



McGill Summer Session in Epidemiology and Biostatistics 2010

The Summer Session in Epidemiology and Biostatistics at McGill offers health professionals the opportunity to gain familiarity with the principles of epidemiology and biostatistics. It also offers graduate students from McGill and other universities the opportunity to acquire academic credits and thereby accelerate course work during a summer term. **Summer session website:** <http://www.mcgill.ca/epi-biostat-occh/summer/>

EPIB-672: Systematic Reviews and Meta-analyses

Special topics in Epidemiology and Biostatistics

Academic credits: 2

Dates: May 3 to 14, 2010

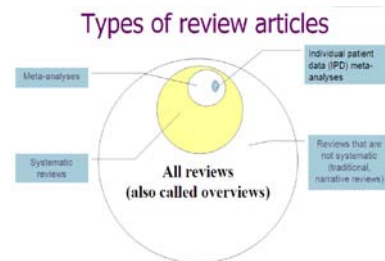
Class times: 1.30 – 4.00 PM, Monday through Friday

Location: Leacock 212, Leacock Bldg

Faculty: Dr. Madhukar Pai, MD, PhD (madhukar.pai@mcgill.ca)

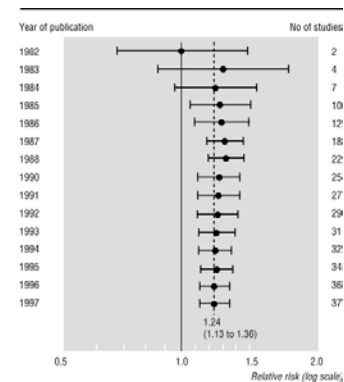
Enrollment limit: 25 [preference for epidemiology/biostats students, clinical residents/fellows]

Systematic reviews and meta-analyses are critical for evidence-based clinical and public health practice. The widespread and growing application of systematic reviews to synthesize evidence on key research and clinical questions makes it useful for health professionals to be able to understand and critique this research design. This course will provide a detailed description of the systematic review process, discuss the strengths and limitations of the method, and provide step-by-step guidance on how to actually perform a systematic review.



Specific topics to be covered include: formulation of the review question, searching of literature, quality assessment of studies, data extraction, meta-analytic methods, and report writing. The course will also cover statistical issues such as selection of statistical models for meta-analysis, practical examples of fixed and random effects models as well as examples of methods to evaluate heterogeneity and publication bias; graphical and tabular

templates for the presentation of meta-analysis data. STATA software package will be used, along with computer lab tutorials on how to effectively use tools such as PubMed and EndNote for conducting reviews. This course will feature invited speakers who will provide overviews of special topics.



Prerequisites: Introductory level training in epidemiology (e.g. EPIB601) and biostatistics (e.g. EPIB607), or permission of the instructor. Students who have not done prior coursework in introductory epidemiology/biostats, must contact the instructor.

Recommended textbooks: 1) Egger M, Smith GD, Altman DG (editors). Systematic reviews in health care. Meta-analysis in context. Second Edition. London: BMJ Publishing Group, 2001. URL: www.systematicreviews.com. 2) Sterne J. Meta-analysis in Stata. Stata Press, 2009. URL: <http://www.stata-press.com/books/mais.html>

All participants will receive a CD that contains useful resources for systematic reviews, such as free software, guidelines, sample data extraction forms, quality checklists, powerpoint slides, etc. **Note:** The language of instruction is English, and students are advised that fluency in English is essential to benefit from the course. However, students may submit their course assignments and examinations in French. Courses may be taken for Academic Credit, Continuing Medical Education (CME) Credit, or for a Professional Interest Certificate.