

International Inuit Cohort Study: Developing the next phase

Summary

Project Leader

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The International Inuit Cohort Study (IICS) was born from an international collaborative effort to gather pertinent data from Inuit circumpolar populations in order to identify differences and trends in this population. This cohort study addresses long-standing questions with respect to Inuit health research. Many studies among Inuit populations are limited by a lack of statistical power, weak external validity and absence of temporal links and causality between disease and potential etiologic factors. Indeed, the small size of communities (between 50 and 5000) living in different regions of the Arctic limits the use of epidemiological studies to determine rates of health outcomes. This initiative is based on three different companion studies conducted among Inuit adults in Canada and Greenland. Each study has a cross-sectional and a longitudinal component. The protocols used were developed in close collaboration and are very similar. The baseline surveys were carried out among adults (≥18 years) with Inuit/Yupik ancestry in the Canadian Arctic and Greenland. From 2004 to 2010, a total of 6223 individuals were recruited as part of three surveys: Qanuippitaa? How are we? Nunavik Inuit Health Survey 2004 (n=929); Inuit Health in Transition – Greenland Survey 2005-2010 (n=3108); International Polar Year - Inuit Health Survey (IPY-IHS) in Nunavut, Inuvialuit Settlement Region, and Nunatsiavut 2007-2009 (n=2459). Individuals participated to 3-4 hours session, including answering to interviewer- and self-administered English/Inuktitut questionnaires to ascertain a range of various lifestyle habits and health outcomes, and to medical and para-clinical examination (with biological samples drawn). At the outset, the IICS project was conducted across the three inhabited ArcticNet IRIS regions in Canada, and extended to Greenland. IICS deals with all aspects of the Cohort, including its constitution as a databank and all activities to further gather data to augment the databank. It builds on previous work on the vulnerabilities of Arctic communities, and it is feasible because of established collaborations with northern people and organizations. The project documents the changing physical, biological and socioeconomic conditions that are affecting people across the circumpolar North and identifies policies and strategies to assist communities in dealing with these changes. However, an agreement has yet to be reached between Inuit regions involved in the IPY-Inuit Health Survey (and especially Nunavut) and principal investigators regarding the governance of data from this survey. Therefore, the work for 2014-2015 involved data analyses only from the Nunavik and Greenland health surveys. In recent years of the project, a new component of the Inuit Cohort Study has emerged focussing on the social determinants of Inuit health, among which community and housing conditions. This component follows three objectives: 1) documenting associations between communities' socioeconomic conditions and health in Nunavik and Greenland; 2) documenting associations between household overcrowding and psychosocial health in Nunavik and Greenland; and 3) assessing the impacts of moving to a new house for Inuit health and well-being in Nunavik and Nunavut. Note: Following the tragic passing of Eric Dewailly in June 2014, Mylène Riva was named Principal Investigator of this project.

People

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Partners

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Publications

Articles Published in Refereed Publications

Bjerregaard, P., Pedersen, HS., Nielsen, NO., Dewailly, E., 2013, Population surveys in Greenland 1993-2009: temporal trend of PCBs and pesticides in the general Inuit population by age and urbanisation, Sci Total Environ, 454-455, 283-288, Published

Chateau-Degat, M-L.*, Ferland, A., Dery, S., Dewailly, E., 2011, Dietary sodium intake deleteriously affects blood pressure in a normotensive population, European Journal of Clinical Nutrition, 533-35, Published

Kellett, S., Poirier, P., Dewailly, E., Sampasa, H., Chateau-Degat, ML., 2012, Is severe obesity a cardiovascular health concern in the inuit population?, American Journal of Human Biology, doi: 10.1002/ajhb.22241, Published

Mylene Riva, Christina Viskum Lytken Larsen, Peter Bjerregaard, 2014, Household crowding and psychosocial health among Inuit in Greenland, International Journal of Public Health, 739–748, Published

Paunescu, AC., Ayotte, P., Dewailly, E., Dodin, S., 2013, Dioxin-like compounds are not associated with bone strength measured by ultrasonography in Inuit women from Nunavik (Canada): results of a cross-sectional study., Int J Circumpolar Health. 29;72, 20843, Published

Paunescu, AC., Ayotte, P., Dewailly, E., Dodin, S., Pedersen, HS., Mulvad, G., Côté, S., 2013, Polyunsaturated fatty acids and calcaneal ultrasound parameters among Inuit women from Nuuk (Greenland): a longitudinal study., Int J Circumpolar Health, 5;72, 20988, Published

Riva, M., Lytken Larsen, C.V., Bjerregaard, P., 2013, Household crowding and psychosocial health among Greenlandic Inuit., International Journal of Public Health. Under review, , Submitted



Riva, M., Plusquellec, P., Juster, R.P., Laouan-Sidi, E.A., Abdous, B., Lucas, M., Déry, S., Dewailly, E., 2014, Household crowding is associated with higher allostatic load among Inuit., Journal of Epidemiology and Community Health., doi:10.1136/jech-2013-203270, Published

Rudkowska I, Ouellette C, Dewailly E, Hegele RA, Boiteau V, Dubé-Linteau A, Abdous B, Proust F, Giguère Y, Julien P, Château-Degat ML, Vohl MC., 2013, Omega-3 fatty acids, polymorphisms and lipid related cardiovascular disease risk factors in the Inuit population., Nutr Metab, 12;10, 26, Published

Valera B, Jørgensen ME, Jeppesen C, Bjerregaard P., 2013, Exposure to persistent organic pollutants and risk of hypertension among Inuit from Greenland., Environmental Research, 122, 65–73, Published

Non-Refereed Contributions

Adamou, T.Y., Riva, M., Dewailly, E., Dery, S., Muckle, G., Dallaire, R., Laouan Sidi E.A., Ayotte, P., 2014, Temporal Trend Assessment Of Circulating Mercury And Pcb 153 Concentrations Among Nunavimmiut Pregnant Women (1992-2013), Arctic Change Conference, -, Published

Chateau-Degat, M.L., Abdous, B., Bjerregaard, P., Dewailly, E., Egeland, G.M., Young, T.K., Galloway, T. and Valera, B., 2011, Distribution of Hypertension and other traditional risk factors through Arctic regions, EPI/NPAM 2011 American Heart Association Conference, Atlanta, GA, March 2011, Accepted

Dupont, C., Laouan-Sidi, E.A., Abdous, B., Riva, M., 2014, Exploring relationships between individual socio-economic status, subclinical atherosclerosis, cardiometabolic diseases and prevalent cardiovascular diseases among Nunavimmiut Exploring relationships between individual socio-economic status, subclinical atherosclerosis, cardiometabolic diseases and prevalent cardiovascular diseases among Nunavimmiut, Arctic Change Conference, -, Published

Riva, M., 2014, How do housing conditions get under the skin to influence health? Considering psychosocial factors associated with the house environment in the Arctic., International Congress of Arctic Social Sciences. Prince George, BC, Canada. May 2014., -, Published

Riva, M., Lucas, M., Lemire, M., Dery, S., Dewailly, E., 2014, Socioeconomic Position And Incidence Of Cardiovascular Diseases Among Inuit In Nunavik, Canada, 142nd American Public Health Association Annual Meeting and Exposition, New Orleans, LA, USA. November 2014., -, Published

Ruiz-Castell, M., Riva, M., 2014, The Social Determinants of Health in Nunavik: exploring gender inequalities, Arctic Change Conference, -, Published