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Changes in Arctic diet put Inuit at risk for rickets
Officials in Nunavut have developed programs that put them on the cutting edge of vitamin D promotion

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IQALUIT — For centuries, Inuit living in Canada's Arctic spent months without sunlight, and lifetimes wearing thick, fur clothing that blocked the sunlight from their dark skin.

Mother Nature provided vitamin D in other ways. Instead of making it through sun exposure, the Inuit got a healthy dose from traditional foods that happen to be rich in vitamin D: the skin of Arctic char; seal liver; the yolks of bird and fish eggs; and seal, walrus and whale blubber.

But as the Arctic has changed, so have eating habits. While seal and char are still staples in Nunavut's isolated communities, walrus and whale consumption have been in decline for 30 years.

The result is vitamin D deficiency, which surfaces as rickets, a disease most Canadians might be surprised to hear still exists in Canada. Thirty-one new cases of rickets were discovered in the first five years of Nunavut's creation.

"It's not something that is actually spoken about much in public health," Isaac Sobol, Nunavut's chief medical officer of health, said. "It's almost a disease of the past, or other populations."

Rickets appears in children, and is often identified by bowleggedness in its more advanced phase. The disease is so rare in most of Canada that while Dr. Sobol has Nunavut's numbers on hand, he has no national statistics with which to compare them.

The signs of deficiency don't bode well at a time when new research suggests that a lack of vitamin D is linked to high cancer rates in northern countries.

To address the problem, public-health officials in Nunavut have developed programs that put them on the cutting edge of vitamin D promotion.

Nunavut taps into the Canada Prenatal Nutrition Program - a federal fund - to get vitamin D supplements to all pregnant and nursing mothers, babies and children under 2. The Canadian Paediatric Society's Indian and Inuit health committee recommends that pregnant and nursing mothers living above the 55th parallel take 800 international units of vitamin D a day from October to April.

In all of Nunavut's 25 communities, expectant mothers are invited to cooking and sewing classes in their local wellness centres and community halls.

Nurses and community health representatives lead lessons in cooking healthy food, emphasizing basic nutrition and using traditional recipes for foods such as bannock, seal stew and fish soup.

New mothers also get lessons in thrifty shopping at the local grocery store. Modern sources of vitamin D - such as fortified milk, yogurt, canned fish and mayonnaise - are readily available in Nunavut, but can be expensive.

The Toonoonik Sahoonek Co-op in Pond Inlet on the northern tip of Baffin Island sells two-litre jugs of milk for \$7.39. That's with a government air-freight subsidy that aims to make fresh, healthy food cheaper than junk food, which can be delivered once a year by ship and sold cheaply year-round.

In spring, when supply rooms are almost empty, the subsidy works. But when the boats come in, the price of soda pop drops from \$3.50 a can to \$2 - cheap by northern standards and, for some, tastier than healthy foods.

While few new mothers could escape the message of vitamin D, Inuit in general, who are less engaged with the health-care system, aren't necessarily aware of the vitamin and its benefits.

Free vitamin D supplements in tablet form are available to Inuit at the community health centre, but health officials say people don't always take them. Pamphlets describing different vitamins and their uses are also available, and are translated into Inuktitut.

The materials are impressive, but come with one small glitch. "Unfortunately," Dr. Sobol says, " 'vitamins' was translated into 'things that make you fat' in Rankin Inlet and Arviat."

While vitamin D deficiency might seem an obvious problem for Arctic dwellers, there is a surprising lack of research on what that means for Inuit, Geraldine Osborne, Nunavut's associate medical officer of health, said.

Dr. Osborne said she found several articles linking vitamin D shortages to rickets and bone development. Some of them point to lower levels of vitamin D in Indian and Inuit children, and one, from 1984, proposes vitamin deficiency as a possible cause of northern infant syndrome, a complicated sickness then found in 16 Indian and Inuit babies.

She found nothing that looks at the impacts of low vitamin D levels on people living closer to the North Pole than the equator. "I was surprised by how little research there was," Dr. Osborne said. "It's an evolving topic."

For now, people living in the land of the midnight sun - and sometimes months of complete darkness - aren't exactly clamouring to up their dose of vitamin D.

"There is not much cancer in our community, I am happy to say," said Susan Salluviniq, the mayor of Resolute Bay, Canada's second-most-northerly community.

For the next few months at least, the hamlet, with its 200 inhabitants, doesn't have to worry about a lack of sunshine.

Resolute Bay entered 24-hour daylight on April 29, and community residents will continue to enjoy non-stop sun until mid-August.

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