



In This Issue

Enjoying The Sun Safely: Reducing The Risk of Skin Cancer
Page 2

Breast Cancer in the NWT: A Retrospective Look - 1984 to 1996
Page 4

Reducing the Risk of SIDS
Page 6

Rickets & Vitamin D Deficiency in the NWT
Page 7

Reportable Disease in the NWT: Shigella...Close Up!!
Page 8

Cyclospora...An Uninvited Dinner Guest!
Page 9

Health Protection Unit Mailbox/ Immunization News
Page 10/11

Laboratory Corner: Sputa Sampling
Page 12

Notifiable Diseases Reported in the NWT: Year to Date (1997) & March/April
Page 15

News Clips
Page 16

Guest Editorial Note:

Why Screen For Breast Cancer in the NWT?

In 1997, the Northwest Territories remains the only jurisdiction which has not yet officially initiated or completed plans to implement a territory-wide organized screening mammography program for the early detection (and treatment) of breast cancer. Screening mammography must be distinguished from diagnostic mammography in that it is done on "healthy" women who have no signs or symptoms of breast disease.

This is not to say that NWT women do not yet have access to breast cancer screening. Stanton Regional Hospital in Yellowknife has been offering both screening and diagnostic mammography services since 1990. Regional Health Boards cover travel costs for women who request or are eligible for screening mammography. Community Health Nurses and physicians are trained to perform clinical breast examinations (CBE), which is an important adjunct to mammography in a well conducted breast cancer screening program. In 1995, the Department of Health and Social Services provided interim guidelines to health care professionals with regard to breast cancer screening program activities and last year appointed a new working group to update these guidelines and provide ongoing advice.

However, a truly organized breast cancer screening program would have the following characteristics:

- an up-to-date list of eligible women (target population) would be maintained;
- eligible women would be individually invited to enter the program and recalled at appropriate intervals;
- quality assurance mechanisms would be in place with oversight on training of staff, equipment, accessibility, performance standards and participants' satisfaction.
- a central database would provide feedback with regard to attainment of goals and objectives.

(continued on Page 3...)

EpiNorth Communication

Telephone: (403) 920-3162

Fax: (403) 873-0442

cc:Mail: EpiNorth, H&SS

Mail:
Health Protection Unit
Health and Social Services
Government of the NWT
Yellowknife, NT X1A 2L9

E-mail: Epi_North@gov.nt.ca

EpiNorth Staff

Managing Editor:
Lona Heintzig

Scientific Advisor:
Dr. André Corriveau

Graphic Design/Assistant:
Lisa McClelland

Production Assistants:
Kerrin Stilwell, Monica Mandeville

Internet access: www.hlthss.gov.nt.ca





Enjoying the Sun Safely:

As we head into another summer here are a few things to keep in mind as you enjoy the great outdoors.

What is UV?

UV radiation is a type of light emitted by the sun and tanning equipment. In large doses, it can be harmful to your health.

Types of UV rays: UV-A rays reach the earth's surface at an intensity dependent on the sun's position and the presence of clouds. These rays are not filtered by the ozone layer.

UV-B rays are more harmful than UV-A rays and are 1000 times more likely to cause sunburn, making them the main cause of skin cancer. Some UV-B is necessary to facilitate vitamin D3 production. The ozone layer filters about half of the UV-B rays but on a continually decreasing level due to the depletion of the ozone layer.

UV-C rays are the only rays almost totally filtered by the ozone layer.

How does UV radiation affect your health?



Short-term damage: Sunburn, itchy eyes, allergies and depression of the immune system.

Long-term damage: Ranges from skin cancer to cataracts and premature skin aging.

UV-A/B- damage the lens of the eye and cause cataracts.

UV-A- adds to the damage caused by UV-B radiation.

UV-B- damages the cornea of the eye, therefore, protective eye wear is essential.

About 55,000 Canadians will develop skin cancer this year alone.

What about a healthy tan? There is no such thing as a healthy tan. Tanning is a protective reaction of the body as it senses overexposure to ultraviolet radiation.

"There is no such thing as a healthy tan. Tanning is a protective reaction of the body as it senses overexposure to ultraviolet radiation."

"Avoid prolonged and unprotected exposure to the sun."

Table 1: Skin Cancer in the NWT (excluding Malignant Melanoma)

YEAR	10 to 19	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	Total
1992	0	0	2	1	1	0	0	4
1993	1	2	4	4	3	4	2	20
1994	0	2	5	2	2	2	0	13
1995	0	1	4	7	5	1	0	18
1996	0	2	4	6	4	1	3	20
Total	1	7	21	23	15	9	5	81

* Source: NWT Cancer Registry

Types of Skin Cancer

Skin cancer usually develops later in life. Table 1 shows the incidence of basal and squamous cell carcinoma in the NWT by age group for the past five years. These types of skin cancer are the most common and if caught early can easily be removed by surgery.

Basal cell carcinoma- is the most common and least dangerous.

Squamous cell carcinoma- is faster growing and can spread throughout the body.

Malignant melanoma- is less common but most fatal.

Table 2 shows the incidence of malignant melanoma over this same time period.

1992 - 1
1993 - 1
1994 - 1
1995 - 2
1996 - 3

*All cases from Ft. Smith Region

UV Risks

WHEN is UV radiation most intense? Around mid-summer from 11am until 4pm. Even on cloudy days up to 80% of harmful rays can penetrate clouds.

WHERE is UV radiation most intense? The sun's rays at the equator are more intense even in the winter. Also, reflection from the snow, ice and water increases the risk of damage to skin and eyes. Altitude is a factor as well because for every 300m increase above sea level, UV-B radiation increases 4% and UV-A radiation increases 1%.

WHAT groups are most at risk? Children have thinner skin than adults and about 80% of the total UV life dose is received before age 18. Two or more serious sunburns as a child or adolescent significantly increases the risk of getting skin cancer later in life. Also, fair skinned people with light eyes who burn easily are more at risk of developing skin cancer.

What precautions can I take?



- Avoid getting a sunburn by wearing protective clothing and applying sun screen with SPF 15 or higher that provides UV-A and UV-B sunblock.
- Avoid prolonged and unprotected exposure to the sun.

Reducing The Risk of Skin Cancer

*Lisa McClelland, BSc
Health Protection Unit
GNWT - H&SS*

- Wear sunglasses that block out UV-A and UV-B rays.
- Consider any medications that increase your skin's sensitivity to UV rays and cause adverse skin reactions, such as tetracycline.
- Avoid getting a tan (even from a sun lamp or tanning bed).
- Examine your skin regularly for changes in moles, freckles or skin discolorations.
- Provide your children with extra care.

Reference: Health Canada Pamphlet - "Enjoying the Sun Safely"



Sun Care Quiz



1. T or F: Up to 80% of the total UV life dose is received before the age of 18.
2. T or F: UV-A rays are 1000 times more harmful than UV-B.
3. T or F: UV-C is one of the main causes of skin cancer.
4. T or F: Skin cancer is increasing rapidly in Canada.
5. T or F: You should always use a sunscreen lotion with a Sun Protection Factor (SPF) of 15 or lower.
6. T or F: You should avoid prolonged and unprotected exposure to the sun between 11am and 4 pm.
7. T or F: Children are more sensitive to UV rays than adults.
8. T or F: UV rays strengthen the immune system.
9. T or F: Some UV rays can damage the lens of the eyes and may cause cataracts.
10. T or F: Having two or more serious sunburns as a child or adolescent does not affect a person's risk of getting skin cancer.

Answers: 1-T, 2-F, 3-F, 4-T, 5-F, 6-T, 7-T, 8-F, 9-F, 10-F

Why Screen for Breast Cancer? (cont.)

*André Corriveau,
MD FRCP
Medical Health Officer
Health Protection Unit
GNWT - H&SS*

The objective of a breast cancer screening program is to decrease mortality attributable to this disease. Evidence now suggests that organized screening mammography can decrease mortality by at least 30% in the target population; that is if a greater than 70% participation rate can be achieved. This implies that women are not only successfully recruited into the program but also retained, coming back for rescreening at recommended intervals. An appropriate communications strategy is thus just as important as are the logistics of providing access to high quality services.

There is broad consensus that all women age 50 to 69 should be offered screening mammography every two years, coupled with annual clinical breast examination and monthly self breast examination. Women who are 70 years or older should also be retained in a screening program for as long as they remain in good general health.

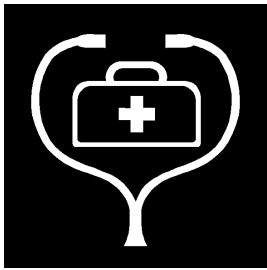
Benefits of screening mammography are less quantified for the 40 to 49 age group. The higher rate of false positive results in pre-menopausal women, which leads to further diagnostic procedures, and the lower yield of true positives in this age group, greatly reduces the cost-benefit of extending such a program to all women beginning at age 40. This would also impose a high opportunity cost on the health care system as a whole. Women at higher risk should however be eligible to enter the pro-

gram at age 40. Screening mammography should ideally be done every year in pre-menopausal women, because breast cancer tends to evolve more rapidly in that group. Finally, women under the age of 40 should not be entered in a screening mammography program.

In the culturally diverse, geographically dispersed and decentralized NWT, there are unique issues that make the development of a centralized organized, territory-wide program more difficult, if not impractical. This challenges the health boards to ensure that breast cancer screening is appropriately integrated into a broader, more comprehensive women's health program organized at the regional and local levels.

It would also be inappropriate to determine the level of priority to be given to a mamography screening program solely on the basis of historical data. The evidence presented in the accompanying article "Breast Cancer in the NWT" on page 4 & 5 suggests that Inuit women may unfortunately be rapidly "catching up" to the rest of the Canadian population and that NWT breast cancer rates may soon reach national levels. As a consequence, regional health boards must anticipate this change and should begin now planning to ensure that all eligible women in their service areas have access to an organized mammography screening program for breast cancer.

"In the culturally diverse, geographically dispersed and decentralized NWT, there are unique issues that make the development of a centralized organized, territory-wide program more difficult..."



Breast Cancer in the NWT:

Introduction

Canada is considered to be a country with a relatively high incidence rate of breast cancer. It is by far the most commonly diagnosed cancer in Canadian women. For 1996, the estimated incidence rate was 107/100,000 women in Canada. The lifetime risk for women has been estimated to be around 11%. During the 1990 to 1996 period, the average age-adjusted incidence rate for the NWT was 69.9/100,000, nearly 35% lower than for Canada as a whole.

Breast Cancer Incidence

Figure 1 shows the evolution of reported breast cancer incidence and mortality in the Northwest Territories since 1980. Five-year averages have been used to minimize the impact of year-to-year random fluctuations. Although cancer only became a reportable condition in 1990 and one may suspect that improved notification also played a role, it is evident that over the past decade and a half, breast cancer incidence has been rising steadily while breast cancer mortality remained fairly stable.

"...breast cancer incidence has been rising steadily [in the NWT] while breast cancer mortality remained fairly stable..."

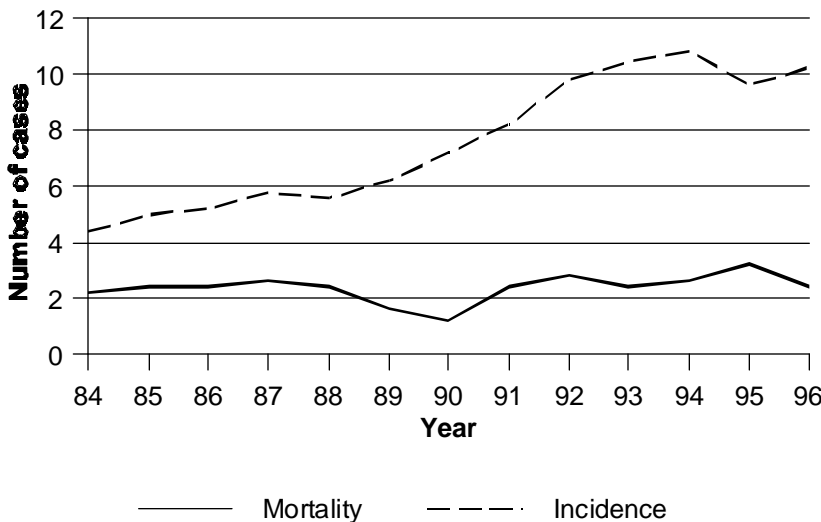
Table 1: Breast Cancer Incidence by Age Group (1990-1996)

Age Group	Number of cases	Incidence rate/100,000	
		NWT	Canada (1989-93)
25-39	8	13.2	26.0
40-49	34	148.9	138.4
50-59	14	116.3	218.5
60-69	8	143.6	310.1
70+	9	258.7	369.9
Total	73		

Between the ages of 40 and 49, the NWT incidence rate appears to be identical to that of the rest of Canada. However it is noted to fall between the ages of 50 and 69 before climbing again for older women.

The overall incidence of breast cancer may diminish in the 50 to 69 age group from a selective out migration of higher risk women. Table 2 shows average crude incidence rates by ethnic group during the 1990-1996 time period. This reveals that Inuit, Dene and Metis women still have lower incidence than "others".

FIGURE 1: Breast Cancer Incidence & Mortality 5-year rolling average, 1984-1996



This pattern is parallel to what has been observed elsewhere in Canada, although a number of features still distinguish the NWT from the rest of the country with regard to breast cancer.

Table 1 presents age-specific breast cancer incidence rates for the NWT as compared with Canada. One striking difference is the fact that the typical increase normally observed in relation with age is not seen in the NWT data.

Table 2: Breast cancer incidence by ethnic groups 1990-1996

	#of cases	Crude incidence rate/100,000
Inuit	18	22.8
Dene	11	31.2
Metis	3	20.1
"Others"	41	50.4
Total	73	34.7

In 1993, it was estimated that 53.1% of the 25 to 49 age group was made up of non-aboriginal women, the proportion dropping to 34.5% in the 50 and over population. This demographic information would lend support to the out-migration hypothesis.

On the other hand, an explanation for the higher rate in the 40 to 49 age group would be that this younger generation presents a different set of risk factors than its elders. Figure 2 illustrates the historical trend since 1980, where it can be noted that Inuit women began being represented in the data by the 1990's. (In this graph, Metis women are included with "Others" because older data did not always make the distinction).

A Retrospective Look - 1984 to 1996

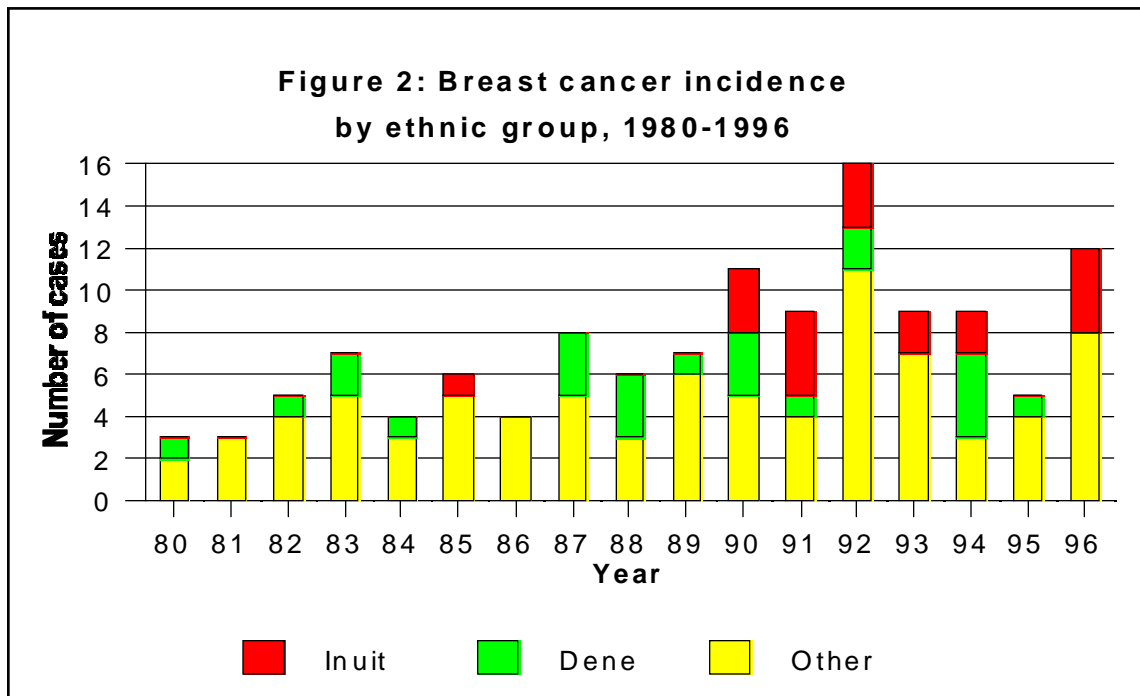
Taking a more detailed look at the period from 1990 to 1996, one finds that Inuit women age 50 and over made up about 32% of the NWT female population, but had only 21% (7/32) of reported breast cancers in that age group; meanwhile, Inuit women age 25-49 had 27% (11/41) of the breast cancers and also represented 27% of the population.

Some known modifiable risk factors:

Relative risk	(estimate)
• age at birth of first child 30 and up	1.9
• current oral contraceptive use	1.5
• alcohol use, 2 drinks/day	1.7
• 3 drinks/day	2.0

*André Corriveau,
MD FRCP
Medical Health Officer
Health Protection Unit
GNWT - H&SS*

"...there remains much uncertainty about the relative contribution of various risk factors to the rising incidence of breast cancer in our society."



Risk factors for breast cancer

As noted above, incidence rates of breast cancer have been increasing in the NWT and Canada over the past several years. This phenomenon has also been observed in other countries. This knowledge, combined with the observation of increasing risk when populations move from a low incidence to a high incidence area, points to the existence of major non-genetic determinants of breast cancer and a potential for prevention. However, there remains much uncertainty about the relative contribution of various risk factors to the rising incidence of breast cancer in our society.

Non modifiable risk factors include:

- female sex (men account for around 1% of breast cancers)
- advancing age
- family history (having one first degree relative with breast cancer increases the risk by a factor of 2; with two first degree relatives it is raised 4-6 times)
- menarche before the age of 16 (20% increased risk)
- late menopause (relative risk of 1.5 if after 55 yrs)

Newer evidence also points to smoking in susceptible individuals, for which risk may be increased by a factor of up to 7 times. Diets high in saturated fats have also been suspected to contribute, although research in this area remains inconclusive for now. It may be the lack of certain types of food which is more important: marine oils have been found to exert a protective effect on the occurrence of mammary tumors in animal models; an inverse relationship between breast cancer and total vitamin A intake has also been observed in some studies.

It is thus tempting to suggest that one explanation for increasing rates seen among Inuit women, whose diet was traditionally high in fish and marine mammal oils, could well be dietary changes that are leading to deficiencies in specific protective nutrients. Another micronutrient, selenium, richly found in marine mammal blubber, is also considered to be a potential cancer preventing agent. It would therefore be indicated to emphasize the benefits of maintaining traditional diets and food sources when considering possible avenues of prevention.



"The evidence presented above suggests that Inuit women may...be rapidly 'catching up' to the rest of the Canadian population and that NWT breast cancer rates will soon reach national levels..."



Reducing the Risk of SIDS

What is SIDS?

Sudden Infant Death Syndrome (SIDS) refers to the sudden and unexpected death of an apparently healthy infant less than one year of age, which remains unexplained even after a full investigation. In Canada, there are about 400 SIDS deaths each year, which makes SIDS the leading cause of death between one month and one year of age. Aboriginal infants have a risk of SIDS that is three to four times higher than the risk to non-aboriginal infants.

Sometimes known as crib death, most SIDS deaths occur when a baby is between 1 and 4 months old. More boys than girls are victims, and most deaths occur during the fall, winter and early spring months.

The death is sudden and unpredictable; in most cases, the baby seems healthy. Death occurs quickly, usually during a sleep time.

After 30 years of research, scientists still cannot find one definite cause or causes for SIDS. There is no way to predict or prevent SIDS, but research has found some things that can help reduce the risk of SIDS.

Sleeping Position

Evidence reveals that babies who usually sleep on their tummy (prone position) have an increased risk of SIDS compared to babies who sleep on their back or side. Studies in England, the Netherlands, Australia and New Zealand report that when there was a decrease in the use of the prone sleeping position, there was also a decrease in SIDS deaths.

More than 50 percent of SIDS mortality may be preventable if babies are placed to sleep on their sides or backs. Deaths due to SIDS fell 30 percent between 1992 and 1995 in the United States. The reduction in SIDS deaths has contributed significantly to an historic low infant mortality rate in the US.

Public awareness programs such as the 'Back to Sleep' campaign in the US are credited with bringing about the improvement in SIDS mortality. Parents need to hear the message: "Babies should be placed to sleep on their sides or on their backs, but not on their stomachs."

While most infants should sleep on their back, infants born with birth defects, those who often spit up after eating, or have a breathing, lung or heart problem may require modifications in their sleeping position. Older infants may be able to turn on their own from their back on to their tummy. It is not necessary to force the back sleeping position on a baby who has enough mobility to find a comfortable position for itself.

Bedding

Infants should sleep on a firm mattress or other firm surface. Fluffy blankets or comforters under the baby should be avoided. Do not let the baby sleep on a waterbed, sheepskin, a pillow, or other soft materials. When infants are very young, do not place soft stuffed toys or pillows in the crib with them. Some babies have smothered with these soft materials in the crib.

Temperature

Research from other countries provides evidence that babies who become too hot have an increased risk of SIDS. However, care must be taken in applying these results to Canada, as our climate and child care practices differ. It is important for parents to know that while infants need warmth and protection from the Canadian elements, they also should not become too hot. Parents can be reassured that if a room is comfortable for them, it is most likely fine for their infant, too. Infants should be dressed and covered in a manner to avoid overheating, even during an illness.

Second-hand Smoke

Exposure to second-hand tobacco smoke is another significant risk factor. An infant who has been exposed either before or after birth is placed at an increased risk for SIDS (as well as more colds and other diseases) compared to those infants who have not been exposed. Women should be encouraged to avoid smoking during pregnancy and after delivery parents should be encouraged to create a smoke-free environment around their baby.

Breastfeeding

It is also recognized that breastfeeding may help protect against SIDS. In addition, breastfeeding has significant nutritional, immunological and psychological benefits for the health of infants. All women should be encouraged and helped to breastfeed their babies.

Educating the Public

The Canadian Foundation for the Study of Infant Deaths, the Canadian Institute of Child Health, the Canadian Paediatric Society and Health Canada have been working to educate the public and health professionals and have joined with aboriginal communities in a partnership approach to address this significant health risk to aboriginal infants.

It is important to emphasize that following these recommendations could reduce the risk of SIDS, but will not prevent all SIDS deaths. Since the cause or causes of SIDS remain unknown, SIDS parents should not conclude that their child care practices caused their baby's death.

"Aboriginal infants have a risk [of SIDS that] is three to four times higher than the risk to non-aboriginal infants..."

"Parents need to hear the message: 'Babies should be placed to sleep on their sides or on their backs, but not on their stomachs'."

Internet Sources:
National Institute of Child Health & Human Development (NICHD)
http://www.nih.gov/nichd/news/SIDS_HP_2/home1B.html

Health Canada
http://www.hc_sc.gc.ca/main/lcdc/web/brch/reprod/sidsjo.html

Rickets & Vitamin D Deficiency in the NWT

What is rickets?

Rickets, a disease characterized by malformation of the bones, is a chronic nutritional disorder that develops primarily in infants and children, due to deficiencies of vitamin D, calcium and phosphate. These deficiencies cause the bones to become so soft they actually bow under the weight of the body and causes nodular enlargements on the ends and sides of the bones, especially at the sternal ends of the ribs, forming what is called a rachitic rosary. It results in knock-knees, bowlegs, pigeon breast and frontal bossing of the skull. Vitamin D must either come from UV light, natural food sources, fortified food sources or supplements. The prognosis is usually favourable, with the majority of cases being mild, with deformities disappearing in 90% of treated cases.

Case Studies

GNWT health databases indicate that there have been a number of documented cases of vitamin D deficiency in most regions of the NWT. Recently, four cases of rickets/vitamin D deficiency, with or without multivitamin deficiencies, were seen by one of the pediatricians at Stanton Regional Hospital.

Case 1: *Dene male born at the end of December 1996 to a 17 year old mother. During pregnancy, the mother did not drink milk or eat any vegetables and only ate caribou occasionally. The infant presented at three months of age with jaundice and was diagnosed with CMV infection. A rachitic rosary was also noted on physical examination. Laboratory investigations revealed Ca 1.7 (ref: 2.20-2.64 mmol/L), ALP >1700 (ref: 30-360 U/L) and PO4 0.96 (ref: 1.00-2.00 mmol/L). The x-ray findings were consistent with early rickets. The infant had been fed inappropriately diluted formula.*

Case 2: *Dene male born early January 1997 to an 18 year old mother. He presented at one month of age in status epilepticus with a two week history of jerky movements. Investigations revealed Ca 1.73, Mg 0.44 (ref: .65-1.05 mmol/L) and an elevated ALP. This infant was successfully managed with IV calcium with no recurrence of seizures. Investigation confirmed nutritional rickets. He had been drinking formula poorly for his initial two weeks of life.*

Case 3: *Inuk male born in mid July 1996 to a 19 year old mother at 33 weeks gestation. He was breast fed, and then given Enfalac. He presented at 4 months of age with respiratory distress, seizures and apnea. Investigations revealed Ca 1.03, glucose 0.7 (ref: 3.9-5.0 mmol/L), low phosphate, elevated liver function tests, hemoglobin 69 (ref: 130-160 mmol/L) and craniotabes (abnormal softening of the skull bones). This child was diagnosed as having Northern Infant Syndrome - a multi-nutritional deficiency.*

Case 4: *Inuk female born at term in mid August 1996 to a 22 year old mother. She presented at 3 months of age with persistent jaundice which was diagnosed as congenital CMV infection. She had been feeding poorly, and a G-tube was inserted at the end of December because of aspiration. A chest x-ray at the end of January revealed findings consistent with rickets and a rachitic rosary was present on exam.*

Risk factors

Figure 1 identifies the main risks for Vitamin D deficiency, which can progress to rickets. As well, some cases of rickets have been reported in breastfed infants. These include infants with little exposure to sunlight or those born during the fall, infants of mothers with inadequate vitamin D stores because of lactose intolerance or adherence to strict vegetarianism (no milk products), and infants with dark or colored skin. As fetal stores of Vitamin D may deplete rapidly, prolonged breastfeeding, without supplementation does carry a risk of vitamin D deficiency, especially when an infant has little exposure to light, even if the nursing mother is supplemented.

Prevention



Prevention of rickets is the best defence, through exposure to ultraviolet light or supplement. The Canadian Pediatric Society recommends guidelines regarding vitamin D prophylaxis due to the persistence of rickets, especially among northern aboriginal populations. Prophylaxis is especially indicated in pregnancy, breastfeeding mothers, and during the winter.



Prophylaxis recommendations

Infants entirely breastfed

- 400 IU/d of vitamin D (increased to 800 IU/d during the winter for children <2yrs in the high north as these are the ones with the highest risk.)

Infants formula fed from fortified whole or canned milk

- this is sufficient during the summer
- 400 IU/d given during the winter

Pregnant women and nursing mothers

- 400 IU/d of vitamin D in addition to the 400 IU/d provided by vitamin/mineral supplement

Children <2yrs who don't drink adequate amounts of fortified milk

- 400 IU/d during the winter

The GNWT is currently working towards tailoring these recommendations to the NWT population.

*Dr. Nicole Chatel,
Pediatrician, Stanton
Regional Hospital*

*Kerrin Stilwell,
BSN student, Health
Protection Unit*

*Editor's note: Thanks to
Elsie De Roose,
Consultant, Infant/Child
Nutrition, GNWT - H&SS
for her assistance.*

Figure 1:

Risk factors for vitamin D deficiency

- **living at high latitudes** where exposure to sunlight is limited,
- **dark skin pigmentation** which hinders the absorption of ultraviolet light
- **consumption of unfortified milk**, which is not enriched with vitamin D

Resources:

Indian and Inuit Health Committee, Canadian Pediatric Society (1988), Vitamin D supplementation for the northern native communities. *CMAJ*, 138, p. 229-230.

Health Canada (1986). Feeding Babies.

Krause & Mahan (1984). Food, Nutrition & Diet Therapy (7th ed).



Reportable Diseases in the NWT

Shigella...Close Up!!

At the beginning of April an individual presented with a two week history of vomiting, diarrhea, malaise, cramps, fever, chills, dizziness and headache. Stool cultures confirmed Shigella sonnei. This individual had been travelling in the Caribbean for about a week, and had returned 3 days prior to the symptom onset. One meal had been consumed on a cruise boat, and bottled water was consumed wherever possible despite being told numerous times that "all water was treated and safe to drink".

Shigella in the NWT

1989 - 2
1990 - 0
1991 - 0
1992 - 3
1993 - 1
1994 - 1
1995 - 2
1996 - 0
Total 9

* Ft. Smith Region - 7
Baffin - 1
Keewatin - 1

What is Shigellosis?: An acute bacterial disease of the small and/or large intestine, characterized by diarrhea, abrupt onset of fever and nausea, and sometimes toxemia, vomiting, cramps and tenesmus. The illness is usually self-limited, lasting an average of four to seven days. The severity and case fatality rates are functions of the host's general health status and the serotype of the bacteria. Diagnosis is made by isolation of *Shigella* from feces or rectal swabs.

Infectious agent: Group D, *Shigella sonnei*

Occurrence: Worldwide, responsible for an estimated 600 000 deaths per year in the world. Two thirds of the cases and nearly all of the deaths occur in children under 10 years of age. Crowded living conditions, low hygienic standards, institutions and day cares, and international travel to countries with low food sanitation standards are all

predisposing factors. Shigellosis is endemic in tropical and temperate climates.

Reservoir: The only significant reservoir is humans, particularly the feces of infected individuals.

Mode of transmission: Infection occurs mainly by direct or indirect fecal-oral transmission. Illness may occur after the ingestion of very few organisms (10-100). Transmission usually occurs from individuals who do not properly clean their hands or nails after defecation, and infection is then spread either directly, or by contaminated food or water. Flies may also transfer organisms from latrines to unrefrigerated food, where organisms can then multiply.

Incubation period: 12-96 hours, usually 1-3 days.

Period of communicability: During acute infection and until the organism is no longer present in feces, usually within 4 weeks of onset.

Treatment: Antimicrobial therapy shortens duration of diarrhea, as well as eliminating organisms from feces within a couple of days. It is recommended for patients with dysentery and for children. Anti-diarrheal compounds inhibiting intestinal peristalsis are contraindicated because they can prolong the course of the illness.

Control measures: Hand washing is the single most important control measure. Other measures include having a sanitary water supply, food processing methods and sewage disposal, prevention of food contamination by flies, and case reporting to the appropriate health authorities.

Site Seeing on the 'Net

Destination:
<http://www.reutershealth.com>

Where are we? Reuters Healthnews Online

What's there?

Reuters Medical News: A comprehensive news service for medical professionals, covers the most important news in health and medicine each business day.

Reuters Health eLine: A consumer-oriented medical news service, delivers relevant health care news featuring stories on men, women, and children's health, diet, exercise, treatment advances and disease management.

Clinical Challenge: Case studies from the Internist's Case Book and Dermatology Files to challenge anyone.

Internet Health Watch: Reviews of various health web sites on the net.

Special Attraction: Journal of Irreproducible Results

This section features articles written from and around the scientific and medical community that enrage, amuse, confound and fascinate the reader. Each essay is well written and full of humor and witticism on just about any subject under the sun! Check it out for yourself!!!

Roadblocks? Navigating through the web site is easy and there were no time delays. You do need a password to access the articles on this site but this is easily obtained for free by filling out their registration page.

Overall rating: This site contains valuable information and news for just about every interested or concerned individual. The articles range in content from serious to down-right amusing. As it is updated everyday, this is one site to bookmark and keep in mind when checking for the latest news in medicine and science.



Ready for another trek along the information highway??

Here's a site you're sure to enjoy!

Reviewed by:
Lisa McClelland

Cyclospora...An Uninvited Dinner Guest!

Frank Hamilton, EHO
Environmental Health
Consultant,
GNWT - DH&SS

Move over Giardia and Crypto, there's a new kid on the block and he's making news! Although no cases have been reported to the Bureau of Infectious Diseases (LCDC), several outbreaks of diarrheal illness due to *Cyclospora* have recently occurred across the United States and a number of these are presently under investigation. This fairly recent player in the outbreak game seems to like hitchhiking on certain berries and greens.

During April and May 1997 the Centre for Disease Control (CDC) in Atlanta received reports of eight event-associated clusters of cases of cyclosporiasis in the United States (Table 1). The suspected foods were from Guatemala, Chile and Mexico, however, no authority is willing to say for sure at this time which food or country is definitely the source. And no wonder, look what happened last year with strawberries. A widespread U.S. outbreak initially implicated California strawberries. Further investigation revealed that raspberries were the likely culprit, but unfortunately the strawberry industry lost millions of dollars before they were "cleared". Canada, thus far, has not had any clusters of outbreaks reported, however cases could occur and go unrecognized. It is therefore important for health care providers to consider the possibility of *Cyclospora* infection in persons with prolonged diarrheal illness and specifically request testing for this parasite.

The organism

Cyclospora is a single-celled microscopic parasite transmitted by ingestion of contaminated water or food. Infected persons excrete oocysts in their faeces, however direct transmission (person to person) is unlikely as the oocysts need a few days to sporulate before becoming infective. This is different from Crypto and Giardia, which sporulate right away. Indirect transmission can occur if an infected individual contaminates the environment and oocysts have sufficient time, under appropriate conditions, to become infectious. It is in this way that the ingestion of contaminated water or food can lead to cyclosporiasis. An animal reservoir is not known. There is still a lot to learn about this little organism, which is a coccidian (type of protozoa). It was previously referred to as a cyanobacterium, due to its blue-green algae-like body.

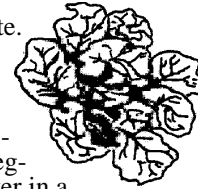
Symptoms & Mode of Transmission

Infected individuals exhibit symptoms of watery diarrhea, loss of appetite, weight loss, stomach cramps and a low grade fever. Other symptoms can include bloating, increased gas, nausea, vomiting, muscle aches, and fatigue. If untreated, the illness can last from a few days to a month or more. The average incubation period is about a week, and three or more stool specimens may be required to identify the parasite. Researchers believe that the infective dose of *Cyclospora* is probably quite low, requiring only a small number of cysts. This is similar to *Giardia* and *Cryptosporidium* where the infective dose is only 50 to 100 cysts. Because of its small size, washing fruits and veggies will not necessarily remove the risk, though it is recom-

mended for general hygiene in removing dirt and some pathogens. Normal cooking temperatures, and freezing temperatures for at least a week are adequate to destroy the parasite.

Reservoir of Infection

Presently, any environment can be a suspected reservoir - unwashed fruit and vegetables, untreated water, or stagnant water in a water tank. Under the microscope, an environment full of nooks, crevices and hair can be seen on fruit such as raspberries, and this provides excellent protection for the parasite, making removal by washing almost impossible. As with some of our other "Touristas", international travellers seem to have a greater risk of infection. Peru is one place where *Cyclospora* is known to be endemic.



Is This a New Organism?

No. Just like when *Campylobacter* came out of the closet in the early seventies to reveal itself from among the vibrios whence it was hiding, this little fellow seems to be cropping up wherever it is looked for. Some of the increases in incidence we are seeing may be due to increased surveillance, however much improvement is still needed to ensure the present laboratory methods become more efficient and sensitive. In the meantime, because there is little we can do as consumers to prevent a cyclosporiasis infection, most of the controls need to be implemented at the source of contamination.

International Controls

For instance, in Guatemala, water used in irrigation and pesticides, as well as the hygiene of workers is being monitored. The CDC and FDA have been working in Guatemala for months now attempting to tract down the source of the contamination. Most plants are drip irrigated using a pipe that has holes in it and lays on the ground along side of the plants. With this method, only the bottom of the plant is watered and the fruit is not. Therefore contamination from irrigation water is unlikely. According to the CDC, pesticide use is the most likely contaminant as the chemicals are diluted with water and then sprayed directly on the plants. Another project being considered as a means of eliminating contamination at the source is sporulation control.

Cyclosporiasis is not life threatening, getting sick just means having diarrhea for a few days. There is no need for the hysteria we saw in the media last year, and as a matter of fact, Giardia and Crypto should be more of a concern, as they have been responsible for more foodborne outbreaks. These diseases, including cyclosporiasis, cannot just be considered water borne anymore, they are food borne as well, and it's the same old story. Somebody gets infected, they get some cysts under their finger nails or on their hands, they prepare meals and voila - an outbreak!

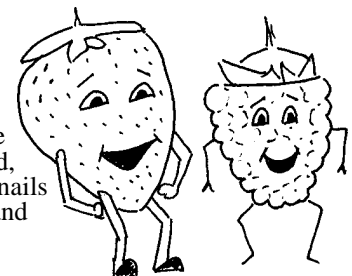
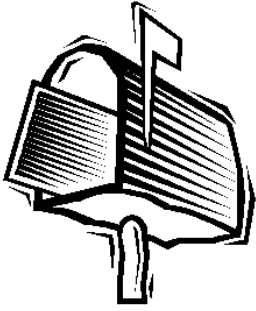


Table 1: Cyclospora Outbreaks in the US

Florida: 29 ill
13 confirmed
Suspect lettuce
Cruise Ship: (Caribbean)
7 ill
2 confirmed
Suspect lettuce
Nevada: 19 ill
10 confirmed
Suspect raspberries
California: 48 ill
ill unknown
Salad (endive & mescaline) and mixed berries
California: 36 ill
13 confirmed
Mixed berries
Texas: 56 ill
13 confirmed
Unknown (salad & berries)
New York: 20 ill
4 confirmed
Raspberries



Health Protection Unit Mailbox

Timing Can Be Everything

Q: Does it matter how long the interval is between giving vaccines?

A: The answer depends on whether the interval is too short or too long. Sometimes the interval between vaccination is altered from the standard because clients get off schedule, increase of disease or because of convenience. The intervals for immunization are determined from intensive serological studies and are set to give the optimum immunological memory.

When the interval is greater than that which is recommended according to the National Standards and the Vaccine's Monograph than there is no reduction in the final antibody concentration. Because immunity is achieved by stimulating the immune system with antigens to produce antibodies, an optimal amount of time is needed for cellular response to occur and reach its fullest potential. The underlying principle of immunization is that by exposing the immune system to bacteria or virus or parts of the germ it will respond just as it does to

the actual infection. The body then makes the same antibodies and T-cells that it would in response to an infection. Although artificially induced, immunization creates the all-important immune memory. If the person is exposed to the same germs in the future, the immune system will be able to identify and destroy them quickly. Therefore, if there is a delay in the recommended schedule for any reason this does not mean starting the series over again, regardless of the amount of time elapsed, as the memory is enhanced by each successive vaccination and has time to develop adequate immunological memory.

This is in sharp contrast to when immunization is given in less than the recommended interval. The antibody response does not have time to develop optimally and the resultant antibody titres will be less than what is seen when the cellular memory has time to fully respond. Therefore if for some reason, such as in times of outbreaks when immunization is given early **it is not to be counted as part of the primary series** and an extra vaccination will be required.

Questions???

Contact:

Wanda White

Communicable
Disease Consultant
Health Protection Unit

GNWT - H&SS

(403) 920-8646

What you need to know about Rubella

Manitoba is reporting that their Rubella outbreak now numbers greater than 2500 cases. These cases are primarily in unimmunized adolescent boys. The greatest problem with rubella is its effect on the developing fetus. Approximately 10 pregnant women have been identified with having rubella in Manitoba. Outbreaks of rubella occurs almost every spring and large epidemics occurs about every seven years. Figure 1 shows the rubella activity in the NWT over the last 10 years.

Rubella is a mild febrile viral disease characterized by a diffuse punctate (minute spots) and maculopapular (red, raised) rash sometimes resembling that of measles or scarlet fever. The incubation period for rubella is 14 to 21 days. After the second week post-exposure some infected individuals, especially adults may develop a mild illness, beginning with low-grade fever, headache, aches and pains, and mild coryza and conjunctivitis. The postauricular, occipital and posterior cervical lymph nodes may be palpable. This precedes the rash by 5-10 days. The patient is most infectious during the prodromal stage and until approximately 4 days after the onset of rash.

Leukopenia is common and thrombocytopenia can occur. Arthralgia and, less commonly, arthritis complicate a substantial proportion of infections, particularly among adult females. Rare complications of encephalitis and thrombocytopenia can occur. The most important consideration with rubella is its

ability to produce anomalies in the developing fetus. Congenital rubella syndrome (CRS) occurs in 90% of infants born to women who acquired confirmed rubella during the first trimester of pregnancy. The risk decreases to the neonate if exposure happens at a later gestation.

It is imperative that all women of child bearing age have protection from rubella. Antibody titre should be checked at first prenatal visit. The laboratory will report titre level and note whether that level is consistent with protective immunity or not. If the rubella titre noted does not indicate that immunity has been achieved then review of immunization status is necessary. Where it has been confirmed that immunization has been given in the past, a booster can be given on one occasion. It is not necessary to continue boosting with vaccine even if subsequent serologic tests are negative because longitudinal studies have shown that these individuals have other evidence of rubella immunity, namely they don't acquire disease.

Clinical diagnosis of rubella is often difficult and inaccurate. Confusion with measles and fifth disease (parvovirus) can occur. If at any time a person presents with a rash of unknown origin, serological investigation for laboratory confirmation is necessary. Prompt reporting to the Medical Health Officer/Health Protection Unit is required to develop plans for intervention as soon as possible to control spread of disease.

NWT Rubella Cases

1989 - 1

1990 - 1

Immunization News Immunization News*

Adverse Vaccine Reactions

Reactions to DPT #5 in the NWT

The Health Protection Unit (HPU) received a report in the later part of May, 1997 that a community in the Baffin Region was experiencing an usual increase in local reactions with DPT Polio #5, that was given for preschool vaccine booster. Increase in local reactions with DPT Polio #5 in itself is not unusual but the number and severity of the reactions were noteworthy. Eighty percent of the children in one community experienced local reactions, redness and swelling of approximately 3" in diameter and two children had severe reactions, with redness and swelling extending past the elbow. Another community recently reported that 12 of the 60 children vaccinated for preschool had large local reactions. An experienced public health nurse reported this event and the number and size of reaction was more than what she would normally see.

Reporting Reactions

It is very important to document and report any suspect adverse events with a particular vaccine. A part of that report would include a description of the event and notation of the vaccine used and its lot number. The Laboratory Centre of Disease Control (LCDC) can then be notified with these summary details. In the specific incident noted above, the Head of Childhood Immunizations at LCDC was notified and has proceeded to review the Adverse Events reported on this particular Lot # and is currently checking the lot # with the Bureau of Biologics.

It is of the utmost importance that any increase in local reactions is reported to the Medical Health Officer for your Region and/or the HPU.

Local Adverse Events

If a local Adverse Event occurs that meets case definition "severe pain and/or swelling (i) lasting 4 days or more and/or (ii) extending past nearest joint, please complete the Adverse Event form and notify MHO.

A reminder that it isn't unusual to see small local reactions with the DPT Polio #5 as it is usually in response to cellular memory achieved from the primary series. It is recommended that the conservative nursing practice of educating parents to give pre and post immunization acetaminophen and to use cold compresses is a good idea as this is sometimes forgotten in this age group.

Summary of Adverse Reactions in the NWT

As with the injection of any foreign substance, local or systemic reactions may occur. Most are mild, short term and self limiting. However, occasionally allergic or serious unexpected reactions may occur. Figure 1 illustrates all reported Adverse Reactions in the NWT from 1993 to 1996, while Table 2 shows the distribution of adverse reactions with the various vaccines.

Table 1: Adverse Reactions in the NWT (1993 to 1996)

Year	1993	1994	1995	1996	Totals
DPT (with or without OPV)	16	12	4	7	39
Pentavalent	0	0	7	0	7
TD (with or without OPV)	2	0	1	0	3
MMR	1	2	3	0	6
BCG	1	5	3	0	9
Fluzone	1	0	0	0	1
Pedvax	1	0	0	0	1
Anthrax	1	1	1	0	3
Recombivax	0	0	1	0	1
Pneumovax	0	0	0	1	1
Total	23	20	20	8	71

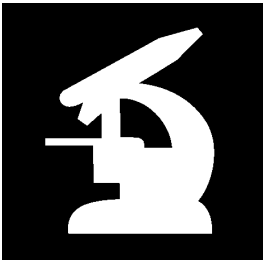
Table 2: Adverse Reactions in the NWT by Vaccine Type

Reaction	Local swelling/Abscess	Fever/Screaming	Hives	Hypotonic Reaction	Convulsions/Seizures	Vomiting	Hallucinations	Adenopathy	Arthritis
DPT (with or without OPV)	19	8	4	2	2	3	1		
Pentavalent			2	3	2				
TD (with or without OPV)			3						
MMR		2	3		1				
BCG	6							3	
Fluzone						1			
Pedvax	1								
Anthrax	3								
Recombivax						1			
Pneumovax									1
Total	31	12	7	6	5	5	1	3	1

Adverse Event Form

The new Adverse Event form released from LCDC in 1996 defines possible Adverse Events that can be temporally associated with receiving a vaccine. The updated form allows the user to simply tick the boxes that best describes the event. It now also allows the Health Care Professional room to supply medical history (previous adverse events, concurrent illnesses, allergies), results of investigation, and hospital treatment. Please notify Dr. Andre Corriveau, Medical Health Officer or Wanda White, Communicable Disease Consultant if concerns arise in your Region about Adverse Events.

Copies of this Adverse Event form can be obtained from the Health Protection Unit at (403)920-8646. All completed forms should be forwarded to the Health Protection Unit. After review, these forms are then sent on to LCDC in Ottawa.



*Editor's Note:
Thanks to Provincial
Laboratory of Northern
Alberta (U of A) and
Stanton Regional
Hospital Laboratory
(Yellowknife) for
assistance with this
article.*

**"Morning
specimens are
the most
concentrated
sample of
disease causing
organisms."**

Laboratory Corner: Sputa Sampling

Collecting good-quality sputa samples is always a challenge. Given the number of variables involved, samples often arrive inadequately labelled, leaking or overgrown with contaminating bacteria. The following guidelines outline how to obtain quality sputum samples.

Obtaining Samples For Bacteriology, TB, and fungal investigation

Specimen Collection:

Best time for collection: Early morning before eating.¹

Container: Clear, sterile, disposable, leakproof container.

Amount of specimen required: More than 2 mL where possible.

Method: Deep cough specimen. The best specimens look thick and green/yellow-green.

Unacceptable: Spit, saliva, postnasal specimens.

Label specimen with:

- Patient's name
- Patient location
- Hospital ID number
- Specimen type ("Sputum")

Frequency of collection:

1. Bacteriology:

1 satisfactory specimen in a 24 hour period.
*After 3 unsatisfactory specimens, reassess collection.*²

2. TB

1 specimen per day for 3 successive days.
1 specimen weekly starting 1st week therapy begins.

3. Fungal

1 specimen in a 24 hour period.

Allowable transport conditions:

Specimens must reach lab within 2 hours.³

Offsite collections:

Specimens must be refrigerated and transported to the laboratory within 24 hours.⁴

Instructions for patients re: Sputum Collection

1. Give the patient a specimen container and the patient instruction sheet for sputum collection.
2. Instruct the patient to gargle or rinse with water prior to specimen collection.⁵ If the specimen is for TB investigation, provide the patient with sterile water.⁶
3. Instruct the patient to remove the lid from the specimen container and hold container to open mouth with lips inside the container opening.
4. Instruct patient to take as deep a breath as is comfortable and **COUGH, DO NOT SPIT**, into the container.
5. Instruct the patient to screw container lid tightly in place and seal with parafilm.
6. Examine the outside of the container for sputum material; if it is soiled, decontaminate it by wiping it clean with paper towel soaked in disinfectant.⁷
7. Place specimen container in biohazard bag with requisition in adjoining pouch.
8. Arrange for specimen transport to the appropriate laboratory* within the stipulated time frame.

* *Baffin* - Montreal Jewish General Hospital.

Keewatin - Cadham Provincial Laboratory

Inuvik, Kitikmeot, and Ft Smith - Stanton Regional Hospital

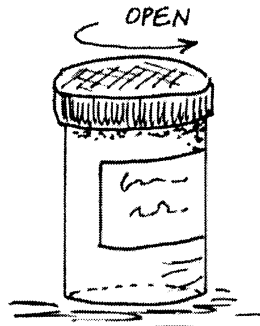
Notes:

- ¹ Morning specimens are the most concentrated sample of disease causing organisms. Food contamination ruins samples.
- ² All sputum specimens will be quality scored; any specimens representing saliva will be rejected and a repeated specimen will be requested by telephone.
- ³ Too long at room temperature can kill pathogenic bacteria.
- ⁴ Refrigeration prevents oropharyngeal bacteria from multiplying and overwhelming pathogenic bacteria.
- ⁵ Do not use mouthwash; it can kill pathogens.
- ⁶ Using tap water to rinse mouth could contaminate the specimen with *Mycobacterium gordonae* present in tap water.
- ⁷ Leaking specimens or specimens with externally contaminated containers are biohazards and will not be processed. Suggestion: use Presept as a disinfectant.

For The Patient: How to Give a Sputum Sample



1. Gargle or rinse with the water you are given.



2. Open the sample container.



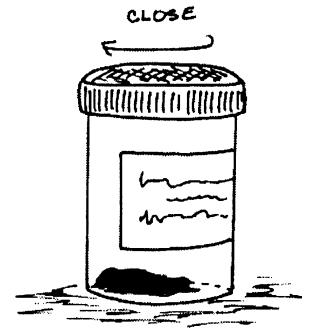
3. Hold the container to your mouth with your lips inside it.



4. Take as deep a breath as you can and cough, do not spit, into the container.



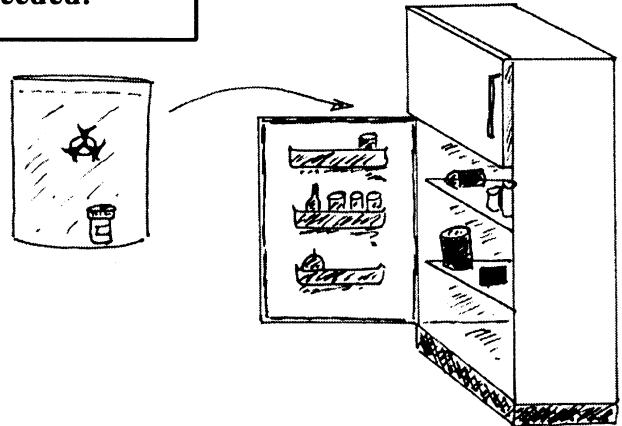
5. The sample you cough should look thick and yellow or green. More than a tablespoon of sample is needed.



6. Close the container lid tightly.



7. Give the sample to your caregiver right away.



8. If you are at home:
Put your sample in the plastic bag you were given. Close the bag.
Put your sample in the fridge right away.
Return your sample to your caregiver within 24 hours.

Notifiable Diseases by Region for March and April 1997

DISEASE	Month	Cumulative		REGIONS (YTD - 1997)							
	Mar & Apr 1997	1996 YTD	1997 YTD	Baffin	Fort Smith/ Mackenzie	Inuvik	Keewatin	Kitikmeot			
Vaccine Preventable Diseases	H. influenzae B	0	2	0	0	0	0	0			
	Influenzae	15	0	15	0	0	0	15			
	Measles										
	Mumps	0	1	0	0	0	0	0			
	Pertussis	4	7	8	0	6	1	0			
	Rubella										
Enteric Diseases	Botulism	0	1	1	0	1	0	0			
	Campylobacteriosis	2	7	3	0	2	0	1			
	Cryptosporidiosis	0	0	6	6	0	0	0			
	E.Coli 0157:H7	0	0	2	0	2	0	0			
	Food Poisoning	0	0	5	0	5	0	0			
	Giardiasis	0	9	2	1	1	0	0			
	Salmonellosis	3	6	4	2	1	1	0			
	Shigellosis	1	0	1		1					
	Tapeworm Infestation	0	0	1	0	1	0	0			
	Trichinosis	0	0	0							
Sexually Transmitted Diseases	Chlamydia	167	329	205	48	53	23	24			
	Gonorrhoea	24	41	52	16	4	1	1			
	Syphilis										
Viral Hepatitis	Hepatitis A	0	1	0							
	Hepatitis B	2	1	2	0	2	0	0			
	Hepatitis C	3	10	8	0	7	1	0			
	Hepatitis, Other	0	1	0							
Other Systemic Diseases	Brucellosis										
	Chickenpox	25	171	104	1	2	11	39			
	Group A Strep	1	0	1	0	0	0	0			
	Meningitis/Encephalitis	4	1	5	0	3	0	1			
	Meningococcal infection										
	Rabies Exposure	4	0	4			4				
	Tuberculosis	3	20	8	0	8	0	0			
HIV INFECTIONS BY YEAR SEEN IN NWT RESIDENTS											
YEAR	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
NUMBER/YEAR	3	2	2	3	3	8	4	2	0	2	1
CUMULATIVE	3	5	7	10	13	21	25	27	27	29	30

Notifiable Diseases Reported By Community

March 1997

Chickenpox (varicella), 5: In Sanikiluaq.

Chlamydia, 69: Yellowknife, 9; Iqaluit, 8; Kugluktuk, 6; Baker Lake, 4; Ft. McPherson, 4; Ft. Smith, 4; Igloolik, 4; Cambridge Bay, 3; Rankin Inlet, 3; Arviat, 2; Cape Dorset, 2; Gjoa Haven, 2; Hall Beach, 2; Rae Edzo, 2; Arctic Bay, 1;; Clyde River, 1; Ft. Resolution, 1; Ft. Simpson, 1; Grise Fiord, 1; Hay River, 1; Holman, 1; Inuvik, 1; Norman Wells, 1; Pond Inlet, 1; Rae Lakes, 1; Sanikiluaq, 1; Wha Ti, 1.

Gonorrhea, 12: Iqaluit, 5; Grise Fiord, 2; Cape Dorset, 1; Ft. Good Hope, 1; Ft. McPherson, 1; Rae Edzo, 1; Taloyoak, 1.

Hepatitis C, 1: In Yellowknife.

Pertussis, 1: In Yellowknife.

Salmonellosis, 1: In Ft. McPherson

Tuberculosis, 2: Yellowknife, 2.

April 1996

Campylobacteriosis, 2: In Yellowknife.

Chickenpox (varicella), 20: Holman, 8; Ft. Smith, 7; Yellowknife, 2; Ft. McPherson, 2, Snare Lake, 1.

Chlamydia, 98: Iqaluit, 13; Yellowknife, 11; Inuvik, 1; Rankin Inlet, 6; Arviat, 5; Ft. McPherson, 5; Pond Inlet, 5; Wha Ti, 5; Ft. Providence, 4; Ft. Simpson, 4; Kugluktuk, 4; Rae Edzo, 4; Cambridge Bay, 2; Hall Beach, 2; Baker Lake, 1; Broughton Island, 1; Cape Dorset, 1; Chesterfield Inlet, 1; Clyde River, 1; Ft. Resolution, 1; Ft. Smith, 1; Hay River, 1; Igloolik, 1; Lutselk'e, 1; Norman Wells, 1; Pangnirtung, 1; Rae Lakes, 1; Taloyoak, 1; Tulita, 1; Whale Cove, 1.

Gonorrhea, 12: Iqaluit, 8; Yellowknife, 2; Cambridge Bay, 1; Whale Cove, 1.

Group A Streptococcus, 1: In Taloyoak

Hepatitis B, 2: Rae Edzo, 1; Yellowknife, 1.

Hepatitis C, 2: Repulse Bay, 1; Yellowknife, 1.

Influenza B, 5: In Rankin Inlet.

Meningitis, 4: Broughton Island, 1; Coral Harbour, 1; Kugluktuk, 1; Rae Edzo, 1.

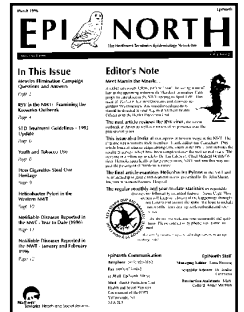
Pertussis, 3: In Ft. Simpson.

Rabies Exposure, 4: In Paulatuk.

Salmonellosis, 2: Clyde River, 1; Yellowknife, 1.

Shigellosis, 1: In Yellowknife.

Tuberculosis, 1: In Lutselk'e

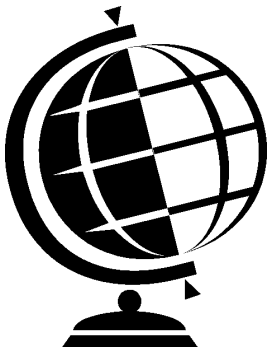


EpiNorth is a publication of the Health Protection Unit, Division of Population Health, Department of Health and Social Services.

Contributions are welcome and should be sent to the Managing Editor. Articles should be in WordPerfect format. Inclusion of material in **EpiNorth** does not preclude publication elsewhere.

Views expressed are those of the authors and do not necessarily reflect departmental policy.

Notifiable disease information reported in **EpiNorth** on a monthly basis reflects reports *received* in the **Health Protection Unit** during the current month, not the month in which the cases occurred. Health professionals who suspect or diagnose a Notifiable disease are required to report it to their **Regional Medical Health Officer** within the time frame legislated in the Public Health Act/Communicable Disease Regulations.



News Clips:

Around the NWT

RSV Activity increasing in the Keewatin

RSV activity has increased in several communities (Repulse, Arviat, Rankin, Baker Lake, Whale Cove and Sanikiluaq) in Keewatin. Both Baffin and Kitikmeot are seeing a reduction in their RSV activity.

Pertussis in Fort Simpson

There have been 8 reported cases of pertussis in the Ft. Simpson area. This has been over a 2 month period with 4 cases reported in the last week.

Pre-employment Screening for BHP

BHP consulted with the HPU to formulate guidelines for preemployment screens and TB screening as a part of their protocol. This will provide good baselines to work from should an incident of TB occur at the minesite.

Source for all NWT items: GNWT - Health Protection Unit

Elsewhere in Canada

Shigella in BC

The Provincial Laboratory in British Columbia has received a greater number of isolates than expected of 2 species of *Shigella* during the latter part of April and May. Since April 28, 8 cases of *S. flexneri* (norm 2 per month) have been reported and 13 cases of *S. sonnei* (norm 5 per month) have been reported. The majority of the cases had returned from travelling in countries such as India, Turkey, or Mexico prior to developing symptoms. At least 5/8 of the *S. flexneri* cases had recently returned from a group tour to Los Cabos, Mexico. Health authorities in BC are following up on the people in the group tour to interview and ensure that there are no symptomatic food handlers.

Source: BCCDC

Shigella in Toronto

The City of Toronto Health Department has linked 2 cases of *Shigella sonnei* to the same chain of restaurants associated with an outbreak in Montreal. As of last week, 15 cases had been reported in Montreal. All cases are associated with 6 of 7 restaurants in one chain. Twenty percent of the staff in one outlet were affected.

Source: Ontario Ministry of Health

In the USA and beyond...

Hepatitis A in Iowa

A case of hepatitis A has been reported in a foodhandler who handled high risk foods (salads) at "Noah's Ark", a large restaurant in Des Moines. The case became known to public health authorities too late to intervene with IG. No further cases linked to this restaurant have been reported to date. To reduce further spread, the local health department is recommending for those who ate salad at the restaurant between April 21 and May 5 (estimated at 2,000 to 4,000 persons) close attention to hygiene, awareness of symptoms, the need to seek medical attention if symptoms develop, and early reporting so that IG can be given to contacts. Reporting of LCDC of Canadian cases linked to this restaurant exposure would be appreciated.

Source: Iowa Department of Health

Typhoid: Imported from Florida

The Scottish Ministry of Health reported a case of typhoid in a 41-year-old food handler who had recently returned from a holiday travelling around Florida. The patient developed mild symptoms while abroad and blood cultures taken from him on his return yielded *Salmonella typhi*. The majority of cases of enteric fever in Scotland are imported from the Indian sub-continent so that a case apparently imported from the USA is unusual.

Source: SCIEH Weekly Report, 13th May 1997

FYI: Airplanes and the Spread of Disease

Aircraft could be spreading dangerous viruses around the world in the sewage from on-board toilets. US researchers who took samples of the waste pumped from commercial aircraft were horrified to discover that nearly half contained infectious viruses that survived the chemicals in the sewage tanks, says *New Scientist* magazine. The World Health Organization and the U.S. Centers for Disease Control decided to look for viruses in aircraft heads. They did not find polio, to their relief, but they did find enteroviruses that cause stomach upset and fever. The range of illnesses that can be transmitted by the world's airlines is quite worrisome. There is concern re: possibility of hepatitis viruses being spread in this way, as well as bacteria and parasites. Although airline waste in the United States is treated in commercial sewage plants, all types of viruses are not always killed. This means one to 10 percent of the viruses survive and are discharged into the environment. Environmental scientists suggest adding stronger chemicals to all aircraft toilets.

Source: New Scientist Magazine

- *RSV Activity increasing in the Keewatin*
- *Pertussis in Fort Simpson*
- *Pre-employment Screening for BHP*
- *Shigella in BC*
- *Shigella in Toronto*
- *Hepatitis A in Iowa*
- *Typhoid: Imported from Florida*
- *FYI: Airplanes and the spread of disease*