Supplementary material

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Supplemental Table 1. Classification of ethnic groups by country of origin using the Immigration, Refugees and Citizenship Canada Permanent Resident (IRCC-PR) database ^a

ETHNIC GROUP	COUNTRY OF ORIGIN					
SOUTH ASIAN	Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka					
EAST ASIAN	China, Hong Kong, Macao, Taiwan, Tibet					
SUB-SAHARAN AFRIAN AND	Africa NES, Angola, Anguilla, Antigua and Barbuda, Aruba, Bahama Islands, Barbados, Benin, Peoples Republic of					
CARIBBEAN	Botswana, Republic of Burkina-Faso, Burundi, Cameroon, Cape Verde Islands, Cayman Islands, Central Africa Republic					
	Chad, Republic of Comoros, Democratic Republic of Congo, People's Republic of the Djibouti, Republic of Dominica,					
	Dominican Republic, Eritrea, Ethiopia, Gabon Republic, Gambia, Ghana, Grenada, Guadeloupe, Guinea, Equatorial, Guinea,					
	Republic of, Guinea-Bissau, Haiti, Ivory Coast, Jamaica, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Martinique,					
	Mauritania, Mauritius, Mayotte, Montserrat, Mozambique, Namibia, Netherlands Antilles, The Nevis, Niger, Nigeria,					
	Rwanda, Sao Tome E Principe Senegal, Seychelles, Sierra Leone, Somalia, South Africa, St. Helena, St. Kitts-Nevis, St.					
	Lucia, St., Vincent and the Grenadines, Sudan, Swaziland, Tanzania, Togo, Trinidad & Tobago, Turks and Caicos Islands,					
	Uganda, Virgin Islands, British Virgin Islands, U.S. West Indies NES, Zambia, Zimbabwe					
SOUTH-EAST ASIAN	Philippines, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar (Burma), Singapore, Thailand, Vietnam, Korea, Japan					
LATIN AMERICAN	Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, French Guiana, Guatemala,					
	Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Surinam					
WEST ASIAN AND ARAB	Afghanistan, Armenia, Azerbaijan, Cyprus, Georgia, Iran, Israel, Turkey, Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait,					
	Lebanon, Libya, Morocco, Oman, Palestinian Authority (Gaza/West Bank), Qatar, Saudi Arabia, Syria, Tunisia, United Arab					
	Emirates, Yemen					
WESTERN EUROPEAN	Andorra, Australia, Australia NES, Austria, Azores, Belgium, Canada, Denmark, United Kingdom, Finland, France,					
	Germany, Gibraltar, Greece, Greenland, Holy See, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Madeira, Malta,					
	Monaco, Netherlands, New Zealand, Norway, Portugal, San Marino, Scotland, Slovak Republic, Spain, Sweden, Switzerland,					
	United States of America, Wales					
EASTERN EUROPEAN	Albania, Belarus, Bosnia-Hercegovina, Bulgaria, Croatia, Czech Republic, Czechoslovakia, Estonia, Hungary, Latvia,					
	Lithuania, Macedonia, Montenegro, Republic of Kosovo, Moldova, Poland, Romania, Russia, Ukraine, Union of Soviet					
3 Cl C	Socialist Republics, Serbia, Slovenia, Yugoslavia					

^a Classification of ethnic groups was based on an algorithm using country of origin, followed by mother tongue and surnames.

Supplemental Table 2. Baseline characteristics of immigrants of different ethnic origins, ^a by neighbourhood walkability (N=256,844)

	South .	Asian		ran African ribbean	South-Ea	st Asian	Latin Am	erican	West Asia	n/Arab	East A	sian	Eastern	European	Western I	European
Variables N(%)																
Neighbourhood	Least	Most	Least	Most	Least	Most	Least	Most	Least	Most	Least	Most	Least	Most	Least	Most
walkability decile ^b (N)	(7,439)	(1,908)	(3,058)	(2,659)	(2,059)	(3,319)	(2,212)	(2,434)	(3,158)	(1,718)	(7,007)	(6,865)	(3,861)	(2,645)	(1,792)	(2,972)
Mean ± SD age c	37.5±10.1	37.1±9. 8	38.2±9.7	37.2± 9.7	39.3± 9.7	39.9±9. 9	39.2± 9.7	39.5± 10.4	38.8± 10.2	38.1±9.7	41. 2 ±9. 9	39.4±10.4	40.4±10. 1	39.8± 10.8	40.0±10. 0	39.8±9.9
Female	4,131	951	1,915	1,578	1,378	2,258	1,272	1,368	1,732	804	4,074	4,076	2,317	1,656	1,007	1,615
	(55.5)	(49 .8)	(62.6)	(59.3)	(66.9)	(68 .0)	(57.5)	(56 .2)	(54.8)	(46 .8)	(58.1)	(59 .4)	(60.0)	(62.6)	(56.5)	(62 .6)
Income Quintile (Q) d																
Q1 (lowest)	597	1,168	581	1,535	140	1,792	193	1,050	251	660	361	2,922	278	1,003	58	789
	(8.0)	(61.2)	(19 .0)	(59.3)	(6.8)	(54 .0)	(8.7)	(43.1)	(7.9)	(38.4)	(5.2)	(42 .6)	(7.2)	(37.9)	(3.2)	(26.5)
Q5 (highest)	961	101	345	131	376	195	387	177	972	162	2,120	393	1,109	314	735	330
	(12.9)	(5.3)	(11 .3)	(4.9)	(18.3)	(5.9)	(17.5)	(7.3)	(30.8)	(9.4)	(30.3)	(5.7)	(28.7)	(11.9)	(41.0)	(11.1)
< high school	4,120	324	2,169	711	1,062	1,102	1,439	705	1,804	935	3,571	2,791	1,599	444	1,015	1,687
education	(55.4)	(17 .0)	(70.9)	(26.7)	(51 .6)	(33.2)	(65.1)	(29 .0)	(57.1)	(54.4)	(51 .0)	(40.7)	(41 .4)	(16.8)	(56.6)	(56.8)
Marital status: Single	2,849	872	1,473	1587	1,032	1,927	923	1,156	1,244	935	2,258	2740	1,076	1,016	616	1,281
	(38.3)	(45.7)	(48 .2)	(59.7)	(50.1)	(33 .2)	(41.7)	(47.5)	(39.4)	(54 .4)	(32.2)	(39.9)	(27.9)	(38.4)	(34.4)	(43 .1)
Immigration Class																
	2,779	417	903	560	1,075	652	756	636	1,337	240	3,819	1,266	1,764	474	1,072 (59.8)	753
Economic family	(37.4)	(21 .9)	(29 .5)	(21 .1)	(52 .2)	(19 .6)	(34 .2)	(26.1)	(42 .3)	(14 .0)	(54.5)	(18.4)	(45.7)	(17 .9)		(25 .3)
	3,252	519	1,502	369	685	676	831	482	636							
Family reunification	(43.7)	(27.2)	(49.1)	(13.9)	(33.3)	(20 .4)	(37 .6)	(38.8)	f 3332.16 3745							

Supplementary material

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Supplemental Table 3. Risk of developing prediabetes in lowest versus highest walkability decile, overall and by immigration status, using glucose thresholds according to the American Diabetes Association and European Association for the Study of Diabetes

Group	Adjusted HR (95% CI)	pvalue			
Overall	1.21 (1.19-1.23)	<0.0001			
Immigrants	1.18 (1.15-1.22)	<0.0001			
Long-term resident	1.20 (1.18-1.22)	<0.0001			
Lowest = Decile 1; Highest = Decile 10 (Referent)					

Adjusted for age, sex, and area income.

Study population: Adults aged 20-64

Study area: Greater Toronto Area, Hamilton, Ottawa, London

Data sources: Dynacare Medical Laboratories, Immigration, Refugees and Citizenship Canada Permanent Resident, 2006 Canadian census, Registered Persons Database, Ontario Diabetes

Prediabetes was ascertained using glucose thresholds according to the American Diabetes Association and European Association for the Study of Diabetes: 1) fasting glucose 5.7 to 6.9 mmol/L, 2) 2-hour glucose 7.8 to 11.0 mmol/L on 75-gram OGTT, 3) HbA1c of 5.7-6.4%.

Supplemental Table 4: Risk of developing prediabetes in lowest versus highest walkability decile, by ethnicity, using glucose thresholds according to the American Diabetes Association and European Association for the Study of Diabetes

Ethnic Groups	Adjusted HR (95% CI)	p-value
South Asian	1.05 (0.96-1.14)	0.3
Sub-Saharan African/Caribbean	1.26 (1.16-1.39)	<0.0001
Southeast Asian	1.29 (1.18-1.41)	<0.0001
Latin American	1.14 (1.03-1.26)	0.01
West Asian/Arab	1.42 (1.27-1.59)	<0.0001
East Asian	0.95 (0.90-1.00)	0.05
Eastern European	1.10 (1.00-1.21)	0.05
Western European	1.03 (0.93-1.15)	0.6

Adjusted for age, sex, area income, ethnicity, education, marital status, immigration visa category, duration.

Study population: Adults aged 20-64

Study area: Greater Toronto Area, Hamilton, Ottawa, London

Data sources: Dynacare Medical Laboratories, Immigration, Refugees and Citizenship Canada Permanent Resident, 2006 Canadian census, Registered Persons Database, Ontario Diabetes

Lowest walkability refers to Decile 1 and highest walkability, Decile 10, is the referent.

Prediabetes was ascertained using glucose thresholds according to the American Diabetes Association and European Association for the Study of Diabetes: 1) fasting glucose 5.7 to 6.9 mmol/L, 2) 2-hour glucose 7.8 to 11.0 mmol/L on 75-gram OGTT, 3) HbA1c of 5.7-6.4%.

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Supplemental Table 5. Likelihood of developing prediabetes among non-Western European immigrants relative to Western Europeans in the least and most walkable neighbourhoods, using glucose thresholds according to the American Diabetes Association and European Association for the Study of Diabetes					
Ethnic Group	Lowest walkability	Highest walkability			