come from fish like char and marine mammals like seals and whales. Doctors observed that Inuit had very little heart disease and later learned that omega-3 fatty acids were helping them have healthy blood vessels and hearts.

**Elder Rachel Uyarasuk from Igloodik** describes how fish were eaten. This shows how fish can be an excellent source of calcium.

*"Arctic cod would be boiled, when they were cooked so that they became soft, even with the bones we would eat them, they were delicious... You do not get boned when they are cooked to tenderness".*

*"That also goes for fish head, again they were stored in a seal skin bag, they did not get too fermented but enough to get delicious, then again these became a subject of feasting."*



# Berries

*For a tasty treat at the end of summer*

Here are two of the nutrients berries can provide:

**Vitamin C:**

Keeps our gums, teeth and skin healthy. It also helps wounds heal, fights infection and is an antioxidant.



**Fibre:**

Is not really a nutrient, but it is important for health. It is found only in plant foods and is needed to help keep people regular. It can also help prevent some kinds of cancer.



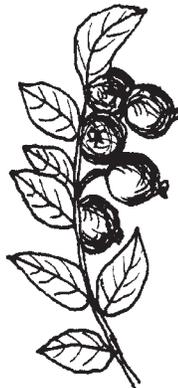
The chart below shows where these nutrients are found in berries:

Nutrient Rating	Cloudberries	Blueberries Cranberries Crowberries (or Blackberries)
<b>Excellent ways to get:</b> (60 grams, or around 1/2 cup, provides at least 25% (50% for vitamin C) of the recommended amount)	Vitamin C	
<b>Nutrients found in lower amounts:</b>	Fibre	Vitamin C Fibre

This table is based on what has been measured in berries.

## Did you know?

- Cloudberry is rich in vitamin C, and so are blueberries. Cranberries and crowberries also contain vitamin C, but not as much.
- Cranberries, blueberries and crowberries all contain flavonoids. Flavonoids are antioxidants that are thought to help prevent some diseases.
- Berries can be eaten fresh, frozen, dried and baked in jams, pies and bannock.



## Blueberry Ice Cream

- Blueberries
- Seal fat made into liquid
- Caribou fat
- Water

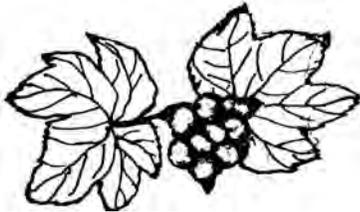
Grind the caribou fat. While grinding add a bit of seal fat and mix. Keep mixing until it gets bigger. After mixing add the berries and stir.

### From the 'Interviewing Inuit Elders' Series\*



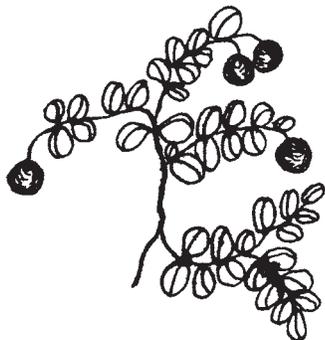
Crowberries are often called blackberries, or paungait, because they are the colour of soot. They are delicious when mixed with caribou fat or seal fat. It is said that they cause constipation if eaten in excess and are used by some to treat diarrhea.

Cloudberry is crunchy in the spring when they are red, and yellow and juicy in late summer when they are ripe.



Cranberries or 'kimminait' have red berries that are acidic but tasty, when ripe. The leaves can be used to make tea.

*"...after we had gathered berries, we would store them for the winter. My mother-in-law would dig a hole in the sand and pour in some fat and wait for the fat to dry. After it had dried she would pour in the berries and cover it with a seal skin.... Berries buried like this kept very fresh."* **Malaija Papatsie, Iqaluit 1998**



*"Crowberries look delicious when they are big and ripe at this time of year in late August and early September. As the weather gets colder, crowberries and other berries start to freeze on the ground. When it starts melting again, berries from the year before become visible. You can even eat them then."* **Jaikku Pitseolak, Iqaluit, 1998**

# Wild Plant Greens

*For medicine and food*

Here are just some of the nutrients plant greens can provide:

**Vitamin C:**

Keeps our gums, teeth and skin healthy. It also helps wounds heal and fight infection.

**Vitamin A:**

Helps us see well in the dark and also helps us fight infection.

**Magnesium:**

Helps the heart beat properly.

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Fibre:**

Is not really a nutrient, but it is important for health. It is found only in plant foods and is needed to help keep people regular. It can also help prevent some kinds of cancer.



qunguliit



netted willow



arctic willow

The chart below shows where these nutrients are found in plants:

Nutrient Rating	Qunguliit (mountain sorrel)	Willow (arctic and netted)
<b>Excellent ways to get:</b> (around 1 cup (or 30 grams) raw, provides at least 25% of the recommended amount)		
<b>Nutrients found in lower amounts:</b>	Vitamin C Calcium Iron Magnesium Fibre	Calcium Magnesium Iron Fibre

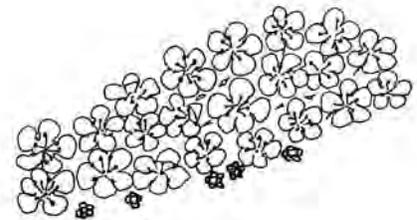
This table is based on what has been measured in qunguliit and willow.

## From the 'Interviewing Inuit Elders' Series \*



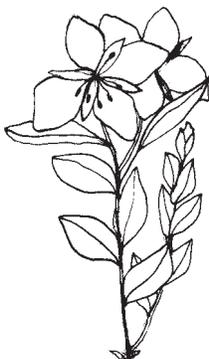
*Qunguliit* or mountain sorrel can ease stomach ache caused by too much fat intake. According to Malaija Papatsie and Jaikku Pitseolak of Iqaluit, as the plants grow, they lose their tangy taste. They taste sweet after being boiled in water and can be used to treat those with low energy. This brew was used to make people sweat. Consumed after meals they are an aid to digestion.

*Aupiluttunnguat* or purple saxifrage is the first flower to come out in the spring. Sometimes they are found among blueberry patches. The red-purple blossoms are tasty, especially when eaten with seal blubber. The leaves can be used for tea.



*Willows* or *suputiit* were delicious to eat when they have the *itsi*, juice in them. I would eat the plants when they started to mature. They tasted sweet when you chewed them. *Willows* are delicious. Jaikku Pitseolak, Iqaluit, 1998.

*Quarait* or net-veined willow are delicious when eaten raw. They need to be chopped or chewed to remove the juice. They could be boiled in water to make a brew for an upset stomach.



*Paunnat* or dwarf fireweed is delicious when mixed with crowberries, blood and oil. The leaves can be eaten raw or mixed with fat. *Paunnat* are good for indigestion.

# Seaweed

*For its naturally salty taste and good nutrition*

Here are just some of the nutrients seaweed can provide:

**Iron:**

Gives us healthy blood and keeps us from getting tired.

**Folate:**

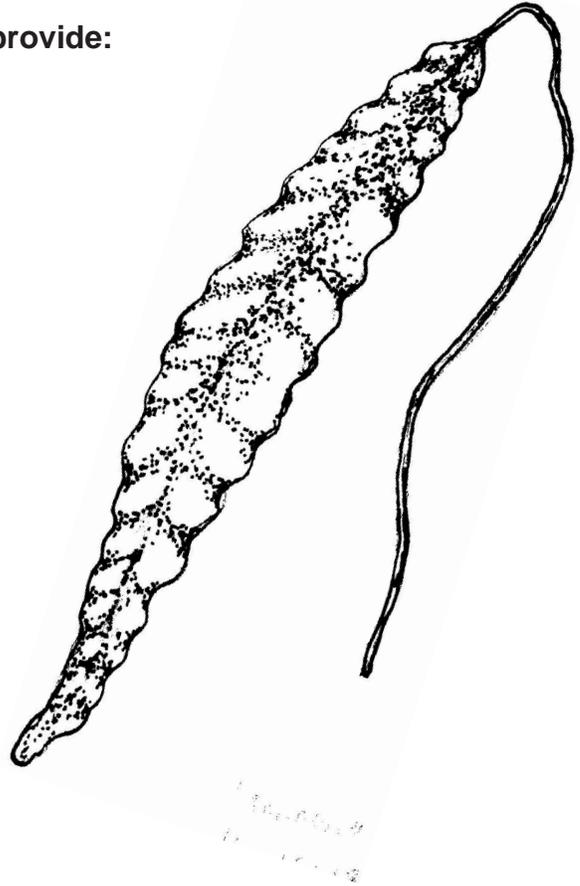
For healthy blood and healthy pregnancy.

**Magnesium:**

Helps the heart beat properly.

**Fibre:**

Is not really a nutrient, but it is important for health. It is found only in plant foods and is needed to keep people regular. It can also help prevent some kinds of cancer.



The chart below shows where these nutrients are found in seaweed:

	Seaweed
<b>Nutrient Rating</b>	
<b>Excellent ways to get:</b> (around 1/2 cup or 40 grams, provides at least 25% of the recommended amount)	
<b>Nutrients found in lower amounts:</b>	Iron Magnesium Folate Fibre

This table is based on what has been measured in the type of seaweed called *Laminaria*.

## Did you know?

The seaweed called qiqquat contains more vitamin C than the seaweed called rockweed or iautit.

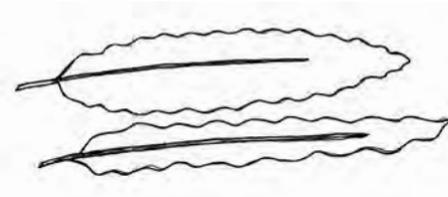
Seaweed is picked and eaten raw or taken home to cook and dry.

Adding seaweed to the water when boiling seal meat makes a tasty broth. Many people like to dip seaweed in seal meat broth.

Some people are looking at ways to harvest and sell seaweed as a northern food.



iautit

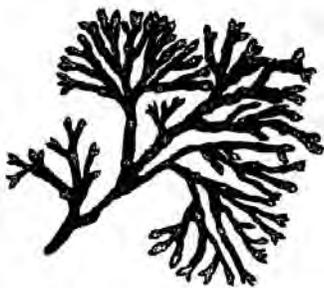


qiqquat

### From the 'Interviewing Inuit Elders' Series...

Arctic kelp or 'qiqquat' are said to be very rich and can cause stomach aches.

*"The kelp that causes stomach aches is found in the current. There is smaller one that is a delicacy when the ice has recently broken up in the spring".* **Malaija Papatsie, Iqaluit, 1998**



There is an old saying which says that qiqquat should not be used as toy whips because that will cause windy weather!

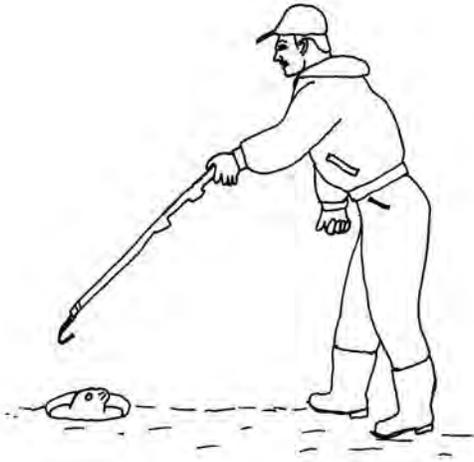
Seaweed can be harvested all year long.

It can heal small cuts which are not healing properly.

A type of seaweed called rockweed or iquutit is used to cure stomach aches caused by diarrhea.

# Fat

*Eating less fat can help people keep a healthy weight and is good for the heart.*

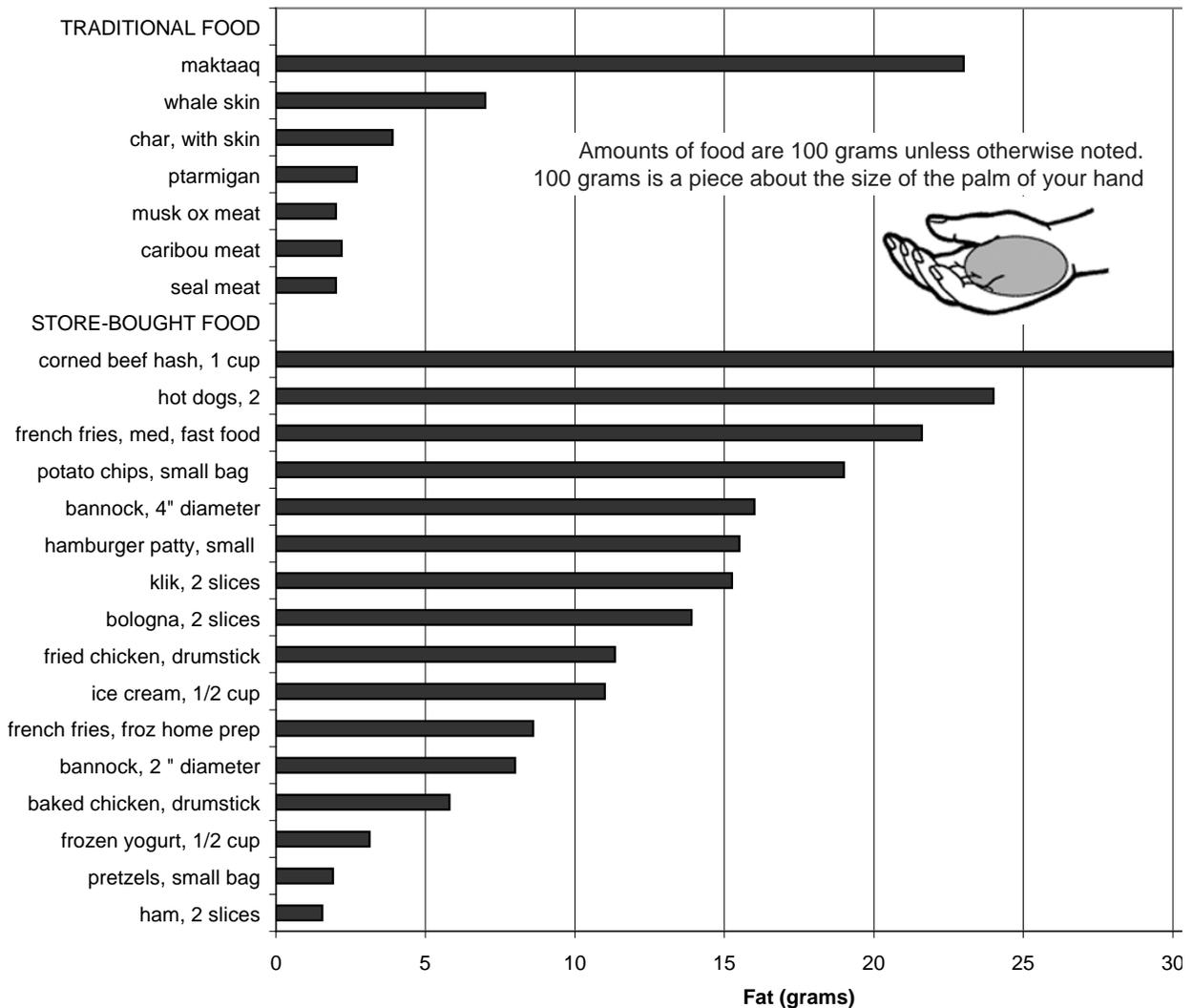


## How much fat do you need?

Energy Needs (Calories)	Recommended Amount of Fat per Day*
1500 (inactive adult)	33 - 58 grams
2000 (moderately active adult)	44 - 78 grams
2500 (very active adult)	55 - 97 grams

\* based on 20-35% of Calories from fat

Here is how much fat is in some traditional and store-bought foods:



## Tips for choosing fats

### Try to use most of the time:

- Fat from seals, whales, walrus and fish
- Liquid vegetable oils (canola, sunflower, etc.)



Some fats can help us have healthy hearts. They are liquid at room temperature.

One type of healthy fat is called **omega-3 fatty acids**.

They can help prevent heart disease and are also important for the developing brain.

Fat from char, seals, whales, walrus and polar bears are very rich in **omega-3 fatty acids**.

### Try to use less often:

- Margarine in tubs
- Butter



These fats are soft at room temperature. They are OK to use occasionally.

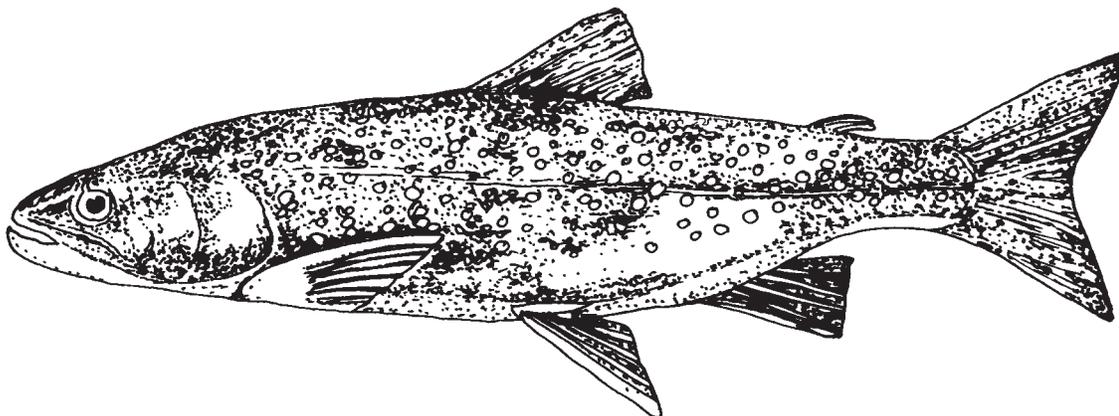
### Try not to use:

- Lard
- Crisco
- Margarine in sticks



These fats are solid at room temperature. They can clog our blood vessels and make the heart work too hard. Unhealthy fats can also be found in foods such as hot dogs, Kwik, bologna, fried foods, chips and coffee whitener.

**Arctic char is the most important source of omega-3 fatty acids for Nunavummiut.**



# Protein

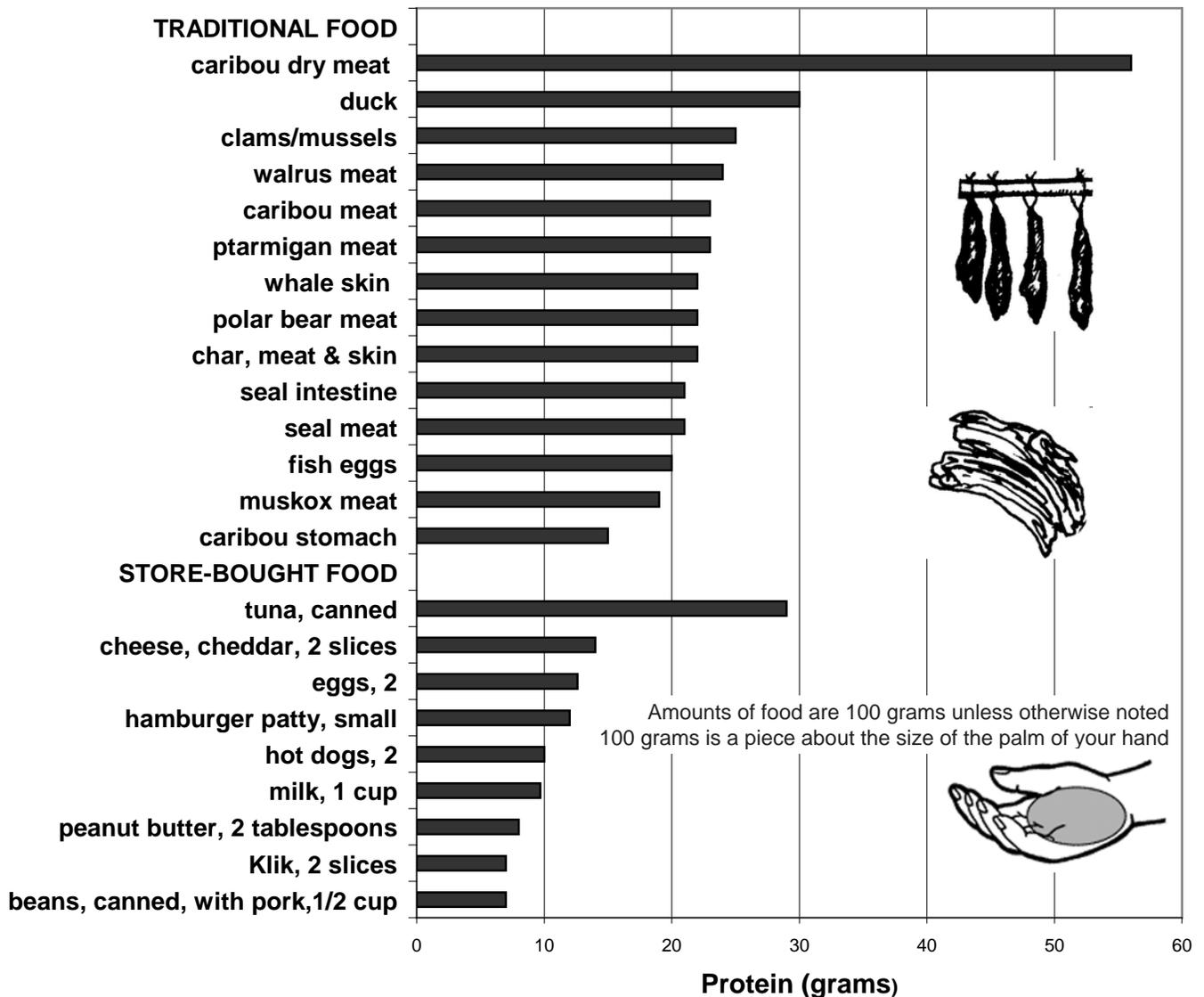
*We need protein for growing and repairing muscles, skin and blood.*



## How much protein do you need?

Age Group	Daily Protein Needs (grams)
7-12 months	14
1-3 years	13
4-8 years	19
9-13 years	34
14 and older, women	46
14 and older, men	56
Pregnancy/Breastfeeding	71

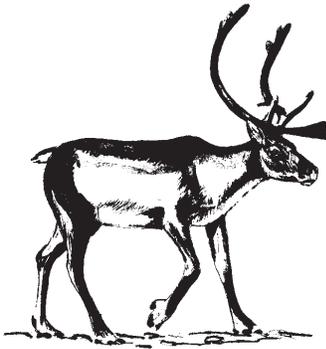
## Have some protein-rich foods everyday!



## Did you know?

### Have some protein-rich foods everyday!

- Nunavummiut have diets that are very rich in protein.
- The traditional foods that provide the most protein for Nunavummiut are caribou and seal meat, and arctic char.
- The store-bought foods that provide the most protein for Nunavummiut are chicken, hamburger meat and pork.
- People who are vegetarian don't eat meat. They get their protein from grains, beans and lentils, milk products and eggs.
- Athletes need a little more protein than people who are not active. The Inuit diet provides enough protein, even for athletes.



#### Caribou Stir Fry (serves 8)

- 2 lbs caribou or musk ox meat
- 4 celery stalks
- 4 carrots
- 1 onion
- 1 green bell pepper
- 1 red bell pepper
- 2 cloves garlic
- 2 tablespoons soy sauce, pepper



***Excellent source of protein!***  
***One serving provides 25 grams of protein***

1. Cut meat into thin strips, On another cutting board, cut veggies into similarly sized pieces
2. Add 2 tablespoon oil to wok or large frying pan, turn heat to medium high
3. Add meat and cook until slightly browned stirring constantly.
4. Add onion and garlic and cook for a couple of minutes, stirring constantly
5. Add the carrots, celery, and green and red peppers. Cook, stirring constantly for about 10 minutes or until the vegetables are tender, but still slightly crunchy.
6. Add soy sauce and pepper.

# Calcium

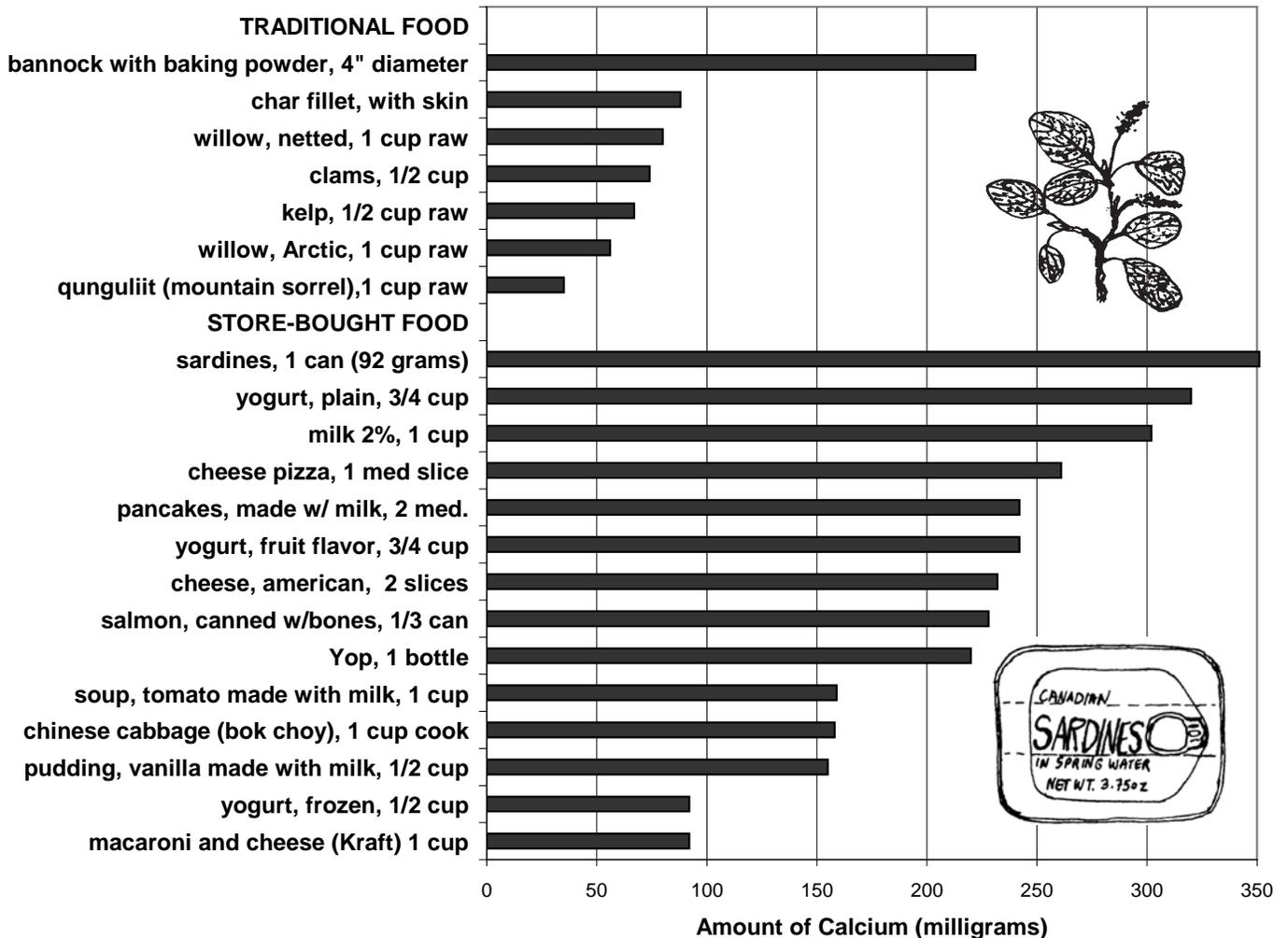
Calcium is needed for strong bones and teeth



How much calcium do you need?

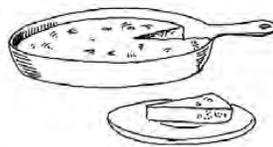
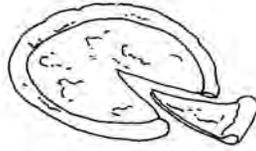
Age Group	Daily Calcium Needs (milligrams)
7-12 months	270
1-3 years	700
4-8 years	1000
9-18 years	1,300
19-50 years	1,000
51 and older	1,200
Pregnancy	1000
Breastfeeding	1000

Take your pick! These foods are all sources of calcium.



## Did you know?

- Getting enough calcium is especially important for young people and for people over 50.
- Many people in Nunavut have diets that are low in calcium.
- The store-bought foods that provide the most calcium for Nunavummiut are bannock, cheese, pizza and milk.
- Be sure to make your bannock with **baking powder** - that is what provides the calcium. Adding skim milk powder to bannock also boosts calcium.



## Lactose Intolerance

Milk and milk products are rich in calcium.

Some people have trouble digesting milk. (This is called lactose intolerance.)

### Why?

They don't have the enzyme that breaks down milk sugar (lactose) in the intestines.

### Symptoms:

- Feeling bloated
- Diarrhea and gas

### What to do:

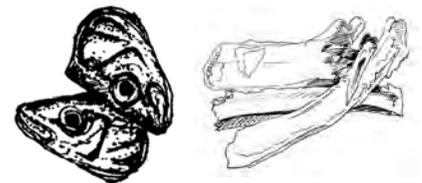
- Drink small amounts of milk at a time (1/4 - 1/2 cup)
- Try cheese or yogurt - they have less lactose than milk.
- Drink warm milk, not cold milk
- Have milk with other foods, not by itself
- Eat foods that contain calcium but no lactose:

fish fillets with skin  
fish heads  
soft well-cooked bones  
canned fish with bones (sardines, salmon)

## Calcium from bones

Not very much is known about how much calcium is in some traditional foods, like soft, well-cooked bones.

Based on what elders have said, calcium could be provided by fish heads, bone soups and stews and soft, spongy meat bones.



### Baked Bannock

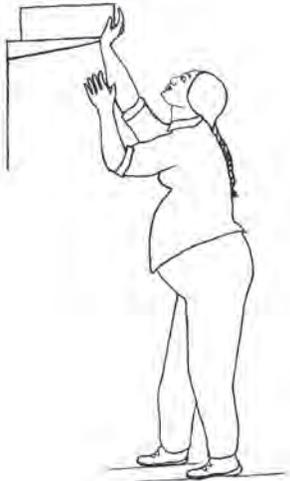
- 4 cups white flour (can use half white and half whole wheat)
- 3 tablespoons baking powder
- 1 cup skim milk powder
- 1 tsp salt
- 1/4 cup liquid vegetable oil (like canola)
- 1 1/2 to 2 cups water
- 1 cup fruit (cut up dried apricots, raisins, cranberries, etc.)

Mix dry ingredients. Stir in oil. Add water and then fruit. Shape dough.  
Bake at 375 degrees F for about 35 minutes

- Tasty**
- Rich in calcium**
- Low in fat**

# Folate

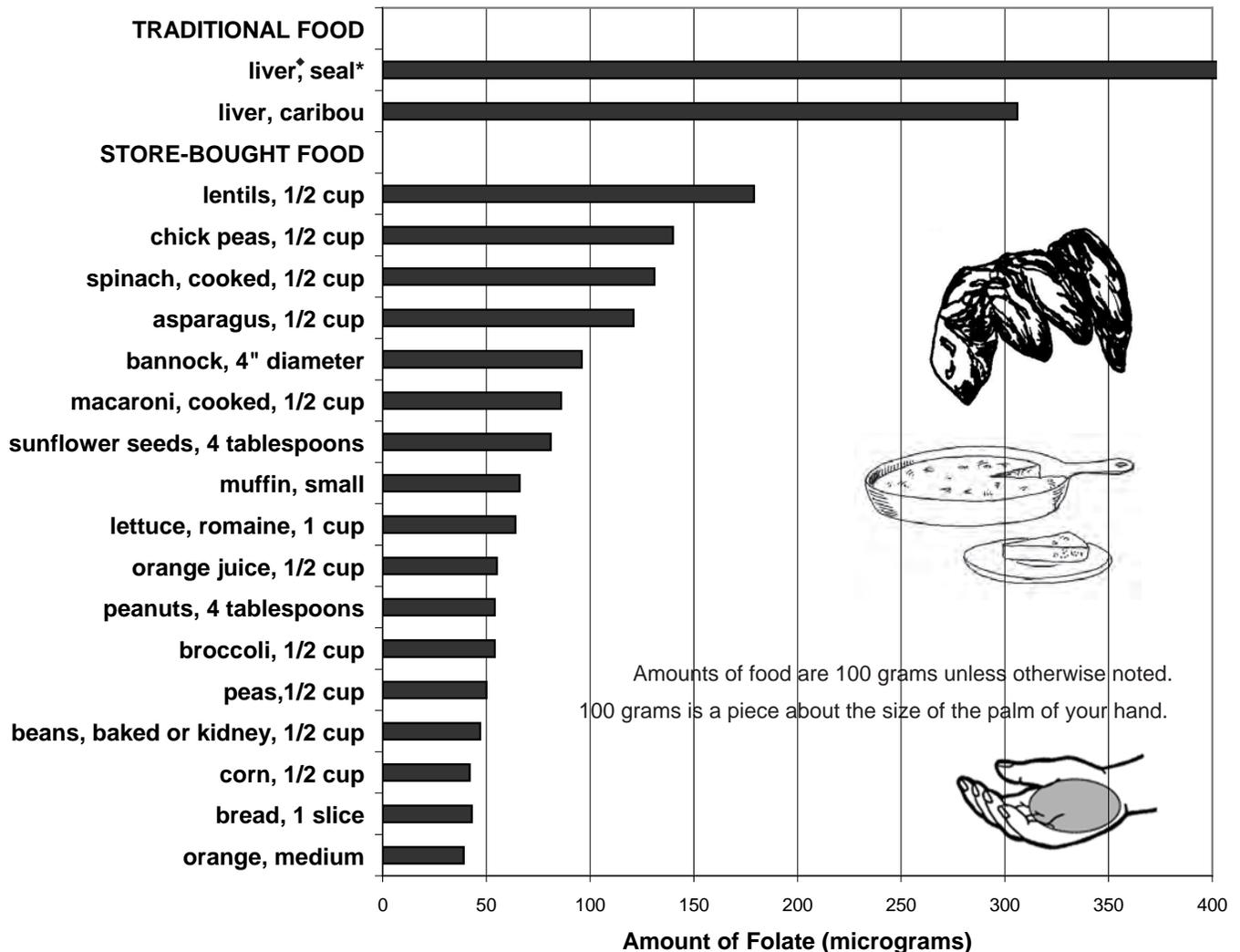
*Folate is needed for healthy pregnancy and healthy blood.*



## How much folate do you need?

Age Group	Daily Folate Needs (micrograms)
7-12 months	80
1-3 years	150
4-8 years	200
9-13 years	300
14 and older	400
Pregnancy	600
Breastfeeding	500

**Take your pick! These foods are all rich in folate.**



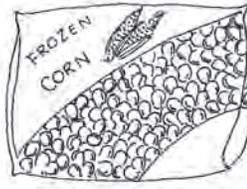
\* the value for seal liver is so high it goes off this graph - seal liver contains around 1000 micrograms folate/100 grams

♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Did you know?

## Add some folate to your day!

- When folate is added to food or to vitamin supplements it is called **folic acid**.
- Many people have diets that are low in folate.
- Folic acid is added to flour and pasta. This is why bannock is a good source of folic acid.
- The need for folate is highest during pregnancy.



Drink vegetable juice or 100% orange juice instead of pop or drink crystals.

Add frozen peas and/or corn when making soups and stews.



Make an easy meal of canned pork and beans, bannock and real orange juice.

### Folic acid helps prevent birth defects.

Folic acid is especially important for woman who are pregnant or might become pregnant.

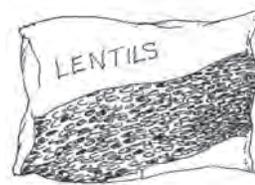
Some birth defects of a baby's spine and brain occur in the first few weeks of pregnancy, before a woman knows she is pregnant. Getting enough folic acid can prevent these birth defects.

The vitamin supplements given to women during pregnancy contain folic acid.



### Caribou Lentil Soup (8 servings)

- 2 tablespoons oil
- 1 pound ground caribou
- 3 large celery stalks, chopped
- 2 large carrots, peeled, chopped
- 1 medium onion, chopped
- 6 garlic cloves, chopped or 2 tsp garlic powder
- 2 1/3 cups dry lentils, rinsed or 2 cans (19 oz) lentils, drained
- 4 beef bouillon cubes
- 7 cups water
- 1 28-ounce canned tomatoes in juice
- 3 1/2 teaspoons ground cumin



**Excellent source of folate!**

**One serving provides 180 mcg of folate.**

1. Heat oil in large, heavy pot over medium-high heat. Add caribou, celery, carrots, onion, and garlic.
  2. Cook, breaking up caribou with back of fork, until meat is cooked through and beginning to brown, about 15 minutes.
  3. Add lentils and stir 1 minute. Add bouillon cubes, water, tomatoes with juice, and cumin. Bring soup to boil. Reduce heat to medium-low. Make sure bouillon cubes have dissolved. Cover and simmer until lentils are tender, about 35 minutes.  
*(If using canned lentils, add during the last 10 minutes of cooking)*
- Season soup with salt and pepper.

# Iron

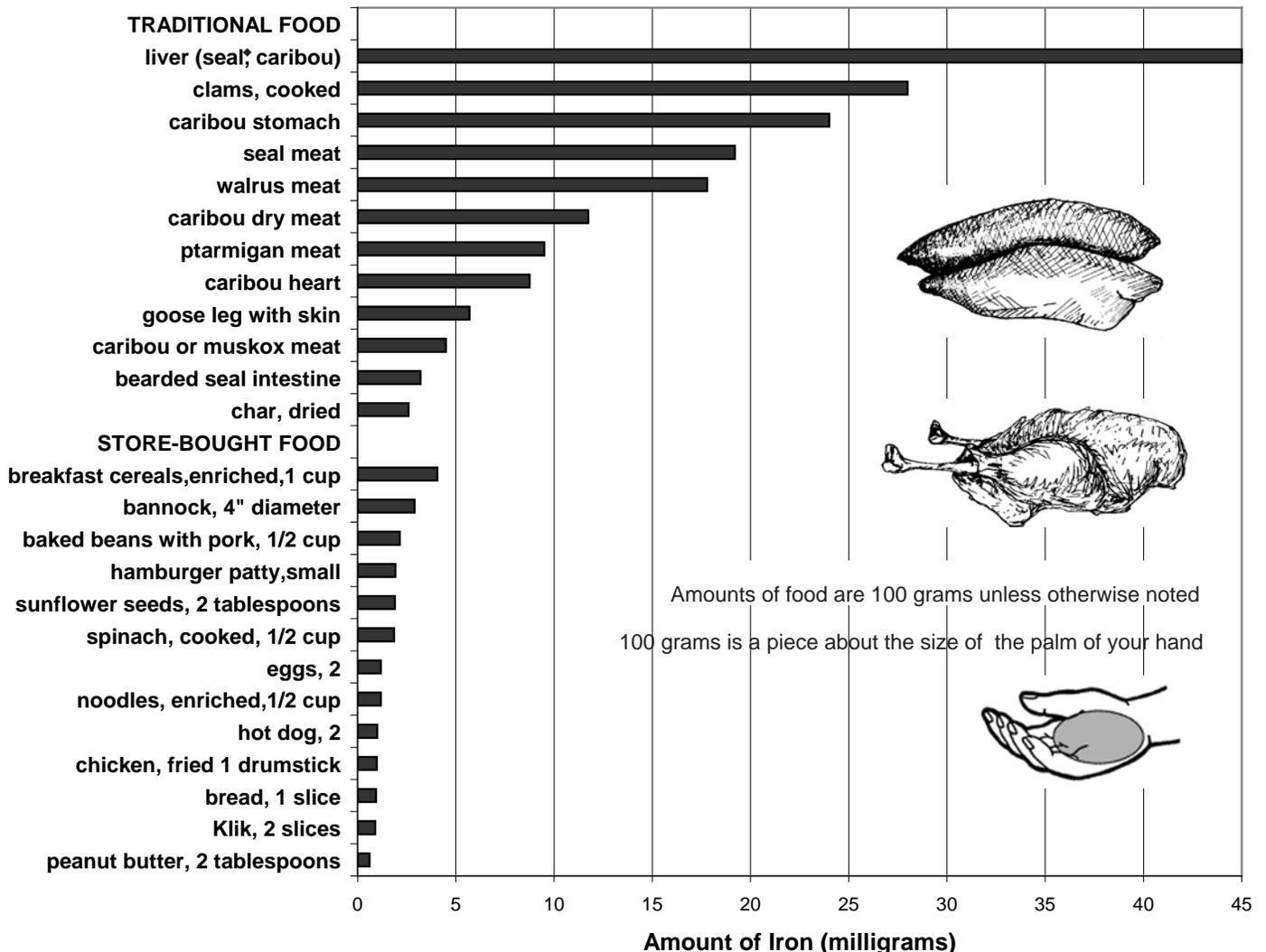
*Iron helps make good red blood that gives us energy.*



## How much iron do we need?

Age Group	Daily Iron Needs* (milligrams)
7-12 months	11
1-3 years	7
4-8 years	10
9-13 years	8
boys 14-18	11
girls 14-18	15
men 19 and older	8
women 51 and older	8
women 19-50	18
Pregnancy	27
Breastfeeding	9

## Compare the amount of iron in store-bought and traditional food.



† Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Did you know?

- Caribou, seal and walrus meat are very important sources of iron for Nunavummiut.
- Babies, teenage girls and pregnant women have very high iron needs. Some people in these groups may not be getting enough iron.
- If children don't have enough iron in their blood, they may grow slowly and not learn as well.
- If iron is lacking in our bodies, we may feel tired.
- Iron that comes from animal foods like seal and caribou meat, is absorbed better than iron from plant foods like beans and macaroni.
- Narwhal dry meat is the traditional food with the most iron (70 milligrams/100grams)



## Add some iron to your day!



When there's no meat or fish around, make a quick meal of canned beans, bannock and orange juice. The vitamin C from the orange juice will help the iron from the beans and bannock get absorbed.



Serving small amounts of liver to babies and children will help them get enough iron. It will also help them learn to like liver!

For a change, make a clam sauce to go with spaghetti; clams are rich in iron, vitamin A and vitamin C .

Try serving sunflower seeds and raisins as a snack.

Eating food with vitamin C, like maktaaq, bell peppers and oranges, helps us absorb iron from plant foods.

### **Caribou Meatballs** (makes 20-24 balls, cooking time 45-60 minutes) Serves 6

- 1 lb ground caribou
- 1 egg
- 1 med onion, minced (or 1 pkg onion soup mix)
- 1 cup rice, raw
- 1 can tomato soup (10 oz, 284 ml)
- 1 can water or milk
- salt, pepper

***Provides 5 grams of iron per serving!***

1. Turn on oven to 350 F
2. Mix ground caribou with other ingredients and form 20 -24 balls. Place them in a 2 quart casserole dish.
3. Mix soup mix with water or milk. Pour over meatballs and cook for about 45 minutes.

***Tip:*** The meatballs can also be cooked on the stove top in a frying pan over medium heat.

*Recipe taken from the Clyde River Prenatal Nutrition Group*

# Potassium

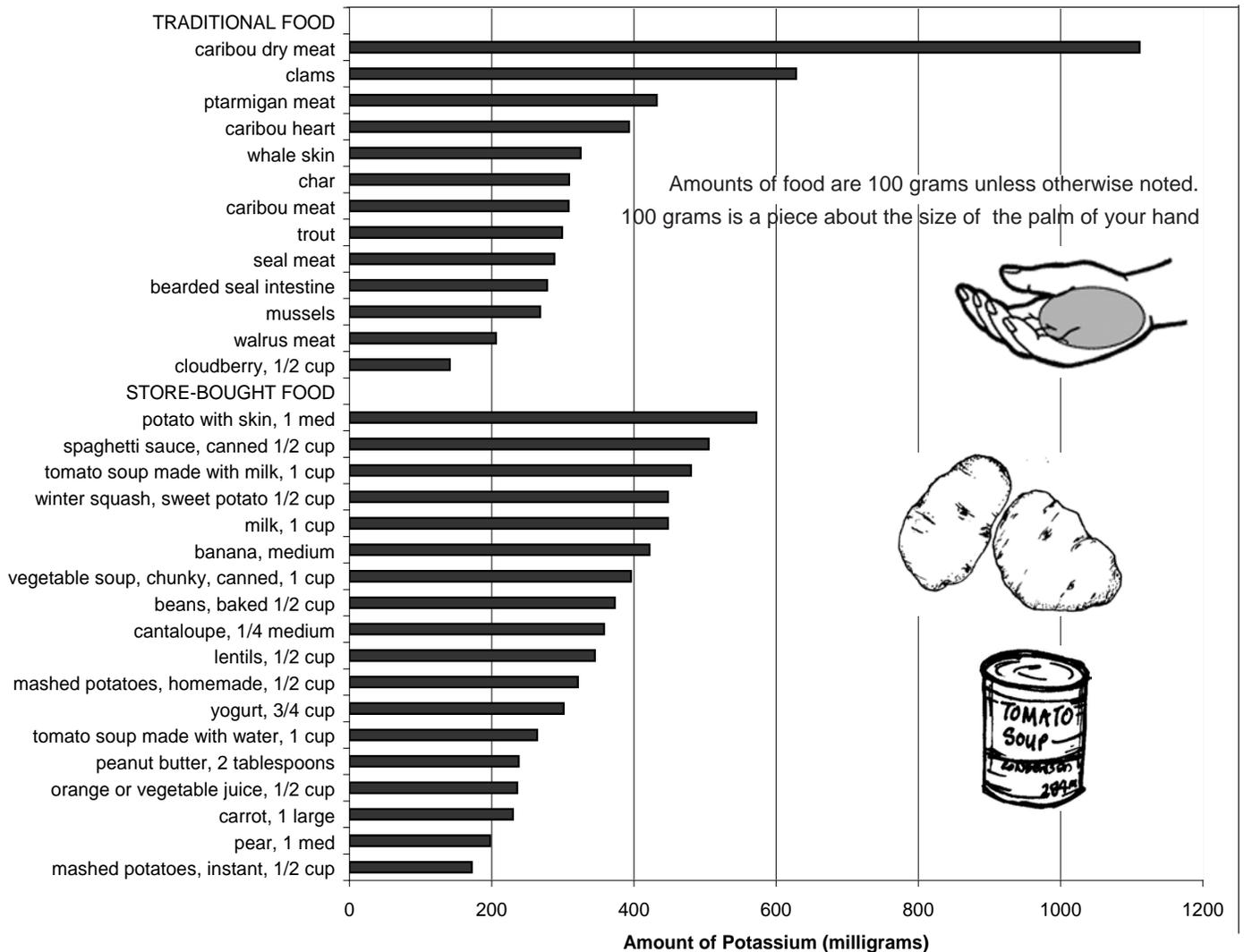
*Potassium helps us have healthy blood pressure*



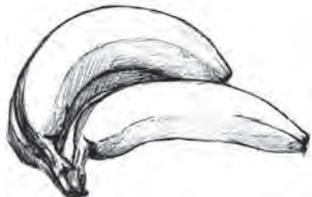
How much potassium do you need?

Age Group	Daily Potassium Needs (milligrams per day)
7-12 months	700
1-3 years	3000
4-8 years	3800
9-18 years	4500
19-50 years	4700
51 and older	4700
Pregnancy	4700
Breastfeeding	5100

Take your pick! These foods are all rich in potassium.



- The traditional foods with the most potassium are caribou dry meat, clams, ptarmigan meat and rabbit.
- Eating foods rich in potassium can help us have healthy blood pressure.
- Potassium can be found in both plant and animal foods.
- Eating fruits and vegetables rich in potassium can protect us from kidney stones and weak bones.
- Homemade mashed potatoes have more potassium than the instant kind.
- Sweet potatoes have a beautiful orange color and a slightly sweet taste. They are rich in potassium (and vitamin A!). Like regular fresh potatoes, they can be baked, boiled or microwaved. Season with salt and pepper and butter or margarine for a tasty treat.



- Warm up with a bowl of vegetable or tomato soup. Both canned and home-made are rich in potassium.
- Add milk to canned tomato soup instead of water - it will make it richer in potassium.
- Drink vegetable or orange juice instead of pop or drink crystals.
- Think of bananas when you are looking for a quick snack. They are one of the fruits with the most potassium. Try them in cereal, on bread with peanut butter and in quick breads and muffins.
- Spaghetti sauce is a tasty way to get potassium. Here's a recipe to try:

**Fast Spaghetti Sauce**

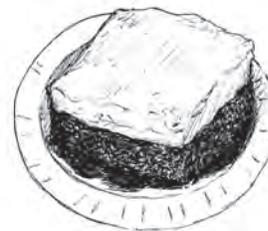
Heat 1 tablespoon oil in frying pan. Cook 1/2 onion, chopped, and 1/2 pound ground caribou or beef, until the meat is brown. Add a 14 oz can of spaghetti sauce and 1 cup chopped carrots or celery. Simmer until the carrots or celery are cooked.

Serves 4 and provides around 500 milligrams of potassium per serving.

**Shepherd's Pie (serves 6)**

- 1 cup onion, chopped
- 1 tablespoon liquid vegetable oil
- 1 pound ground caribou or ground beef
- 1 tsp salt
- 1-10 oz can corn, drained
- 4 cups mashed potatoes (instant or homemade)

1. Preheat oven to 375 degrees.
2. In a frying pan, cook the chopped onion in oil
3. Add meat and brown, drain off extra fat. Add salt.
4. Place meat in baking dish, distribute corn over meat.
5. Cover with mashed potatoes.
6. Bake for 15 - 20 minutes or until top is golden brown.



**Excellent source of potassium!  
Provides around 800 mg per serving**

*Recipe taken from Qamanituaq Cooks! produced by the Baker Lake Prenatal Nutrition Project*

# Vitamin A

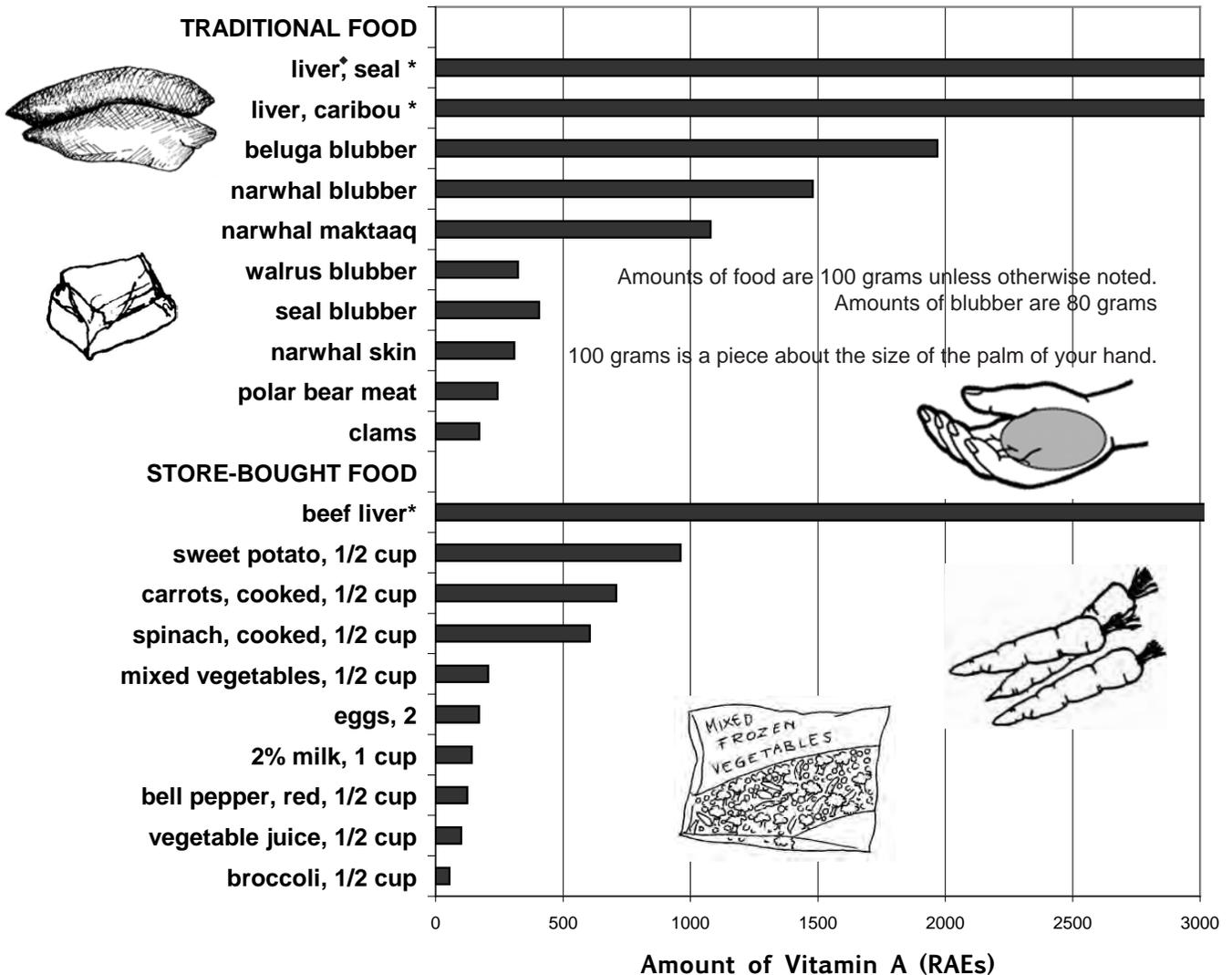
*Vitamin A helps fight infection and helps us see better in the dark*



How much vitamin A do you need?

Age Group	Daily Vit. A Needs (RAEs)
1-3 years	300
4-8 years	400
9-13 years	600
men 14 and older	900
women 14 and older	700
Pregnancy	770
Breastfeeding	1,300

Take your pick! These foods are all rich in vitamin A.



\* Vit A values for liver are so high they go off this graph. The values are: caribou liver: 30,000; seal liver: 15,000; goose and beef liver: 9,000 RAEs

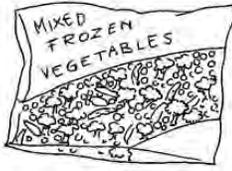
♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Did you know?

- Seal and caribou liver,\* and narwhal and beluga blubber are the most important sources of vitamin A for Nunavummiut.



- Frozen mixed vegetables, carrots, eggs also provide Nunavummiut with vitamin A.

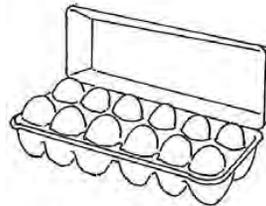


- Some adult Nunavummiut have diets that are low in vitamin A.

- Vitamin A can be stored in the body. Just one serving of liver provides enough vitamin A to last many days.



- Liver is the traditional food with the most vitamin A.



## Add some vit A to your day!

To boost vitamin A, add a cup of frozen mixed vegetables to a packaged soup mix.

Serving small amounts of liver to babies and children will help them get enough vitamin A. It will also help them learn to like liver!

Choose colourful vegetables for the most vitamin A. Carrots, sweet potatoes, spinach, bell pepper and broccoli are all great sources.

Try serving raw veggies, like carrots and red bell pepper, with a yogurt dip, as a snack for kids.

### Creamy Carrot Soup (serves 8)

1 cup chicken broth (made with bouillon cube or powder)  
4 cups carrots, sliced (fresh, frozen or canned)  
1/4 cup margarine  
1/3 cup onion, finely chopped  
1/4 cup flour  
1 cup skim milk powder  
3 cups cold water  
salt and pepper to taste



**One serving is an excellent source of vitamin A!**

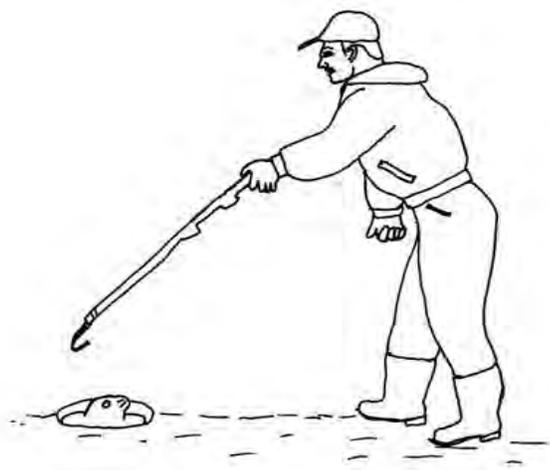
1. In a sauce pan over medium heat, add carrots to chicken broth and cook until soft. Add more water if necessary during cooking.
2. Remove pot from stove. Do not drain liquid. Mash carrots with potato masher or a fork. Set them aside.
3. In another large pot, melt the margarine. Add the chopped onion and cook until soft, about 5 to 7 minutes.
4. Add the flour and milk powder to the cooked onion. Cook, stirring constantly for several minutes.
5. Stir in the cold water. Cook and stir until the mixture boils and is smooth and thick.
6. Add the mashed carrots to the mixture and heat until hot. Add salt and pepper to taste.

*Recipe tested by the Cooking Group of the Baker Lake Prenatal Nutrition Project*

\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# Vitamin C

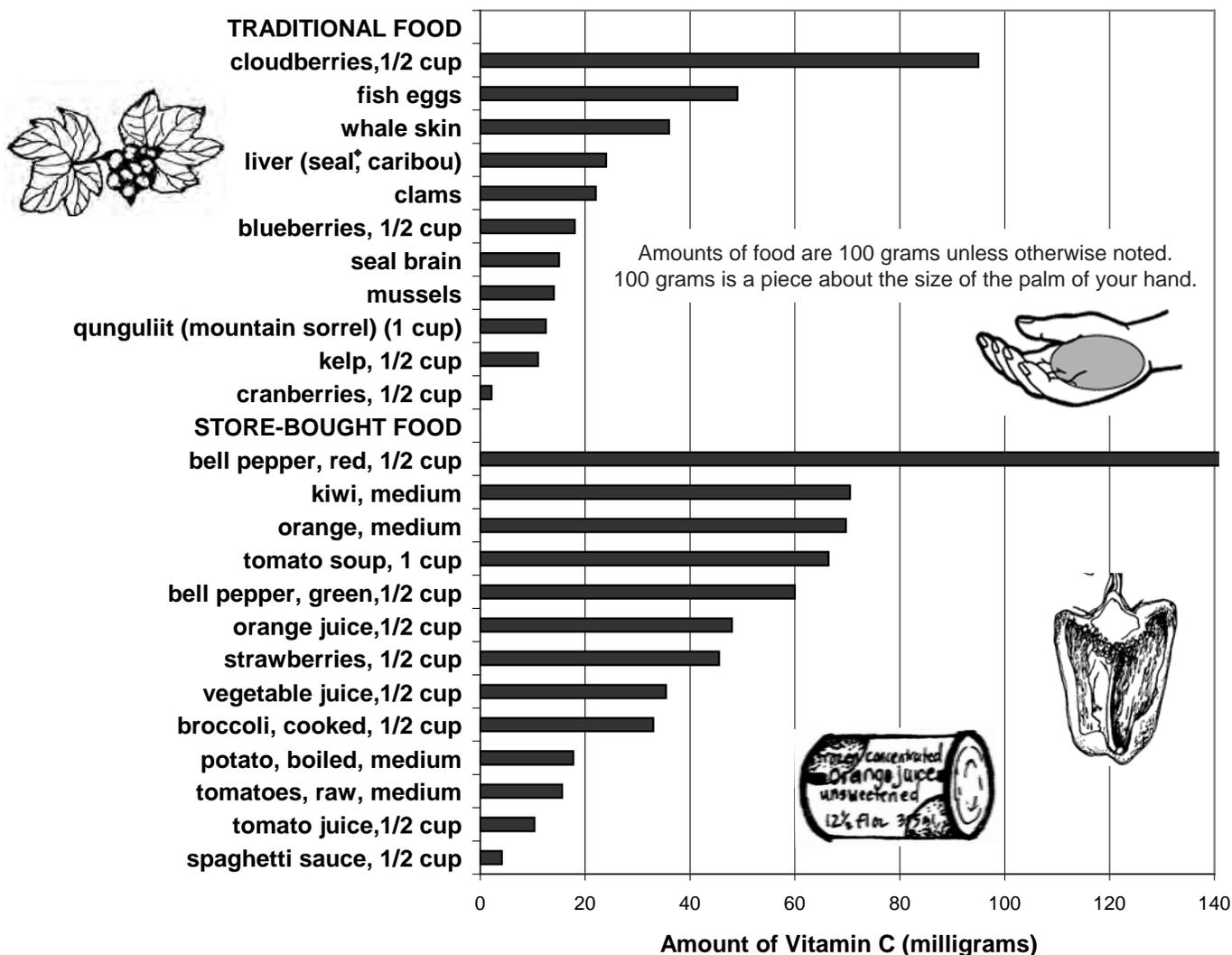
*Helps wounds to heal and keeps our gums, teeth and skin healthy.*



## How much vitamin C do you need?

Age Group	Daily Vit. C Needs (milligrams)
7-12 months	50
1-3 years	15
4-8 years	25
9-13 years	45
boys 14-18	75
girls 14-18	65
men 19 and older	90
women 19 and older	75
Pregnancy	85
Breastfeeding	120

## Take your pick! These foods are all rich in vitamin C.



\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Did you know?

## Add some vitamin C to your day!

- Whale skin is the most important traditional food source of vitamin C for Nunavummiut.
- Drink crystals with vitamin C added, orange juice from frozen concentrate and apple juice are also important sources of vitamin C for Nunavummiut.
- Some elders have diets that are low in vitamin C.
- Vitamin C can not be stored in the body. We need to have some everyday.
- During times of illness, stress or surgery, we need extra vitamin C.



To boost vitamin C, try to replace one drink of pop with real orange, apple or vegetable juice.

Serving small amounts of liver to babies and children will help them get enough vitamin C. It will also help them learn to like liver!

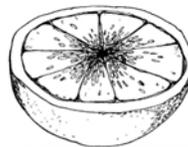
Vitamin C is lost in water and in the air, so:

- Cook vegetables in very little water
- Don't soak vegetables in water
- Don't overcook
- Store fruits and vegetables in containers or bags



**Smokers need an extra 35 milligrams of vitamin C every day! This is because smoking lowers the body's ability to use vitamin C.**

One-half cup of any of the foods below provides around 35 mg of vitamin C:



### **Creamy Maktaaq Chowder (serves 8)**

- 1 ½ pounds (3 cups) maktaaq without the blubber, cut into cubes
- 1 tablespoon oil
- 1 onion, chopped
- 4 potatoes, peeled and chopped
- 2 cans mushroom soup
- 3 cans water
- 2 cans evaporated milk
- 1 can corn, drained



***Delicious!***

***Excellent source of vitamin C.***

1. Place oil in heavy pot, add chopped onion and cook until golden brown.
2. Add the potatoes, soup, water, evaporated milk and maktaaq. Bring to boil then lower heat and cook over medium heat for about 30 minutes or until potatoes and maktaaq are cooked.
3. Add the corn and let cook for another 5 minutes.
4. Season to taste with salt and pepper.
5. Enjoy!

# Vitamin D

*We need vitamin D for strong bones and teeth*

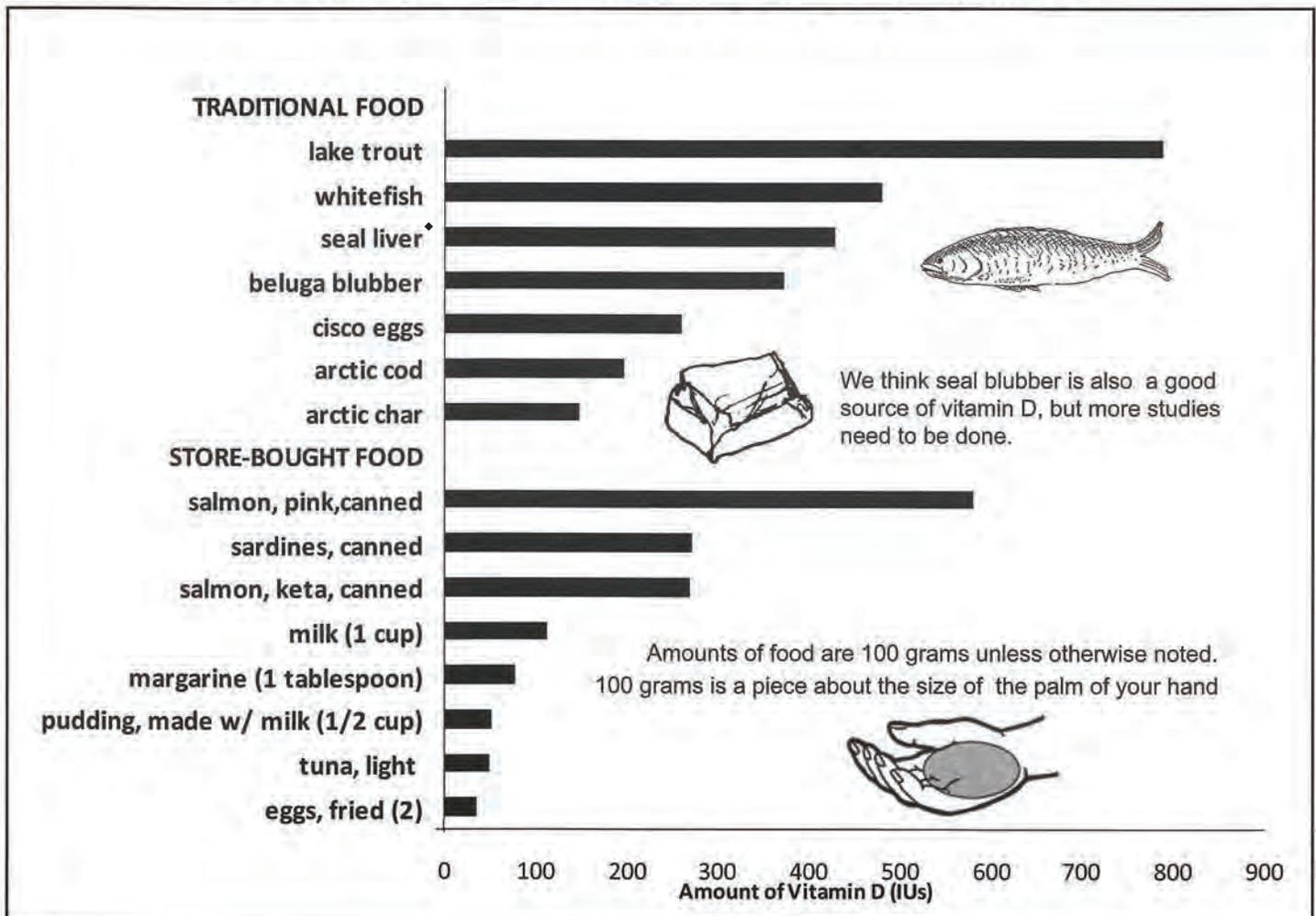


## The Vitamin D supplementation policy for Nunavut is:

Group	Daily Vitamin D Supplement Needs
	IUs
Infants less than 1 who breastfeed	800
Infants less than 1 who bottle feed	400
Children older than 1	400
Pregnant* and nursing women	1000
People over 50	400

\* In addition to the 400 IUs in prenatal supplements

## Take your pick! These foods are all rich in vitamin D:



♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

- We can get vitamin D from food, from supplements and from sunshine.
- Vitamin D is called the 'sunshine' vitamin because our skin makes vitamin D when sunlight hits it.
- In Nunavut, the sun doesn't provide us with enough vitamin D.
- Vitamin D supplements are needed every day for:
  - pregnant and breastfeeding women
  - infants and young children
  - people over 50



Try to eat fish, milk, eggs and other foods with vitamin D, often.

Inuit traditional foods such as fish, seal liver\* and blubber are rich in vitamin D.

Take advantage of sunny days to get outside with the kids and get some free vitamin D!



### **Rickets**

Without enough vitamin D, babies and young children may develop a disease called rickets. Rickets is a painful disease. It makes bones get soft and bend.

We can prevent rickets by giving vitamin D drops to babies and young children every day, all year long.

Taking vitamin D supplements every day, all year long when pregnant and breastfeeding will also help prevent rickets.



**Sunshine and Fish!**

**Two great sources  
of vitamin D**

\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# Calcium

We need calcium for strong bones and teeth.

Calcium is especially important for young people.

Building a strong skeleton when you are young means your bones will stay strong longer.

Physical activity and vitamin D are also needed to build healthy bones.

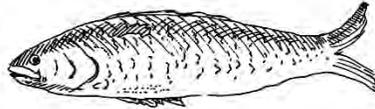
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## Traditional food sources of calcium

Not very much is known about how much calcium is in traditional food. Based on what elders have said and the few studies that have been done, calcium could be provided by:



Fish heads



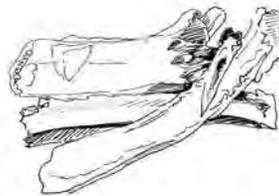
Fish eaten with skin



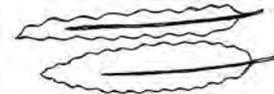
Fish head soup



Clams



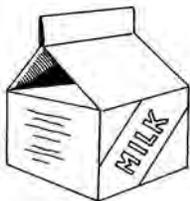
Soft spongy bones



Plants  
(seaweed, willow, sorrel)

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## Excellent sources of calcium (one serving provides at least 25% of daily need)



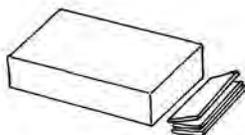
Milk



Canned fish with bones



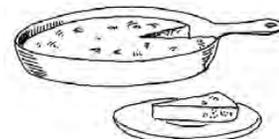
Yogurt and Yop



Cheese



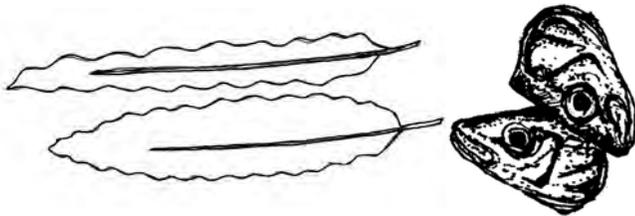
Cheese pizza



Bannock  
(made with baking powder)

## Calcium in traditional foods

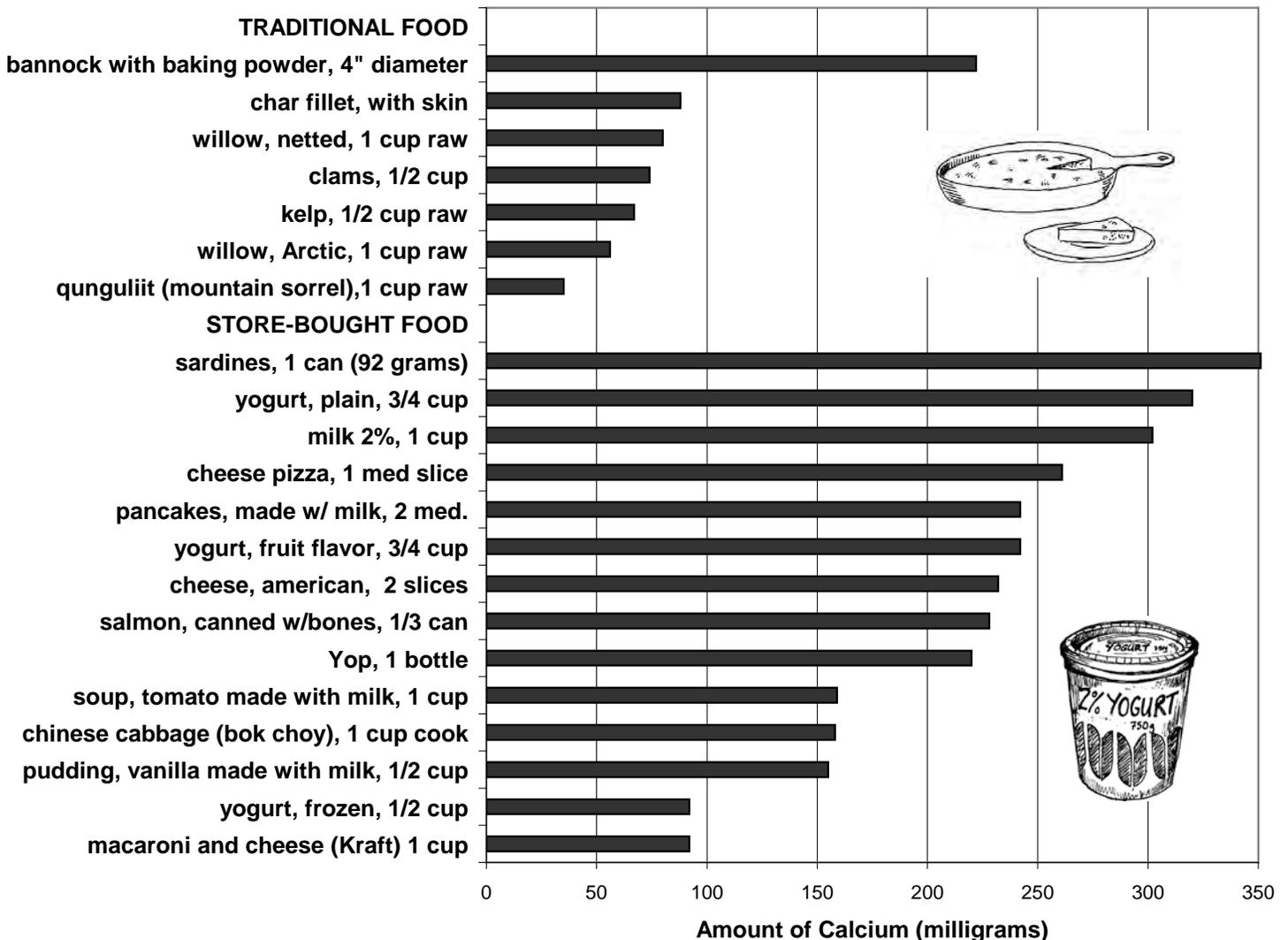
Elders say they have always made good use of animal bones by eating well-cooked fish and fish heads, soft spongy ends of bones, and soups and stews made with bones. These are likely to be good sources of calcium. Fish skin also contains calcium and so do some plants like willow, quinguliq and seaweed.



## How much calcium do we need?

Age Group	Daily Calcium Needs (milligrams)
7-12 months	270
1-3 years	700
4-8 years	1000
9-18 years	1,300
19-50 years	1,000
51 and older	1,200
Pregnancy	1000
Breastfeeding	1000

## How much calcium is in food?



# Folate

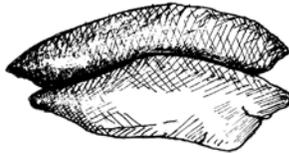
Folate is needed for healthy pregnancy and healthy blood.  
It can also be called folic acid or folacin.

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## Excellent sources of folate (one serving provides 25% of the daily need)



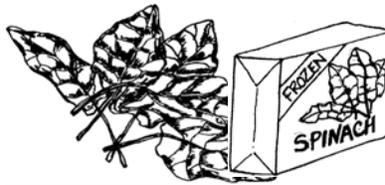
Liver  
(seal, caribou, etc)



Lentils



Asparagus



Spinach



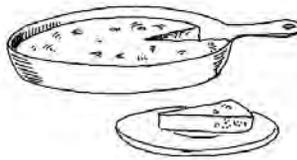
Chick peas

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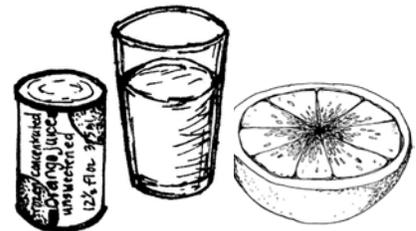
## Other sources of folate (one serving provides less than 25% of daily need)



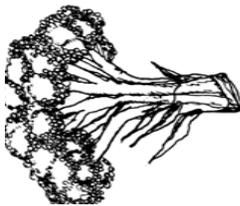
Pasta



Bannock



Oranges and Orange Juice



Broccoli



Corn



Sunflower Seeds

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♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Folate in traditional food

## How much folate do we need?

Folate has not been measured in many traditional foods. Seal and caribou liver are rich in folate, and based on what we know about store-bought food, we think that wild greens are also rich in folate.

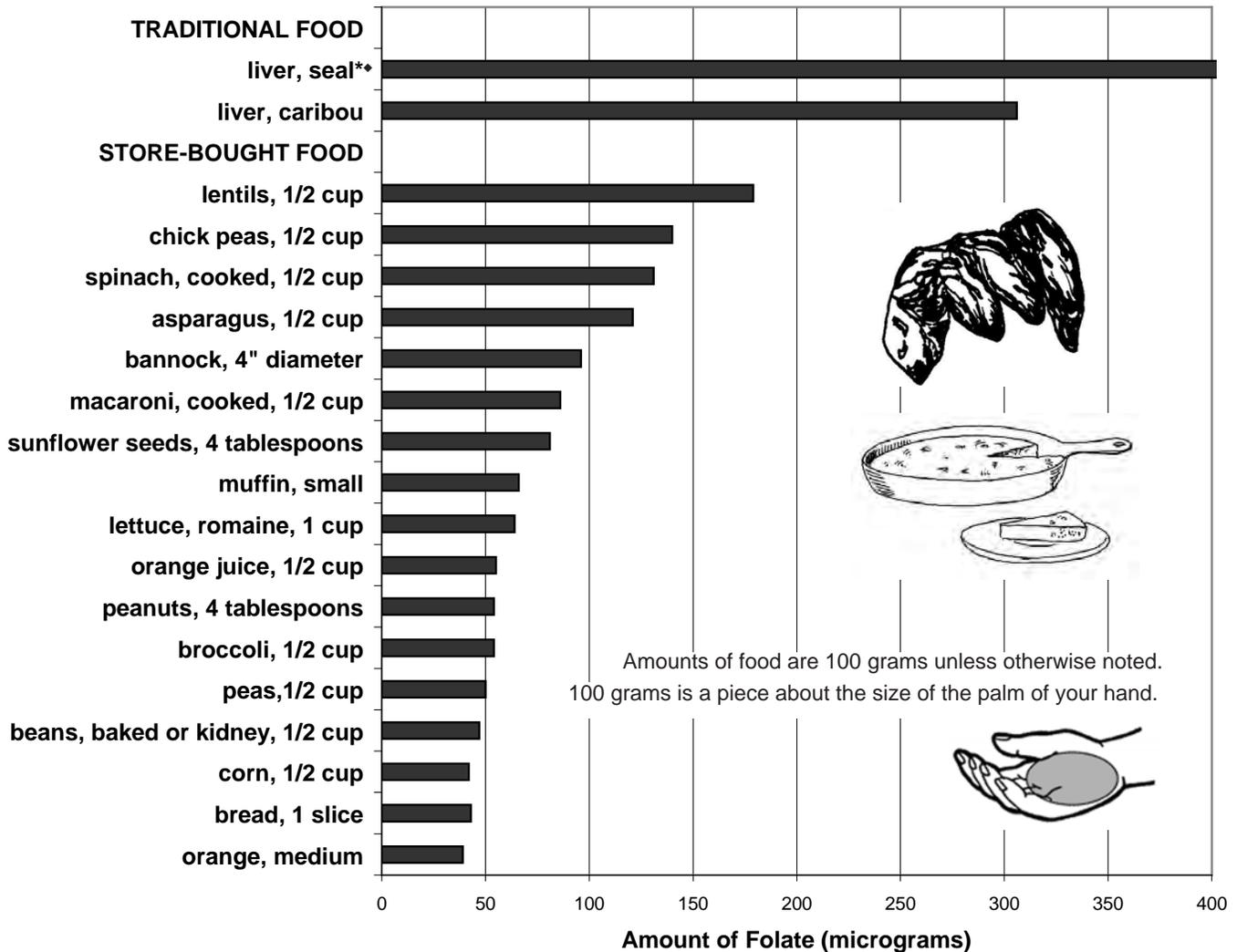


Age Group	Daily Folate Needs (micrograms)
7-12 months	80
1-3 years	150
4-8 years	200
9-13 years	300
14 and older	400
Pregnancy	600
Breastfeeding	500

### Folate helps prevent birth defects

Some birth defects of a baby's spine and brain occur very early in pregnancy, before a woman knows she is pregnant. This is why getting enough folate is so important for women who could become pregnant.

### How much folate is in food?



\* the value for seal liver is so high it goes off this graph - seal liver contains around 1000 micrograms folate/100 grams.

♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# Iron

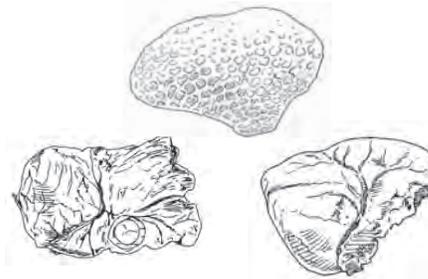
Iron helps make good red blood that gives us energy.  
Iron is especially important for infants and pregnant woman.

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## Excellent sources of iron (one serving provides 25% of daily need)



Organ Meat\* and Blood



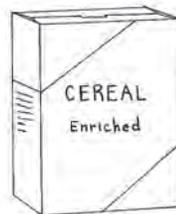
Traditional Meats



Wild Birds  
(including liver and gizzards)



Clams and Mussels



Enriched Cereals



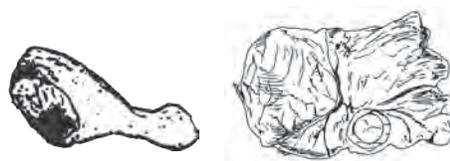
Beans and Lentils

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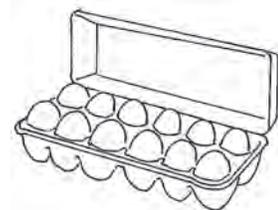
## Other sources of iron (one serving provides less than 25% of daily need)



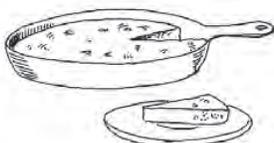
Pasta



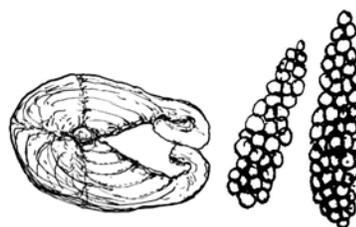
Other Meats  
(beef, chicken, pork)



Eggs



Bannock and Bread



Fish and Fish eggs



Nuts and Seeds

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\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Iron in traditional foods

The meat, blood and organs\* of sea and land animals are very rich in iron.



### Infants need more iron than men!

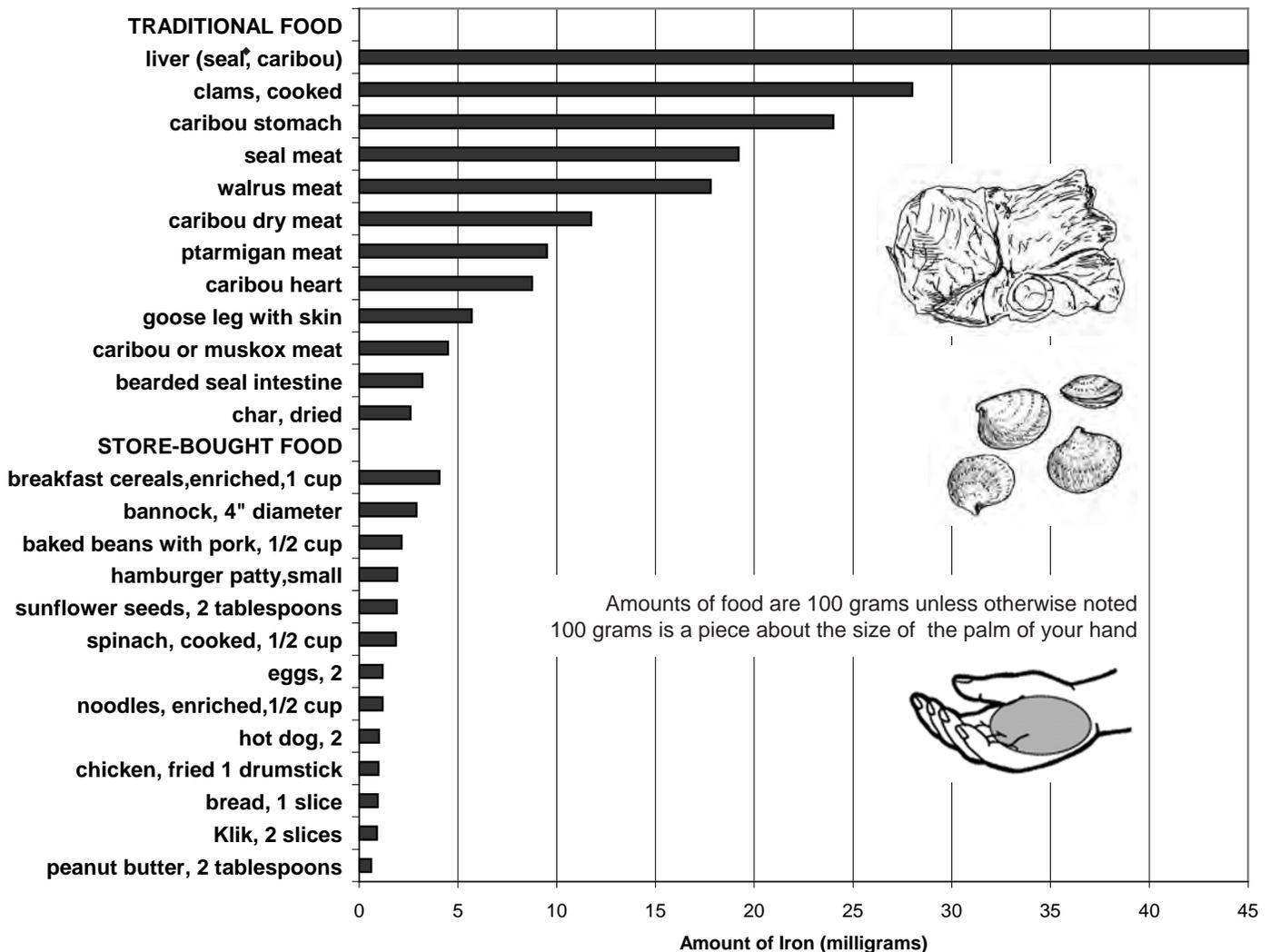
Babies between 7-12 months old are growing so quickly they need more iron than a grown man!

Just one heaping tablespoon of caribou liver will provide infants with almost all the iron they need for the day.

## How much iron do we need?

Age Group	Daily Iron Needs* (milligrams)
7-12 months	11
1-3 years	7
4-8 years	10
9-13 years	8
boys 14-18	11
girls 14-18	15
men 19 and older women 51 and older	8
women 19-50	18
Pregnancy	27
Breastfeeding	9

## How much iron is in food?



\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# Vitamin A

Vitamin A helps our body fight infection and lets us see better in the dark.

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## Excellent sources of vitamin A (one serving provides 25% of daily need)



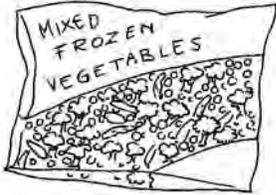
Liver<sup>♦</sup>



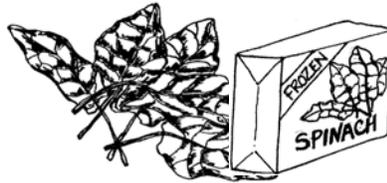
Blubber



Maktaaq



Mixed vegetables



Spinach



Carrots

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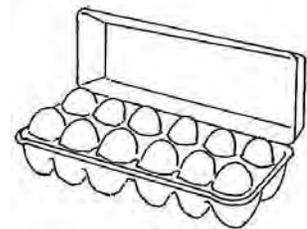
## Other sources of vitamin A (one serving provides less than 25% of daily need)



Clams



Milk  
(fresh, powdered, evaporated)



Eggs



Red Bell Pepper



Broccoli



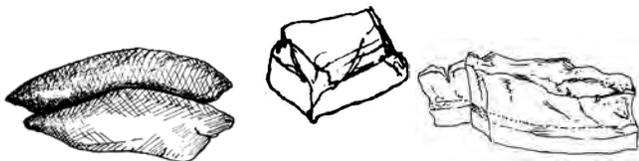
Vegetable Juice

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<sup>♦</sup> Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Vitamin A in traditional foods

## How much vit A do we need?

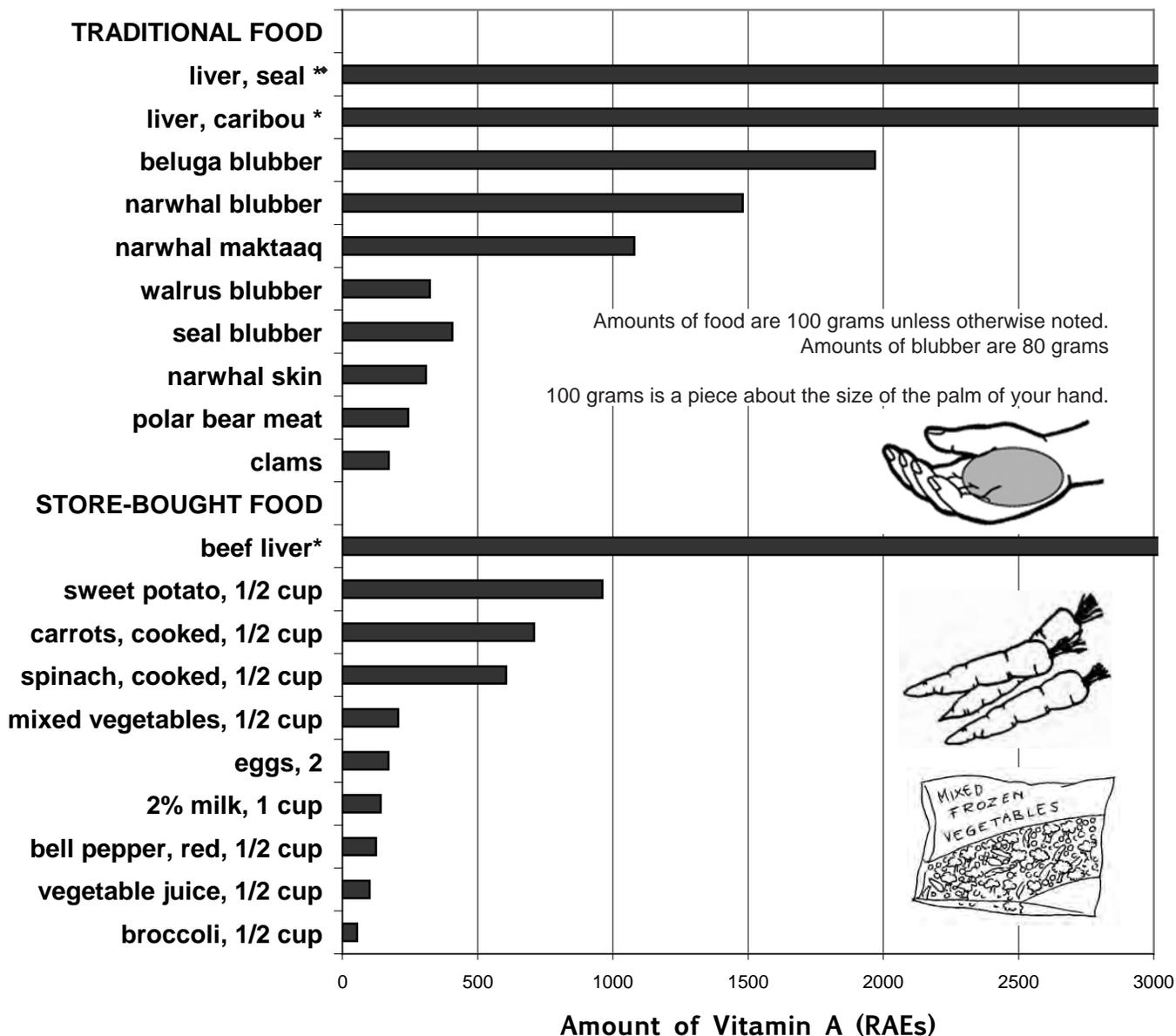


Inuit traditional foods such as liver, blubber and maktaaq are very rich in vitamin A.

Just one serving of caribou liver will give you all the vitamin A you need for many days!

Age Group	Daily Vit. A Needs (RAEs)
1-3 years	300
4-8 years	400
9-13 years	600
men 14 and older	900
women 14 and older	700
Pregnancy	770
Breastfeeding	1,300

## How much vitamin A is in food?



\* Vit A values for liver are so high they go off this graph. The values are: caribou liver: 30,000; seal liver: 15,000; goose liver: 9,000 and beef liver: 9,000 RAEs

♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# Vitamin C

Vitamin C helps wounds to heal and keeps our gums, teeth and skin healthy.  
Smokers need more vitamin C than non-smokers

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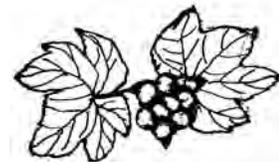
## Excellent sources of vitamin C (one serving provides 50% of the daily need)



Whale skin



Fish eggs



Cloudberry



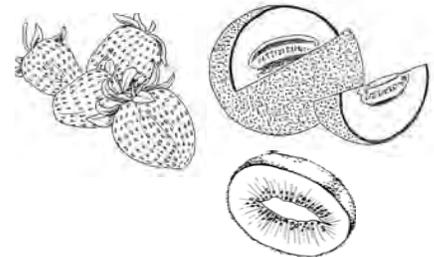
Oranges and Orange juice



Bell peppers



Tomato soup



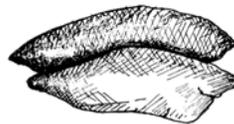
Kiwi, Cantaloupe, Strawberries

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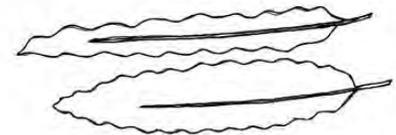
## Other sources of vitamin C (one serving provides less than 50% of the daily need)



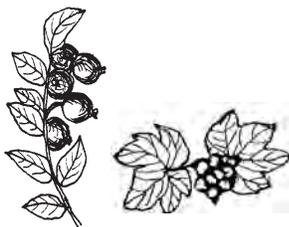
Qunguliit



Liver  
(seal\*, caribou)



Seaweed



Berries



Broccoli



Potatoes

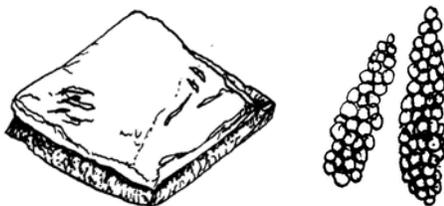
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\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

## Vitamin C in traditional foods

## How much vitamin C do we need?

Based on what has been measured, cloudberry, cisco eggs, whale skin, liver and clams are the Inuit traditional foods with the most vitamin C.

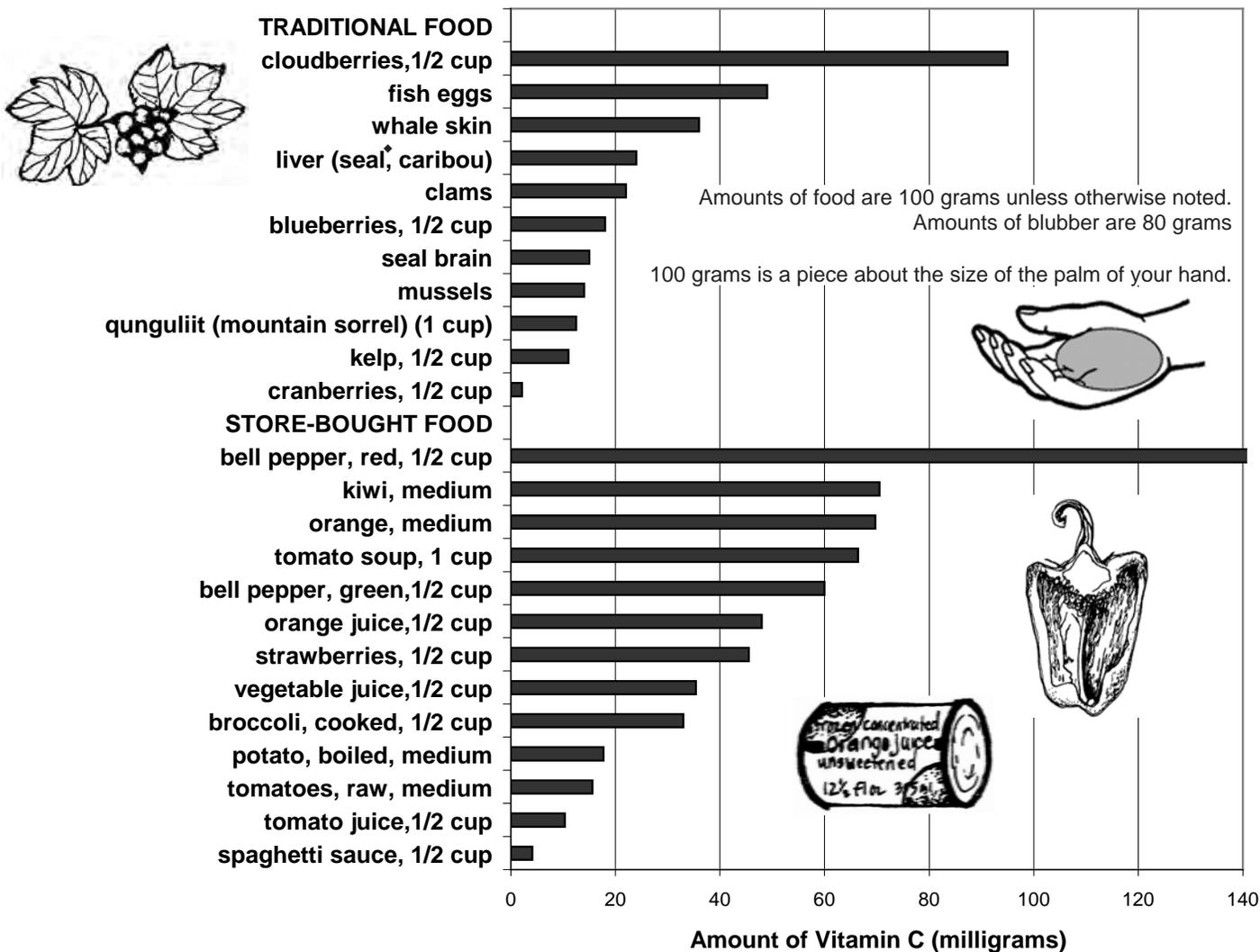


### Smokers need an extra 35 milligrams of vitamin C every day!

One serving of whale skin provides about this much.

Age Group	Daily Vit. C Needs (milligrams)
7-12 months	50
1-3 years	15
4-8 years	25
9-13 years	45
boys 14-18	75
girls 14-18	65
men 19 and older	90
women 19 and older	75
Pregnancy	85
Breastfeeding	120

## How much vitamin C is in food?



\* Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

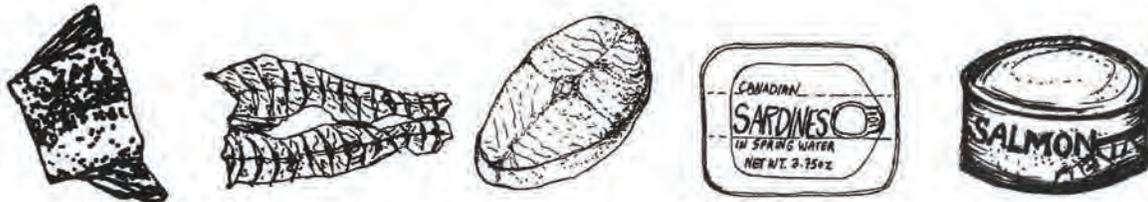
# Vitamin D

We need vitamin D for strong bones and teeth.

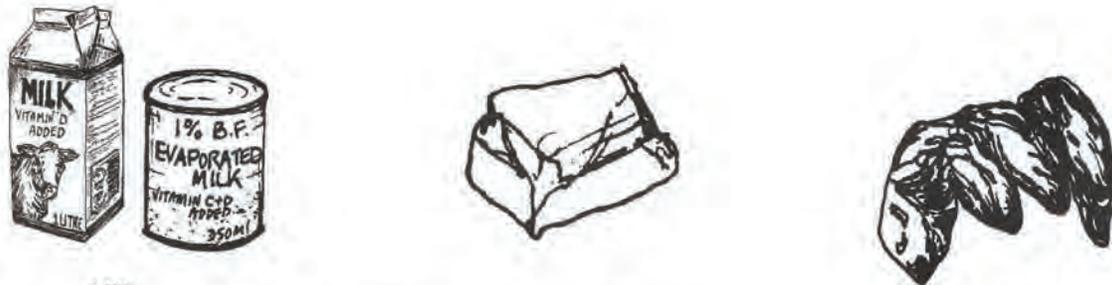
Vitamin D helps calcium get into the body and make bones strong. Without enough vitamin D, babies and small children may develop a disease called rickets. Rickets is a painful disease. It makes bones get soft and bend.

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## Excellent sources of vitamin D (one serving provides at least 25% of daily need)



Fish  
(fresh, frozen, dried and canned)



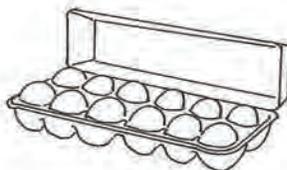
Milk  
(fresh, powdered, evaporated)

Blubber

Seal liver<sup>♦</sup>

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## Other sources of vitamin D (one serving provides less than 25% of daily need)



Eggs



Margarine



Pudding, made with milk

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<sup>♦</sup> Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.



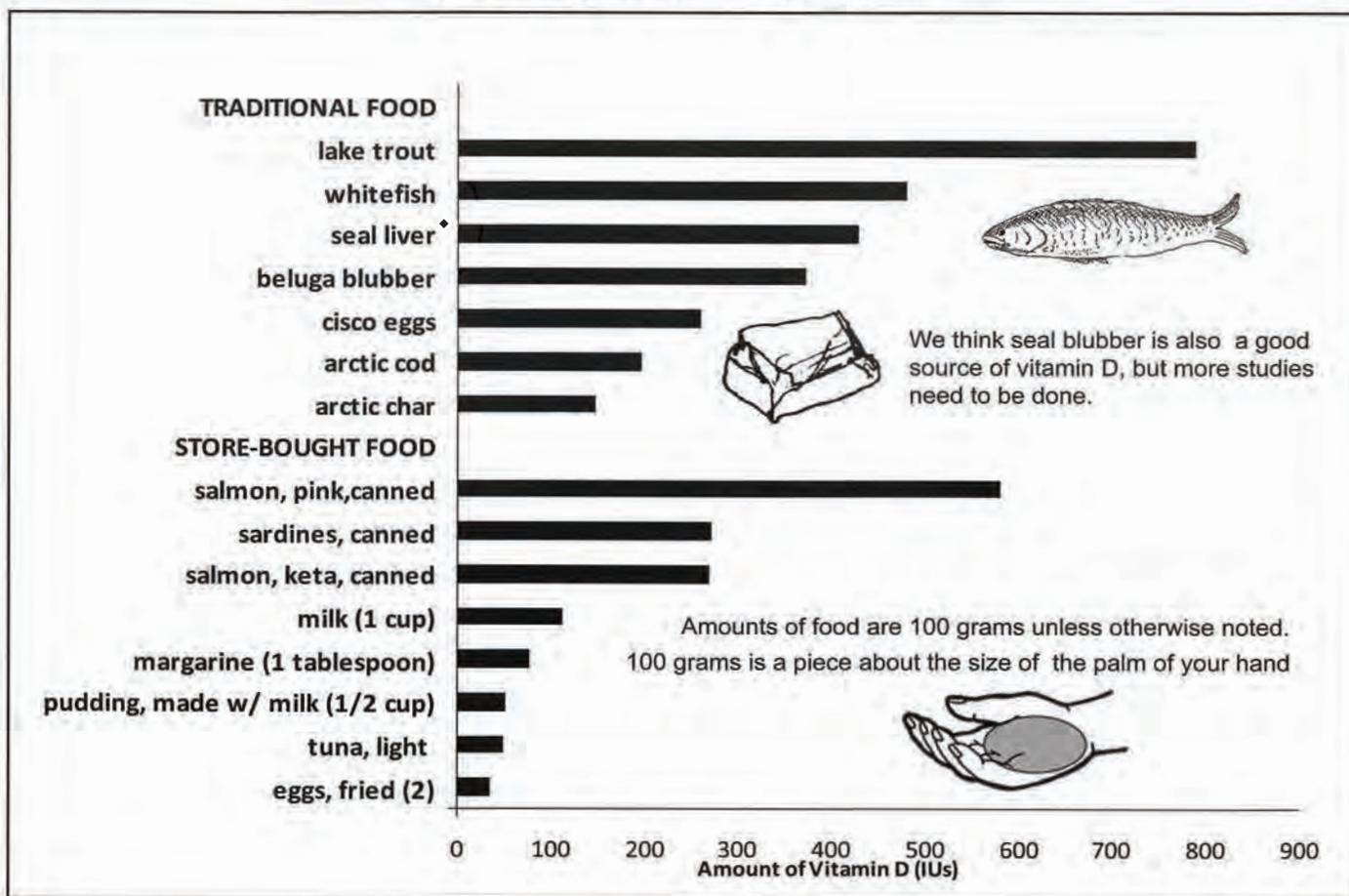
- Studies have found that some Nunavummiut don't get enough vitamin D.
- We can get vitamin D from food, from supplements and from sunshine.
- Vitamin D supplements are needed every day for:
  - pregnant and breastfeeding women
  - infants and young children
  - people over 50
- Eating foods with vitamin D also helps build strong bones and teeth.

**The Vitamin D supplementation policy for Nunavut is:**

Group	Daily Vitamin D Supplement Needs
	IUs
Infants less than 1 who breastfeed	800
Infants less than 1 who bottle feed	400
Children older than 1	400
Pregnant* and nursing women	1000
People over 50	400

\* In addition to the 400 IUs in prenatal supplements

**How much vitamin D is in food?**



♦ Inuit women of child-bearing age in Nunavut who may become pregnant, are planning to get pregnant, or are pregnant are advised to eat ringed seal meat instead of ringed seal liver.

# REFERENCES

## Traditional Knowledge Sources

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NWT Fact Sheet Series on Northern Animals

## Food Composition References

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<http://www.inspection.gc.ca/english/fssa/labeti/guide/ch7be.shtml#7.25>



