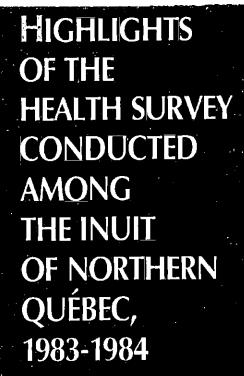
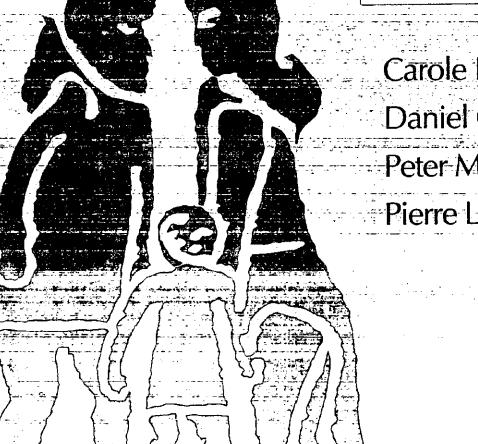


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- Mrs. Renée Légal and Mrs. Lise Trépanier of Projet Nord, who prepared the graphs.

We also wish to emphasize the significant contribution of professionals in the Projet Nord team and Kativik Regional Board of Health and Social Services whose experience among the Inuit and comments were valuable to us.

Our thanks to everyone associated with the 1983-1984 survey.

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FOREWORD

The ministère de la Santé et des Services sociaux in collaboration with the Kativik Board of Health and Social Services and the Department of Community Health of the Centre hospitalier de l'Université Laval will carry out in 1992 a significant and comprehensive health survey in the Nunavik population. This survey's main purpose - entrusted to Santé Québec* - is getting to collect health-related data in order to better understand people's problems and improving the services and programs assigned to them.

As far as the Inuit population is concerned, this will be the second time that they are asked to cooperate in a comprehensive health survey. Between 1983 and 1984, a Université de Montréal work team conducted a survey allowing to collect health and lifestyle - related data. This survey's main results are published in this issue. Their significance lies on the fact that they constitute themselves a basis for the survey projected for 1992, and especially because they provide the Inuit population with a better understanding of their social and sanitary situation.

Santé Québec's 1992 survey will be similar but different at the same time. It will enable this region to get equipped with a data bank as those in the other regions of Québec. This data bank will be organized on the basis of local population culture

^{*} Santé Québec is a research agency sponsored by the MSSS and its agencies in order to conduct health surveys within Québec's population.



and needs. Its main users will be the Kativik Board of Health and Social Services, the Kativik Regional Government as well as the agencies and people working for a better Nunavik population's social and sanitary standard.

A coordinating and planning committee was set up for the purpose of Santé Québec Inuit Health Survey 1992 and its members are enlisted below:

- Carole Beaulne, Inuulitsivik Hospital
- Pasha Berthe, Kativik B.H.S.S.
- Suzanne Bruneau, Kativik B.H.S.S.
- Lise Corbin, Ungava Hospital
- André Corriveau, Kativik B.H.S.S.
- Colette Couture, DSC-CHUL
- Carole Daveluy, Santé Québec
- Aline Émond, Santé Québec
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- Louise Guyon, Santé Québec
- Mireille Jetté, Santé Québec
- Pierre Lafontaine, MSSS
- René Plamondon, DSC-CHUL
- Jean-François Proulx, Kativik B.H.S.S.
- Manon Rouleau, BSQ
- Francine Tremblay, Kativik B.H.S.S.
- Normand Tremblay, Ungava Hospital
- Jobie Weetaluktuk, Kativik B.H.S.S.

At Santé Québec 1992 survey's completion, a new issue revealing its highlights will be prepared in order to inform the population about its main results.

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NTRODUCTION



This report presents the main findings of a health survey conducted in 1983-1984 by a multidisciplinary team headed by Peter Foggin of the geography department, Université de Montréal, among the Inuit in Northern Québec. The Department of Community Health (DSC) of the Centre hospitalier de l'Université Laval (Projet Nord team) was also involved in the survey.

The survey was designed to draw a socio-sanitary profile of the Inuit population. Among other things, it focused on the links between various risk factors and the state of health of the population. It was based on a broad notion of health, encompassing such factors as human biology, the environment, living habits, and the organization of health care services. This report presents the highlights of the survey, and follows a plan similar to the one used in the Santé Québec Health Survey report.

We have pursued a twofold objective in presenting the highlights. First, we wish to inform the Inuit population of the main findings of the survey, in which they participated, to enable them to learn more about the socio-sanitary conditions prevailing in their territory at the time of the survey. The data presented in this report do not paint a complete picture of the situation, although they do cover the factors which were analysed and may give rise to useful reflection.

Our second objective is to present a number of indices drawn from the survey which may be used as comparison points with the findings of the next

Santé Québec survey, with a view to ascertaining how the situation has changed in just under 10 years. In this perspective, our report seeks to establish a link between the Plasannouq project health survey and the Santé Québec health survey planned in 1992. The latter survey will provide the Inuit population with additional information on the state of its health, the main risk factors it is facing, and a number of high-risk groups in the population.

The first part of this report focuses on a number of variables associated with the demography of the Inuit population. In addition to clearly setting out the main demographic characteristics, this analysis may make it easier to discern various health problems or, at least, a number of problems confronting the Inuit population, e.g. the importance of certain causes of death. The demographic data presented in the first part are issued from the data of the Census of population, held all over Canada in 1986, and from the statistics on births and deaths produced annually by The Bureau de la statistique du Québec. Data on hospitalizations are produced by the ministère de la Santé et des Services sociaux.

EMOGRAPHIC CHARACTERISTICS

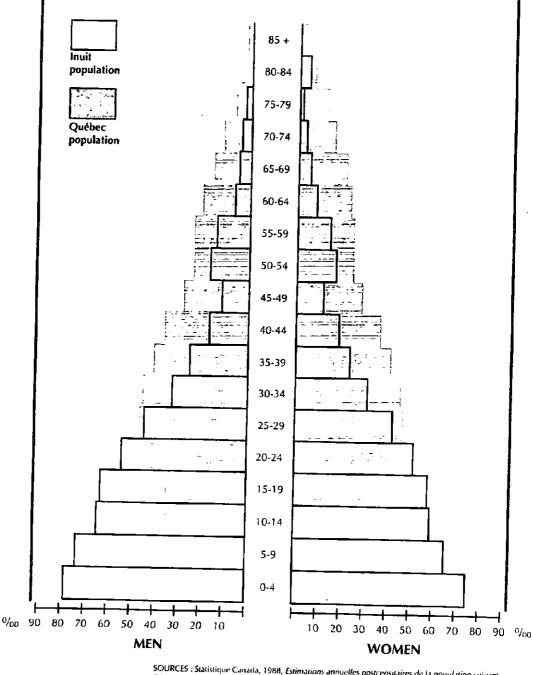


BREAKDOWN BY AGE OF THE POPULATION

- One noteworthy feature of the Inuit population is that it is young. In 1988, nearly two-thirds of the Inuit (54 percent) were under 20; scarcely more than 2 percent were 65 or over, in striking contrast to Quebecers overall, 27 percent of whom were under 20, and 10 percent, 65 or over.
- The estimated population in 1988 was 6342 Inuit in the Kativik region.
- The Inuit birthrate is high. Between 1984 and 1988, an annual average of 34 live births per 1000 persons was recorded, nearly three times the overall Québec figure, i.e. 13 per 1000 persons.
- The natural growth rate, i.e. the surplus of births over deaths, is very high. Between 1984 and 1988, it was 13 percent, compared with 3 percent in Québec as a whole.
- The breakdown by age of the Inuit population has remained essentially unchanged since 1976. Thus, the population cannot be said to be ageing as it is generally doing in Québec.



Age pyramids; Inuit and Québec populations, by sex (1988)



SOURCES: Statistique Canada, 1988, Estimations annuelles postcensitaires de la population suivant l'état matrimonial, l'âge, le seue et composantes de l'accroissement, Canada, provinces et territoires au 1º fuin 1988, p. 30-33. Kativik Regional Board of Health and Social Services. Age groups : Nonhem Québec : 1988/12/31.



LIFE EXPECTANCY AT BIRTH

Life expectancy at birth indicates the average number of years an individual can hope to live, bearing in mind the socio-economic and environmental conditions prevailing in the population.

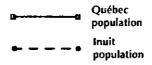
 Life expectancy among Inuit population has grown significantly over the last thirty years.
 From 43 years in 1954-1958, it has expanded to 62 years in 1984-1988.

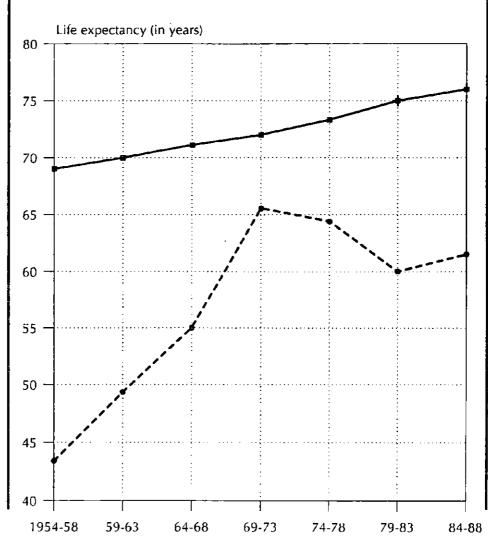
The decline of life expectancy between 1969-1973 and 1979-1983 might reflect a deterioration of the social conditions. This situation might be also partly attributable to the growing contribution of accidental deaths over time among young men.

 Overall, life expectancy at birth among the Inuit is significantly lower than among the overall population of Québec; in 1986, the discrepancy was 14 years.









SOURCE : MSSS. Système permanent de surveillance de l'état de santé de la pripulation.

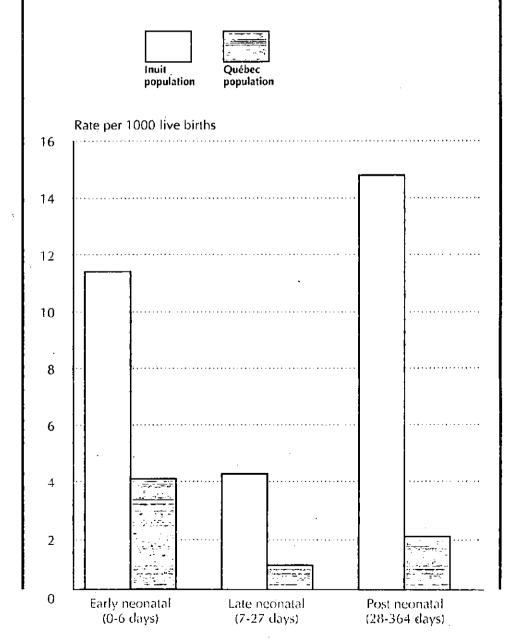
INFANT MORTALITY

Infant mortality refers to deaths occurring up to the age of one. It is a useful indicator because it is closely tied to the hygiene and health conditions prevailing in a community.

- Infant mortality has declined in the Inuit population. According to a recent study, the drop occurred by and large prior to 1971.
 Between 1976 and 1986, it fell nearly 35 percent.
- The drop in infant mortality is due primarily to improved sanitary conditions and progress in the fight against infectious diseases.
- Despite such progress, the Inuit infant mortality rate is still markedly higher than that in the overall population of Québec. Between 1984 and 1988, it was 30 per 1000 live births, nearly 4 times higher than Québec as a whole, where it was at 7 per 1000.
- Nearly 50 percent of Inuit infant deaths occur after the first month of life (post-neonatal mortality), which contrasts with the situation in Québec overall, where 57 percent of infant deaths occur within the first seven days of life (early neonatal mortality).



Infant mortality (1984-1988); Inuit and Québec populations



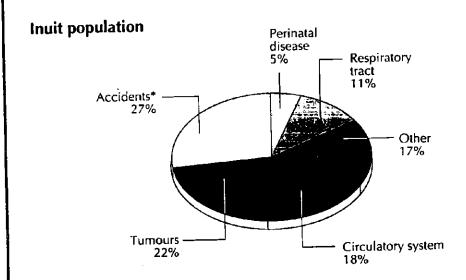
SOURCE : MSSS, Système permanent de surveillance de l'état de santé de la population.

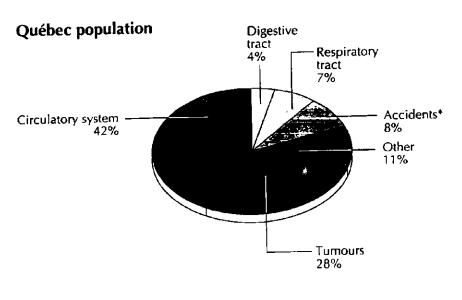
MAIN CAUSES OF DEATH

- The importance of infectious and parasitic diseases among the Inuit has decreased significantly, although deaths attributable to heart disease and cancer have increased noticeably. Since the early 1970s, accidents, poisoning and traumatisms have been the main causes of death.
- Between 1984 and 1988, accidents, poisoning and traumatisms were the leading causes of death (27 percent), followed by cancer (22 percent) and heart disease (18 percent). In Québec as a whole, heart disease is the main cause of death (42 percent), followed by cancer (28 percent), with accidents a distant third (8 percent). It should be noted that the Inuit population is younger than the general population.
 - In the category accidents, poisoning and traumatisms, the Inuit experience as many motor vehicle accidents as they do suicides, homicides and drownings. In Québec as a whole, suicides and motor vehicle accidents predominate for this category.
 - Lung cancer accounts for 50 percent of Inuit cancer deaths, compared with 27 percent in Québec as a whole.
 - Ischaemic heart diseases, i.e. diseases resulting from poor blood circulation, account for only 16 percent of all Inuit deaths linked with heart disease, compared with 59 percent in Québec.



Main causes of death (1984-1988); Inuit and Québec populations





*Accidents, poisoning, traumatisms

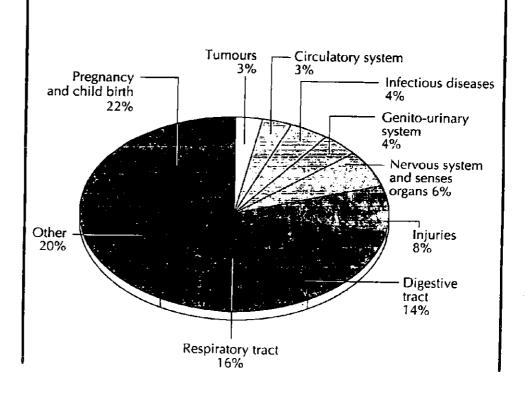
MAIN CAUSES OF HOSPITALIZATION

In 1987-1988, pregnancy and child birth ranked first among the main causes of hospitalization in the Kativik region.

- Respiratory tract disorders ranked second. Respiratory diseases, pneumonia and flu were most frequently diagnosed among such disorders; Inuit children made up the largest group of hospitalization in this category.
- Digestive tract diseases, including mainly dental diseases, ranked third. Injuries were also an important cause of hospitalization in 1987-1988, especially among Inuit male adults between 15 and 34.
- Nervous system and senses organs diseases ranked fifth and otitis media (middle ear infections) were most frequently noted, especially among children.
- Generally, hospitalization rates among the Inuit were higher than those in Québec as a whole with respect to the main causes of hospitalization, with the exception of circulatory system diseases and tumours. Thus, in 1987-1988, the Inuit hospitalization rate for all causes and adjusted for age was 298 by 1000 habitants, while it was 115 by 1000 habitants in Québec as a whole.



Main causes of hospitalization in the Kativik region (1987-1988)



HE
PLASANNOUQ
SURVEY
1983 - 1984



PRESENTATION OF THE PLASANNOUQ SURVEY*

The health survey conducted among the Inuit between late 1982 and the winter of 1984 focused on a sample of 367 homes randomly selected among 13 Inuit communities in the region. Between 25 and 30 households were chosen in each community; the sample encompassed 2284 individuals, including 1014 Inuit 14 years of age or under.

Information was collected using three questionnaires. The first, a medico-social questionnaire, was answered by one person in the household, usually the mother, on behalf of each member of the household. It focused, for example, on the use of health services, the health problems encountered, food, various examples of the respondent's perceptions concerning the state of her health, the quality of services offered, changes which had occurred in Inuit society, and so on.

The members of each household in the sample were also asked to appear for a medical examination. In addition to various measurements (blood pressure, weight, height, ear examination, blood sample), individuals 15 or over who were given the medical examination were asked to complete a questionnaire, dealing with individual health problems, especially those related to the lungs, and living habits. In the case of children under 15, the mother completed the questionnaire during a subsequent visit to the home.

^{*} Planification/Santé/Nouveau-Québec



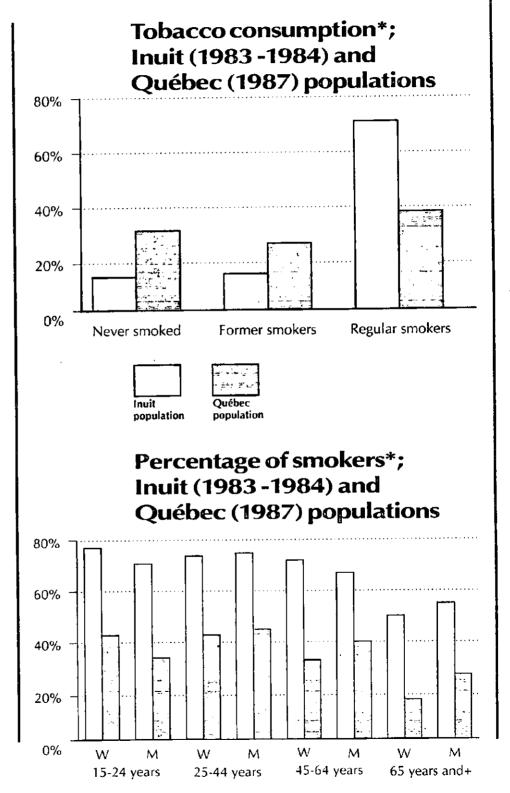
LIVING HABITS

Tobacco

Tobacco use significantly increases the risk of cardiovascular diseases and respiratory problems; it particularly causes lung and throat cancer. Smoking during pregnancy affects the health of the foetus.

- In 1983-1984, nearly 75 percent of the adult (15 years old and more) Inuit population smoked cigarettes, compared with 38 percent of Quebecers overall in 1987 (Graph 6).
- In the Kativik region, 73 percent of women and 70 percent of men were smokers. The percentage of smokers in 1991 is not known; it will be useful to obtain figures in this regard through the new Inuit health survey (Santé Québec).
- A higher percentage of Inuit men and women in all age groups smoke than in the general Québec population (Graph 7).
- The highest percentage of Inuit smokers is in the 15-44 age group, while Inuit 65 or over smoke less. In Québec as a whole, the highest percentage of smokers is in the 25-64 age group.

Graphs 6 and 7



LIVING HABITS

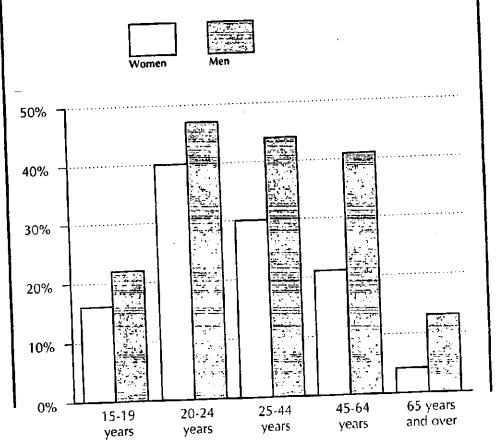
Alcohol

Alcohol consumption causes diseases of the liver and can lead to throat cancer. It also increases the risk of accidents, an important cause of death in the Kativik region, and is associated with family violence and delinquency.

- In the Kativik region, 31 percent of men and 22 percent of women consumed alcohol in the month prior to the survey. At that time, a higher percentage of men than women consumed alcohol in the North, which is similar to the situation observed in Québec as a whole.
- The greatest discrepancy in alcohol consumption between men and women in the Kativik region was noted in the 25-64 age group.
- Alcohol consumption among the Inuit is highest in the 20-24 age group, and is similar for men and women.



Alcohol consumption* in Northern Québec Inuit (one month prior to the survey), 1983-1984





LIVING HABITS

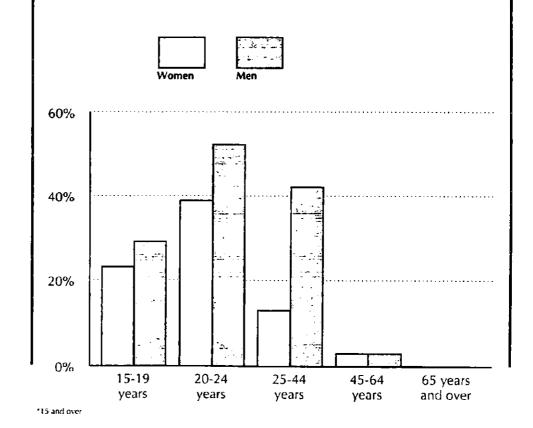
Drugs

The consumption of non-prescription drugs is a serious problem which, increasingly, is affecting all societies. It is associated with accidents and violence and causes several health problems.

- On average, 22 percent of the Inuit men and 12 percent of the Inuit women surveyed consumed drugs in the month prior to the survey.
- The highest percentage of drug users (men and women) in the Kativik region was found in the 20-24 age group (Graph 9).
- Drug consumption was low among Inuit 45 and over.



Drug consumption*
in Northern Québec
Inuit (one month prior to
the survey), 1983-1984



LIVING HABITS

Weight problems

High blood pressure, high blood cholesterol, diabetes, ischaemic heart diseases (diseases resulting from poor blood circulation) and some types of cancer are associated to obesity.

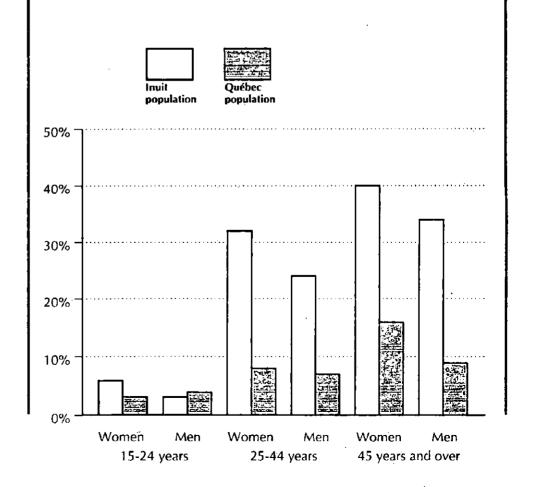
Obesity is a major health problem in Québec and affects over 10 percent of the population.

• In 1983-1984, 22 percent of the Inuit population suffered from obesity (according to the criteria of the survey)*, whose prevalence increases with age. Inuit women seem particularly affected by this problem. In each of the age groups analysed, the Inuit appear to suffer more extensively from obesity than the Québec population in general, except in the case of adolescents and young men in the 15-24 age group. However, these data must be interpreted cautiously as there is no weight table adapted to the Inuit population.

^{*}Obesity is defined by 20% over ideal weight.



Percentage of obese individuals; Inuit (1983 - 1984) and Québec (1987) populations



ENVIRONMENT

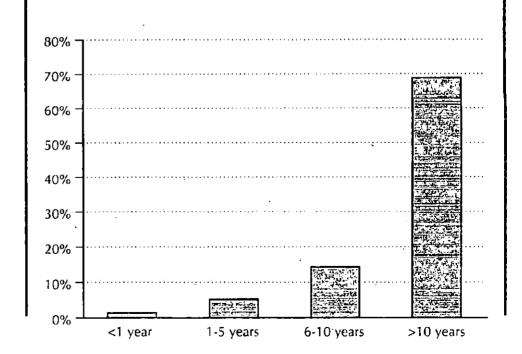
The physical and social environment in which we live can affect individual health. For example isolation or a lack of social support, the work environment, unemployment, climatic conditions and air (including smoking) and water pollutionare all factors which can have a detrimental effect on health.

- In 1983-1984, nearly 70 percent of Inuit adults had lived in the community for over 10 years only 2 percent had lived there for less than one year.
- Over 38 percent of the respondents were living in households with five to seven members, and 33 percent in households with eight to ten members. Less than 1 percent of the respondents were living alone.

These figures suggest that a feeling of belonging to the community may be high.



Percentage of individuals by length of residency in community (1983 -1984) in Northern Québec Inuit



HEALTH STATUS

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Respiratory problems

Hospital records revealed that respiratory problems are common in the Kativik region. Several decades ago, tuberculosis was fairly widespread. Moreover, extensive tobacco consumption normally causes a higher incidence of bronchitis and pneumonia.

Interpreters working in the health survey asked the Inuit if they had ever had tuberculosis or pneumonia or suffered from bronchitis. Respondents' reports of these diseases were not officially confirmed by the examination of medical records.

- Some 31 percent of Inuit respondents said they had had tuberculosis, while 21 percent said they had had pneumonia. Many respondents may have confused tuberculosis (TB) with TB preventive treatment, which could explain the high percentage of tuberculosis.
- Some 13 percent of the Inuit claimed to have had bronchitis.

Cardiovascular problems

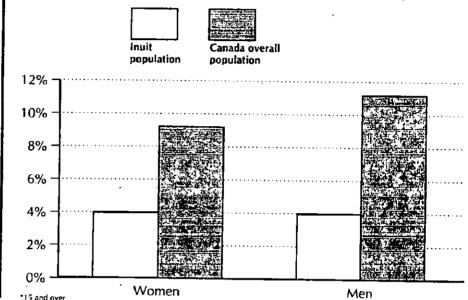
High blood pressure or hypertension significantly increases the risk of heart disease and stroke. Widespread hypertension in North America is a serious health problem, exacerbated by the fact that symptoms rarely appear until complications occur.

The team conducting the health survey in the Kativik region measured respondents' blood pressure and took blood samples in order to ascertain blood cholesterol levels.

 In the Kativik region, 4 percent of the population suffered from hypertension, which is low compared with 10 percent recorded among Canadians overall.



High blood pressure *; Inuit (1983-1984) and Canada overall (1978) populations



 High blood pressure was equally prevalent among Inuit men and women; in Canada as a whole, 11 percent of men and 9 percent of women suffered from the condition.

Serum cholesterol

Serum cholesterol is a fatty substance produced primarily by the liver, which accounts for 80 percent of overall blood cholesterol. The remainder comes from food. Excess blood cholesterol is a contributing factor in cardiovascular diseases. Nearly half of Canadian adults have above-normal levels of serum cholesterol.

In 1983-1984, serum cholesterol levels were normal among Inuit men and women in all age groups. It will be interesting to ascertain whether this situation has been maintained when the forthcoming Santé Québec health survey is conducted.

HEALTH STATUS

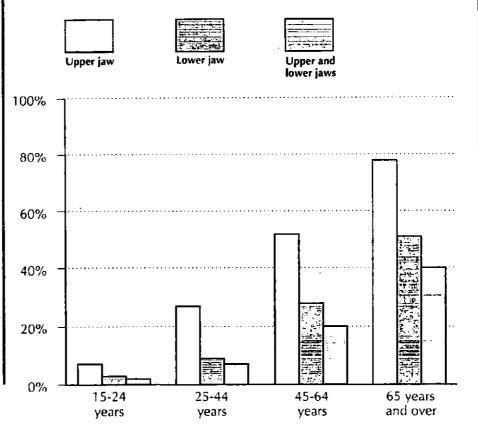
Dental problems

Poor eating habits undermine dental health. Heavy sugar consumption, especially when oral hygiene is poor, favours the development of dental caries, a condition which increases with age.

- In 1983-1984, the frequency among the Inuit of teeth being extracted because of dental caries was high. This situation may cause inadequate mastication of food and, as a result, gastrointestinal and nutritional problems.
- The survey team observed that many Inuit have no teeth either in the upper or lower or both jaws. In all age groups, complete absence of the teeth was more common in the upper jaw compared to the lower.



Toothless individuals* in Northern Québec Inuit, 1983 -1984



HEALTH STATUS

Ear infections

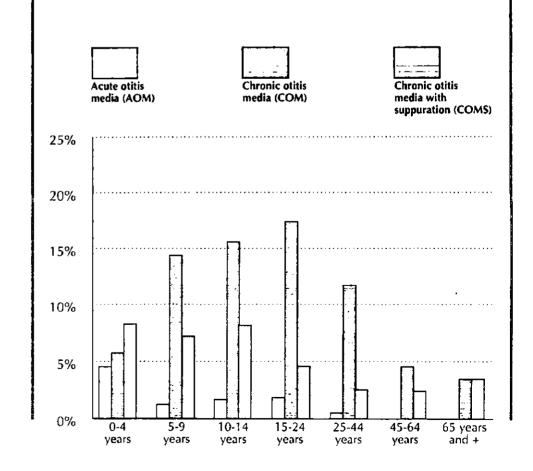
High levels of otitis media were noted in the Inuit population, especially among children. While the causes of the condition are not always clear, it is suspected that lifestyles, such as overheated dwellings, exposing children to cigarette smoke, bottle-feeding babies in a lying down position and, possibly, genetic factors, may contribute to it.

The main complications of otitis media are the perforation of the eardrum and a chronic discharge (otorrhea) which may lead to deafness.

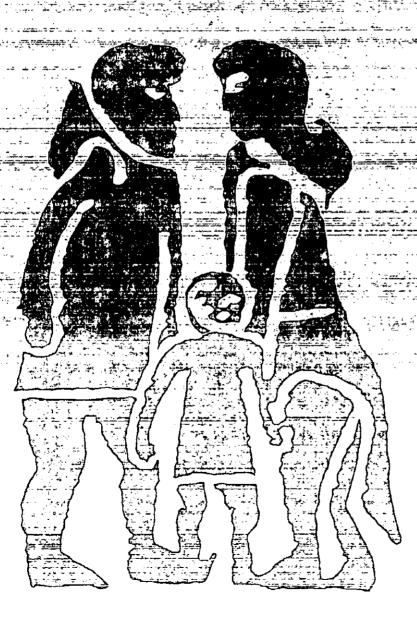
- In 1983-1984, 38 percent of the Inuit examined displayed signs of a past or present ear infection, although these data must be interpreted as an estimation of this problem.
- It was also noted that chronic otitis media with suppuration ("running" infection) was more frequent among children under the age of 15.

Graph 14

Prevalence estimates of otitis media in Northern Québec Inuit, 1983 -1984



Conclusion



An examination of medical records and the 1983-1984 Plasannouq health survey in the Kativik region have provided useful data on the Inuit population, which is quite young. The presence of large numbers of young people might explain the high incidence of accidental deaths in the region. Moreover, young people are unlikely to suffer from heart disease and cardiac problems, which are rare in the North.

According to the survey, nearly three-quarters of Inuit men and women in the Kativik region consumed tobacco. Alcohol consumption was more prevalent among men than women, especially in the 20-24 age group. The highest percentage of non-prescription drug users (men and women) was found in the 20-24 age group. A large number of men and women suffered from overweight; however, high blood pressure and elevated serum cholesterol levels were rare.

Dental problems were fairly prevalent, as indicated by the high prevalence of toothlessness. Approximately one-third of the population suffered from ear infections.

The data discussed in this study were collected nearly 10 years ago. Basic cultural changes which significantly affect health have occurred in the meantime. It would be useful to simultaneously survey the health status of the Inuit population, their living habits, and the consequences of illness on their activities. To this end, Santé Québec and



Kativik Regional Board of Health and Social Services plan to conduct a health survey in 1992, data from which will provide revealing comparisons with data collected during the Inuit Health Survey in 1983-1984.

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Highlights of the Health Survey Conducted among the Inuit of Northern Québec, 1983-84.

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