OBESITY AND CENTRAL FAT PATTERN AMONG GREENLAND INUIT AND A GENERAL POPULATION OF DENMARK. RELATIONSHIP TO METABOLIC RISK FACTORS.

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Background. Obesity and central fat pattern are associated with several cardiovascular risk factors including insulin resistance, glucose intolerance, hypertension and dyslipidemia in most populations. Among the Inuit of Canada and Alaska obesity is increasingly common. **Aim.** To assess the occurrence and metabolic correlates of obesity among Greenlanders and Danes. **Methods.** From 1999 to 2001 917 adult Inuit participated in a health survey in Greenland. The examination included a 75g OGTT. BMI, WHR, and blood pressure were measured. P-glucose, p-insulin, and lipids were measured. Overall obesity was defined as BMI>30kg/m^2, central obesity as WHR>0.9 for males and WHR>0.85 for females, and the cut point for large waist circumference were set at the 90% percentile for each study population. Data from the Danish study 'Inter99' (n=5606) conducted in 1999-2000 were used for comparison. **Summary of results.** Compared with the Inter99 population, a larger proportion of Inuit women had a BMI (age adjusted) exceeding 30 kg/m^2 (25.4% vs.17.6%, p<0.001) and a WHR (age adjusted) over 0.85 (66.6% vs.18.5%, p<0.001).19.3% of Inuit men had a BMI over 30kg/m^2 vs. 17.8% of the Danish men (p=0.056), and WHR>0.9 was present in 71% of Inuit men vs. 60.3% of the Danish men (p<0.001). Among Greenlanders with BMI > 30 kg/m^2 the age specific levels of fasting glucose, 2-h glucose, and insulin were significantly higher than that among the Danes with BMI>30, whereas blood pressure levels were lower. Danes with central obesity had significantly higher levels of fasting glucose, 2h-glucose, triglyceride, and blood pressure than the Inuit; whereas HDL cholesterol was lower than that among the Inuit. Waist circumference over the 90% percentile was associated with similar levels in the two populations of blood pressure, HDL cholesterol, and triglyceride, whereas fasting glucose, 2-h glucose, and fasting insulin were higher among the Inuit. **Conclusion.** Central fat pattern and obesity are more prevalent among the Inuit, but the obesity observed among the Inuit is not associated with the same degree of metabolic disturbances as in a general Danish population. It is debatable whether obesity criteria based on studies in other populations are applicable to the Inuit.