Criteria		Brief description of how the criteria were handled in the meta-analysis
Reporting of background should include		
√	Problem definition	We systematically review the body of literature describing the cardiovascular risk and management profile of a group at high risk for developing cardiovascular disease (CVD), adult South Asians living in Canada.
√	Hypothesis statement	South Asians living in Canada have a worse cardiovascular risk profile than White Caucasians, despite much lower rates of smoking and similar body-mass index
√	Description of study outcomes	Systolic blood pressure (SBP), diastolic blood pressure (DBP), total cholesterol (TC), low-density lipoprotein (LDL-C), high-density lipoprotein (HDL-C), fasting triglycerides (TG), fasting insulin, fasting glucose, HOMA-IR, BMI, body fat %, WHR, Waist circumference, prevalence and incidence of CVD, prevalence of impaired fasting glucose, impaired glucose tolerance, and summaries of differences in lipoprotein (a), apolipoprotein B/ apolipoprotein A, C-reactive protein (CRP), plasminogen activator inhibitor-1 (PAI-1), physical inactivity, diet intake, and management of CVD.
√	Type of exposure or intervention used	Ethnicity (South Asians vs. White Caucasians)
√	Type of study designs used	Observational studies (retrospective cohort studies, cross-sectional studies, case control studies) or baseline data from appropriately sampled RCTs were included.
√	Study population	Our population was limited to adult South Asians and White Caucasians.
Reporting of search strategy should include		
√	Qualifications of searchers	The credentials of the investigators (AR, RdS, SK, and SA) are indicated in the author list.
√	Search strategy, including time period included in the synthesis and keywords	On February 17, 2014, using OvidSP, we searched MEDLINE (1946- Feb 17, 2014); EMBASE (1974- Feb 17, 2014); Cochrane Central Registry of Controlled Trials (1996- Feb, 2014), Evidence Based Medicine Reviews Health Technology Assessment (1996- Feb, 2013), Evidence Based Medicine NHS Economic Evaluation Database (1996- Feb, 2014), and CINAHL (1983- Feb 17, 2013, 2014). The complete search strategy, including keywords, can be found in Supplementary Appendix 1.

√	Databases and registries searched	MEDLINE (1946- Feb 17, 2014); EMBASE (1974- Feb 17, 2014); Cochrane Central Registry of Controlled Trials (1996- Feb, 2014), Evidence Based Medicine Reviews Health Technology Assessment (1996- Feb, 2013), Evidence Based Medicine NHS Economic Evaluation Database (1996- Feb, 2014), and CINAHL (1983- Feb 17, 2013, 2014).
√	Search software used, name and version, including special features	We used OvidSP to perform the search. EndNote X7 was used to merge retrieved citations and to remove duplicates.
√	Use of hand searching	We hand searched reference lists of retrieved papers and previous reviews.
√	List of citations located and those excluded, including justifications	Please refer to Figure 1 for details of the search. Citations of excluded articles can be provided upon request.
√	Method of addressing articles published in languages other than English	We only selected English language articles for the review
√	Method of handling abstracts and unpublished studies	We excluded studies that were not published as full reports, such as conference abstracts and letters to the editors.
√	Description of any contact with authors	We contacted authors to obtain gender specific means and standard deviations, stratified by ethnicity, for some outcomes (BMI, waist circumference, and body fat %).
Reporting of methods should include		
√	Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	All studies were conducted in humans, and all study designs were eligible for inclusion as long as they compared established or novel CVD risk factors, or CVD prevalence between South Asians and White Caucasians.
√	Rationale for the selection and coding of data	We extracted data relevant to study characteristics and outcomes. The following data was extracted from the studies: 1) study design (e.g. RCT, prospective cohort, cross-sectional, etc.); 2) location of conduct; 3) major research question(s); 4) sample size; 5) mean age of sample; 6) sex; 7) ethnicity; 8) anthropometry measures reported; 9) health status of participants (e.g. healthy, CVD, diabetes, etc.); 10) description and duration of intervention or exposure and follow-up; 11) primary outcomes 12) means and standard deviations for continuous outcomes and numbers of events, odds ratios (OR), and 95% confidence intervals for dichotomous outcomes.
√	Assessment of confounding	We included most-adjusted multivariable relative risks or mean values for comparison.
√	Assessment of study quality,	Three reviewers (AR, RdS, SK) assessed the quality of

	including blinding of quality assessors; stratification or regression on possible predictors of study results	the included studies using the modified Newcastle-Ottawa scale (NOS) that has been developed to assess the quality of non-randomized studies. Each study could be assigned a maximum score of 7, 1 point for each of the following criteria: research design, recruitment strategy, sample representativeness, response rate, outcome measures, power calculation and statistical analyses.
√	Assessment of heterogeneity	Cochran's Q statistic was used to detect heterogeneity, and the I^2 statistic was used to estimate the percentage of variation across studies that arose from true heterogeneity rather than chance. To explore heterogeneity, pre-planned sensitivity analyses limited the analyses to high quality studies (NOS≥5), and stratified analyses by study type (administrative database vs. cross-sectional) and sampling mechanism (random vs. convenience) were conducted.
√	Description of statistical methods in sufficient detail to be replicated	Details of statistical methods and software used to pool effect sizes, detect and quantify heterogeneity and sensitivity analyses are provided in the methods section.
√	Provision of appropriate tables and graphics	Forest plots for 3 outcomes shown.
Reporting of results should include		
√	Graph summarizing individual study estimates and overall estimate	Figures 2- 17 (Supplementary Appendix 1). Tables 1 and 2 (Supplementary Appendix 1)
√	Table giving descriptive information for each study included	Table 1
√	Results of sensitivity testing	Described within the results section and supplementary appendices (Supplementary table 1). Some forest plots for sensitivity testing are provided in the supplementary appendix.
√	Indication of statistical uncertainty of findings	We present each effect estimate with its 95% CI and heterogeneity tests.
Reporting of discussion should include		
√	Quantitative assessment of bias	We did perform subgroup analyses by quality score, to estimate associations in studies which were at lower risk of bias. Due to the small number of studies for most outcomes, we did not formally assess publication bias or pursue statistical correction for publication bias.
√	Justification for exclusion	Excluded were animal/*in vitro* studies, those which did not directly compare CVD risk factor or management outcomes in South Asians and White Caucasians, and

		those studies not conducted in Canada. Secondary publications of the same study that did not provide new information were also excluded.
√	Assessment of quality of included studies	We used a custom quality score, modified from the NOS, that assessed 1) appropriateness of research design; 2) recruitment strategy; 3) response rate; 4) representativeness of sample; 5) objectivity/reliability of outcome determination; 6) power calculation provided; 7) appropriate statistical analyses. Variation in quality rating of the studies resulted primarily to different methods of determining ethnicity and sampling. We conducted sensitivity analyses to explore the difference in effect sizes between high and low quality studies.
Reporting of conclusions should include		
√	Consideration of alternative explanations for observed results	Risk factors in childhood and youth, genetic
√	Generalization of the conclusions	Generalizable to Canadian South Asians
√	Guidelines for future research	Future research is required to understand the early origin and childhood risk factors prevalence among South Asian youth in Canada, to devise suitable screening and management strategies for South Asian youth in order to prevent early onset coronary heart disease.
√	Disclosure of funding source	No external funding was received for the preparation of this manuscript.