Supplementary Tables

Table S1: Traditional food consumption among Inuit in the Canadian Arctic as reported in reviewed studies

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Reference** | **Year of Data Collection** | **Location** | **Sample Size** | **Data source** | **Demographic** | **Data collection tool** | **Measure** | **Contribution of country food to dietary intake** |
| Mayhall 1973(35) | 1968-1973 | Hall Beach and Igloolik, Nunavut | 955 (over two communities and three studies) | Canadian Inuit Ontological Investigations Study | All | Not reported | Not reported | ~50% |
| Canadian Medical Association 1976(107) | 1970-1972 | “Four widely dispersed Inuit settlements” | 346 | Nutrition Canada Survey | All | Not reported | Not reported | Not reported |
| Ellestad-Sayed et al. 1978(37) | 1976 | Chesterfield Inlet and Repulse Bay, Nunavut | 59 | N/A | All | 24-h dietary recall | Percentage of total energy intake, in calories (% TEI) | >30.2% |
| Kuhnlein et al. 1996(40) | 1987-88 | Qikiqtarjuak, Nunavut | 366 | Broughton Island Dietary Survey | All | Repeated (every 2 months for a year) 24-h dietary recall | % TEI | 33.0% |
| Berti et al. 1999(53) | 1987-88 | Qikiqtarjuak, Nunavut | 164 | Broughton Island Dietary Survey | Children and youth (<18 years old) | Proxy (mother) reporting; repeated (every 2 months for a year) 24-h dietary recall | % TEI | 16% |
| Blanchet et al. 2000(24); Proust et al. 2014(41) | 1992 | Nunavik | 452 | Santé Quebec Health Survey | All (18+ years old) | Food frequency questionnaire (FFQ) | % TEI | 21.0% |
| Kuhnlein et al. 2008(55) | 1993 | Nunavut, Yukon, NWT | 3562 total, including 1525 Inuit | N/A | All (18+ years old) | 24-h dietary recall | % TEI | 22.0% |
| Proust et al. 2014(41) | 2004 | Nunavik | 861 | *Qanuippitaa?* Health Survey | All (18+ years old) | Food frequency questionnaire (FFQ) | % TEI | 16.0% |
| Gagné et al. 2013(34) | 2006 | Nunavik | 245 | Nunavik Childcare Nutrition Program Baseline Survey | children (1-3 years) | Proxy (mother) reporting; 24-h dietary intake | % TEI | 2.6% |
| Sharma et al. 2009(43) | 2006 | Inuvialuit Settlement Region (ISR) | 101 | Healthy Foods North Baseline Study | All (19+ years old) | 24-h dietary recall | % TEI | 14.0% |
| Kenny et al. 2018(38) | 2007-08 | Nunatsiavut, Nunavut, ISR | 2095 | International Polar Year (IPY) Inuit Health Survey | All (18+ years old) | 24-h dietary recall | % TEI | <20% |
| Kenny et al. 2018(38) | 2007-08 | Nunatsiavut, Nunavut, ISR | 1568 | IPY Inuit Health Survey | all (<40 years old) | 24-h dietary recall | % TEI | 12.5% |
| Kenny et al. 2018(38) | 2007-08 | Nunatsiavut, Nunavut, ISR | 1568 | IPY Inuit Health Survey | all (40+ years old) | 24-h dietary recall | % TEI | 25.6% |
| Kenny et al. 2018(38) | 2007 | ISR | 267 | IPY Inuit Health Survey | all (<40 years old) | 24-h dietary recall | % TEI | 6.5% |
| Kenny et al. 2018(38) | 2007 | ISR | 267 | IPY Inuit Health Survey | all (40+ years old) | 24-h dietary recall | % TEI | 19.2% |
| Kenny et al. 2018(38) | 2007 | Nunatsiavut | 260 | IPY Inuit Health Survey | all (<40 years old) | 24-h dietary recall | % TEI | 2.7% |
| Kenny et al. 2018(38) | 2007 | Nunatsiavut | 260 | IPY Inuit Health Survey | all (40+ years old) | 24-h dietary recall | % TEI | 9.3% |
| Johnson-Down and Egeland 2010(113) | 2007 | Nunavut | 388 | Nunavut Inuit Child Health Survey | children (3-5 years old) | Proxy (mother) reporting; 24-h dietary intake and FFQs | % TEI | 8.40% |
| Schaefer et al. 2011(97) | 2008 | Nunavut | 106 | Health Foods North Baseline Study | women (19-44 years old) | FFQ | % TEI | 21.0% |
| Sharma et al. 2013(1) | 2008 | Nunavut | 208 | Health Foods North Baseline Study | All (18+ years old) | FFQ | % TEI | 21.0% |
| Singer et al. 2014(2) | 2014 | Repulse Bay, Nunavut | 85 | N/R | all (7-17 years old) | FFQ | servings of country food (CF)/week | 11 |
| Singer et al. 2014(2) | 2014 | Repulse Bay, Nunavut | 132 | N/R | all (18-47 years old) | FFQ | servings of CF/week | 12 |
| Singer et al. 2014(2) | 2014 | Repulse Bay, Nunavut | 33 | N/R | all (48+ years old) | FFQ | servings of CF/week | 18 |

Table S2: Prevalence of Anemia in Inuit in the Canadian Arctic reported in reviewed studies

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Reference** | **Year of Data Collection** | **Location** | **Sample Size** | **Demographic** | **Measure** | **Cut-off** | **Prevalence** |
| Christofides et al. 2016(118) | 2001 | Nunavut and Northern Ontario | 170 | all | anemia | Hb<110g /L | 36% |
| Plante et al. 2011(119) | 2004 | Nunavik | 466 | women | anemia | Hb<120g/L | 42.50% |
| Plante et al. 2011(119) | 2004 | Nunavik | - | women (age20-49) | anemia | Hb<120g/L | 60% |
| Plante et al. 2011(119) | 2004 | Nunavik | - | women (age 50+) | anemia | Hb<120g/L | 38% |
| Pirkle et al. 2014(102) | 2005 | Nunavik | 292 | children (age 8-15) | anemia | Hb < 120 g/L | 12.60% |
| Pirkle et al. 2014(102) | 2005 | Nunavik | 292 | children (age 8-15) | Iron deficiency anemia (IDA) | Hb < 120 g/L and serum ferritin <15 μg/L or when Hb < 120 g/L and transferrin saturation coefficient < 0.14 | 8.70% |
| Zhou et al. 2011(120) | 2007 | Nunatsiavut, Nunavut, ISR | 1511 (all) | Women (age 18+) | Iron deficiency (ID) | N/R | 20.40% |
| Zhou et al. 2011(120) | 2007 | Nunatsiavut, Nunavut, ISR | 1511 (all) | Men (age 18+) | ID | N/R | 3.10% |
| Jamieson et al. 2013(98) | 2007 | Nunavut, ISR, Nunatsiavut | 697 | Women (age 18+) | IDA | anemia + SF <10 μg/L | 21.70% |
| Jamieson et al. 2013(98) | 2007 | Nunavut, ISR, Nunatsiavut | 169 | Women (age 18-30) | IDA | anemia + SF <10 μg/L | 17.90% |
| Jamieson et al. 2013(98) | 2007 | Nunavut, ISR, Nunatsiavut | 326 | Women (age 31-50) | IDA | anemia + SF <10 μg/L | 21.30% |
| Jamieson et al. 2013(98) | 2007 | Nunavut, ISR, Nunatsiavut | 202 | Women (age 51+) | IDA | anemia + SF <10 μg/L | 24.90% |
| Jamieson et al. 2016(124) | 2007 | Canadian Arctic | 1092 | Women (age 18-30) | Anemia | Hb <120 g/L | 11.70% |
| Jamieson et al. 2016(124) | 2007 | Canadian Arctic | 1092 | Women (age 31-50) | Anemia | Hb <120 g/L | 15.40% |
| Jamieson et al. 2016(124) | 2007 | Canadian Arctic | 1092 | Women (age 50+) | Anemia | Hb <120 g/L | 3.90% |
| Jamieson et al. 2012(123) | 2007 | Canadian Arctic | 1092 | Men (age 18-30) | Anemia | Hb< 130 g/L | 2.70% |
| Jamieson et al. 2012(123) | 2007 | Canadian Arctic | 1092 | Men (age 31-50) | Anemia | Hb <130 g/L | 3.20% |
| Jamieson et al. 2012(123) | 2007 | Canadian Arctic | 1092 | Men (age 50+) | Anemia | Hb <130 g/L | 1.10% |
| Pacey et al. 2011(121) | 2007 | Nunavut, ISR, Nunatsiavut | 388 | Children (age 3-5) | ID | SF <120 μg/L | 18.0% |
| Pacey et al. 2011(121) | 2007 | Nunavut, ISR, Nunatsiavut | 388 | Children (3-5) | IDA | Anemia + SF <120 μg/L | 5.4% |
| Pacey et al. 2011(121) | 2007 | Nunavut, ISR, Nunatsiavut | 388 | Children (3-5) | Anemia | Hb<110g/L (age 3-4) and HB<155g/L (age 5) | 16.8% |
| Jamieson et al. 2012(123) | 2007-08 | Nunavut, ISR, Nunatsiavut | 454 | Men (18+) | anemia | Hb<110g/L (3-4) and HB<155g/L (5) | 16.10% |
| Jamieson et al. 2012(123) | 2007-08 | Nunavut, ISR, Nunatsiavut | 99 | Men (age 18-30) | anemia | Hb<110g/L (3-4) and HB<155g/L (5) | 6.40% |
| Jamieson et al. 2012(123) | 2007-08 | Nunavut, ISR, Nunatsiavut | 220 | Men (age 31-50) | anemia | Hb<110g/L (3-4) and HB<155g/L (5) | 10.60% |
| Jamieson et al. 2012(123) | 2007-08 | Nunavut, ISR, Nunatsiavut | 135 | Men (age 51+) | anemia | Hb<110g/L (3-4) and HB<155g/L (5) | 30.30% |
| Jamieson and Kuhnlein 2008 | 2008 | Canada Arctic | n/a: lit review | Women | anemia |  | 52-79% |
| Jamieson and Kuhnlein 2008 | 2008 | Canada Arctic | n/a: lit review | Children | anemia |  | 19-47% |

Table S3: Prevalence of obesity and abdominal obesity among Inuit in the Canadian Arctic as reported in reviewed studies

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Reference** | **Year of Data Collection** | **Location** | **Sample Size** | **Demo-**  **graphic** | **Measure** | **Self-reported (SR) or Measured (M)** | **Cut-off** | **Prevalence** |
| Kellett et al. 2012(6) | 1992 | Nunavik | 677 | All (age 18+) | Body-mass index (BMI) | M | >40 kg/m2 or >30 kg/m2 with co-morbidity (severe obesity) | 1.5% |
| Kuhnlein et al. 2004(22) | 1998 | Nunavut, ISR, Nunatsiavut | 272 | Women (age 18+) | BMI | SR or M (when participant could not report) | >30 kg/m2 | 23.0% |
| Kuhnlein et al. 2004(22) | 1998 | Nunavut, ISR, Nunatsiavut | 289 | Men (age 18+) | BMI | SR or M (when participant could not report) | >30 kg/m2 | 16.0% |
| Chateau-Degat et al. 2010(156) | 2004 | Nunavik | 887 | Adults (age 18+) | BMI | M | >30 kg/m2 | 28.0% |
| Chateau-Degat et al. 2011(156) | 2004 | Nunavik | 386 | Women (age 18+) | Waist circum-ference (WC) | M | >80 cm | 55.7% |
| Chateau-Degat et al. 2011(156) | 2004 | Nunavik | 324 | Men (age 18+) | WC | M | >94 cm | 19.8% |
| Rønn et al. 2017 | 2004 | Nunavik | 765 | Adults (age 18+) | BMI | M | >30 kg/m2 | 29.2% |
| Rønn et al. 2017 | 2004 | Nunavik | 765 | Adults (age 18+) | Waist circumference (WC) | M | >102 cm (m), >88 cm (f) | 38.0% |
| Kellett et al. 2012 | 2004 | Nunavik | NR | Adults (age 18+) | BMI | M | >40 kg/m2 or >30 kg/m2 with co-morbidity (severe obesity) | 5.5% |
| Charbonneau-Roberts et al. 2007(144) | 2005 | Nunavut | 12 | Men (age 19+) | BMI | M | >30 kg/m2 | 27.0% |
| Charbonneau-Roberts et al. 2007(144) | 2005 | Nunavut | 40 | Women (age 19+) | BMI | M | >30 kg/m2 | 68.0% |
| Charbonneau-Roberts et al. 2007(144) | 2005 | Nunavut | 12 | Men (age 19+) | WC | M | >102 cm | 35.4% |
| Charbonneau-Roberts et al. 2007(144) | 2005 | Nunavut | 40 | Women (age 19+) | BMI | M | >88 cm | 86.1% |
| Medehouenou et al. 2015(149) | 2005 | Nunavik | 290 | children (age 8-14) | BMI | M | >30 kg/m2 | 6.60% |
| Kenny et al. 2018(38) | 2007-08 | Nunavut | 1568 | Adults (age 18+) | BMI | M | >30 kg/m2 | 33.10% |
| Kenny et al. 2018(38) | 2007-08 | Nunavut | 620 | Men (age 18+) | BMI | M | >30 kg/m2 | 24.0% |
| Kenny et al. 2018(38) | 2007 | Nunavut | 948 | Women (age 18+) | BMI | M | >30 kg/m2 | 39.0% |
| Kenny et al. 2018(38) | 2007-08 | ISR | 267 | Adults (age 18+) | BMI | M | >30 kg/m2 | 49.0% |
| Kenny et al. 2018(38) | 2007-08 | ISR | 86 | Men (age 18+) | BMI | M | >30 kg/m2 | 41.3% |
| Kenny et al. 2018(38) | 2007-08 | ISR | 181 | Women (age 18+) | BMI | M | >30 kg/m2 | 52.6% |
| Kenny et al. 2018(38) | 2007-08 | Nunatsiavut | 260 | All (age 18+) | BMI | M | >30 kg/m2 | 41.2% |
| Kenny et al. 2018(38) | 2007-08 | Nunatsiavut | 97 | Men (age 18+) | BMI | M | >30 kg/m2 | 31.3% |
| Kenny et al. 2018(38) | 2007-08 | Nunatsiavut | 163 | Women (age 18+) | BMI | M | >30 kg/m2 | 47.2% |
| Galloway et al. 2010(142) | 2007-08 | Nunavut, ISR, Nunatsiavut | 177 | Boys (age 3-5) | BMI | M | ≥95 BMI percentile acrd to 2000 CDC growth reference | 57.1% |
| Galloway et al. 2010(142) | 2007-08 | Nunavut, ISR, Nunatsaivut | 199 | Girls (age 3-5) | BMI | M | ≥95 BMI percentile acrd to 2000 CDC growth reference | 45.2% |
| Galloway et al. 2010(142) | 2007-08 | Nunavut, ISR, Nunatsaivut | 376 | Children (age 3-5) | BMI | M | ≥95 BMI percentile acrd to 2000 CDC growth reference | 50.8% |
| Zienczuk and Egeland 2012(151) | 2007-08 | Nunavut, ISR, Nunatsaivut | 2178 | All (age 18+) | BMI | M | >30 kg/m2 | 35.8% |
| Zienczuk and Egeland 2012(151) | 2007-08 | Nunavut, ISR, Nunatsaivut | 837 | Men (age 18+) | BMI | M | >30 kg/m2 | 27.0% |
| Zienczuk and Egeland 2012(151) | 2007-08 | Nunavut, ISR, Nunatsaivut | 1341 | Women (age 18+) | BMI | M | >30 kg/m2 | 42.0% |
| Schaefer et al. 2011(97) | 2007 | Nunavut | 106 | Women (age 19-44) | BMI | M | >30 kg/m2 | 40.4% |
| Zotor et al. 2012(50) | 2007 | ISR | 66 | Adults (age 19+) | BMI | M | >30 kg/m2 | 57.0% |
| Zotor et al. 2012(50) | 2007 | ISR | 87 | Adults (age 19+) | BMI | M | >30 kg/m2 | 36.0% |
| Zotor et al. 2012(50) | 2007 | ISR | 77 | Adults (age 19+) | BMI | M | >30 kg/m2 | 37.0% |
| Erber et al. 2010(160) | 2007 | ISR | 228 | Adults (age 19+) | BMI | M | >30 kg/m2 | 45% |
| Erber et al. 2010c | 2007 | ISR | 53 | Men (age 19+) | BMI | M | >30 kg/m2 | 40 % |
| Erber et al. 2010(160) | 2007 | ISR | 175 | Women (age 19+) | BMI | M | >30 kg/m2 | 46% |
| Erber et al. 2010(160) | 2008 | ISR | 14 | Men (age 19+) | BMI | M | >30 kg/m2 | 34% |
| Pakseresht et al. 2014(84) | 2008 | Nunavut, ISR | 441 | Adults (age 19+) | BMI | M | >30 kg/m2 | 47% |
| Hopping et al. 2010(146) | 2008 | Nunavut | 218 | Adults (age 19+) | BMI | M | >30 kg/m2 | 43.7% |
| Hopping et al. 2010(146) | 2008 | Nunavut | 38 | Men (age 19+) | BMI | M | >30 kg/m2 | 34.2% |
| Hopping et al. 2010(146) | 2008 | Nunavut | 180 | Women (age 19+) | BMI | M | >30 kg/m2 | 45.7% |
| Singer et al. 2014(2) | 2014 | Nunavut | 85 | Children and adole-scents (age 7-17) | BMI | M | >30 kg/m2 | 13% |
| Singer et al. 2014(2) | 2014 | Nunavut | 165 | Adults (age 18+) | BMI | M | >30 kg/m2 | 37% |

Table S4: Prevalence of type 2 diabetes among Inuit in the Canadian Arctic as reported in reviewed studies

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Reference** | **Year of Data Collection** | **Location** | **Sample Size** | **Demographic** | **Measure** | **Cut-off** | **Prevalence** |
| Schaefer et al. 1980(140) | 1976-77 | Arctic Bay (Nunavut) and Inuvik (NWT) | 503 | All | Self-reported | N/A | 0.002% |
| Thouez et al. 1989(141) | 1982-84 | Nunavik | 2121 | Adolescents and adults (age 15+) | Random plasma glucose | >11.0 mmol/L | 0% |
| Chateau-Degat et al. 2010(145) | 2004 | Nunavik | 887 | Adults (age 18+) | Fasting plasma glucose | Fasting plasma glucose ≥7.0 mmol/L | 4.7% |
| Chateau-Degat et al. 2010(145) | 2004 | Nunavik | 498 | Women (age 18+) | Fasting plasma glucose | Fasting plasma glucose ≥7.0 mmol/L | 6.6% |
| Chateau-Degat et al. 2010(145) | 2004 | Nunavik | 387 | Men (age 18+) | Fasting plasma glucose | Fasting plasma glucose ≥7.0 mmol/L | 2.7% |
| Erber et al. 2010(160) | 2007 | ISR | 228 | Adults (age 19+) | Self-reported | N/A | 6% |
| Erber et al. 2010(160) | 2007 | ISR | 53 | Men (age 19+) | Self-reported | N/A | 8% |
| Erber et al. 2010(160) | 2007 | ISR | 175 | Women (age 19+) | Self-reported | N/A | 6% |
| Egeland et al. 2011(147) | 2007 | Nunavut, ISR, Nunatsiavut | 831 | Adults (age 18+) | Oral glucose tolerance test | fasting glucose level ≥7.0 mmol/L or greater OR 2-h glucose level ≥11.0 mmol/L or greater OR taking medication for diabetes | 5.1% |
| Singh and Chan 2017(217) | 2007 | Nunavut, ISR, Nunatsiavut | 828 | Men (age 18+) | Self-reported OR fasting glucose | Fasting plasma glucose ≥7.0 mmol/L | 5.5% |
| Singh and Chan 2017(217) | 2007 | Nunavut, ISR, Nunatsiavut | 1353 | Men (age 18+) | Self-reported OR fasting glucose | Fasting plasma glucose ≥7.0 mmol/L | 5.8% |
| Singh and Chan 2017(217) | 2007 | Nunatsiavut | 262 | Adults (age 18+) | Self-reported OR fasting glucose | Fasting plasma glucose ≥7.0 mmol/L | 8.7% |
| Singh and Chan 2017(217) | 2007 | Nunavut | 1653 | Adults (age 18+) | Self-reported OR fasting glucose | Fasting plasma glucose ≥7.0 mmol/L | 5.5% |
| Singh and Chan 2017(217) | 2007 | ISR | 266 | Adults (age 18+) | Self-reported OR fasting glucose | Fasting plasma glucose ≥7.0 mmol/L | 3.9% |
| Singer et al. 2014(2) | 2014 | Nunavut | 194 | Adults (age 19+) | Oral glucose tolerance test | fasting glucose level ≥7.0 mmol/L or greater OR 2-h glucose level ≥11.0 mmol/L or greater OR taking medication for diabetes | 3.6% |

Table S5: Prevalence of vitamin A deficiency among Inuit in the Canadian Arctic as reported in reviewed studies

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Reference** | **Year of Data Collection** | **Location** | **Sample Size** | **Demographic** | **Measure** | **Cut-off** | **Prevalence** |
| Berti et al. 2008(108) | 1987 | Nunatsiavut, ISR, Nunavut | 405 | Non-pregnant women (age <40) | % below estimated average requirement (EAR) | N/R | 55% |
| Dallaire et al. 2003(33) | 1993 | Nunavik | 594 | Infants | Umbilical cord concentration | below 10 ug/dL | 8.50% |
| Kuhnlein et al. 2008(55) | 1993 | Nunavut, ISR | 1525 | Women (age <40) | % below EAR | N/R | 53% |
| Kuhnlein et al. 2008(55) | 1993 | Nunavut, ISR | 1525 | Women (age 40+) | % below EAR | N/R | 93% |
| Kuhnlein et al. 2008(55) | 1993 | Nunavut, ISR | 1525 | Men (age <40) | % below EAR | N/R | 56% |
| Kuhnlein et al. 2008(55) | 1993 | Nunavut, ISR | 1525 | Men (age 40+) | % below EAR | N/R | 78% |
| Schaefer et al. 2011(97) | 2008 | Nunavut | 106 | Women (age 19+) | % below EAR | N/R | 16% |
| Sharma et al. 2013(1) | 2008 | Nunavut | 36 | Men (age 19+) | % below EAR | N/R | 39% |
| Sharma et al. 2013(1) | 2008 | Nunavut | 172 | Women (age 19+) | % below EAR | N/R | 24% |