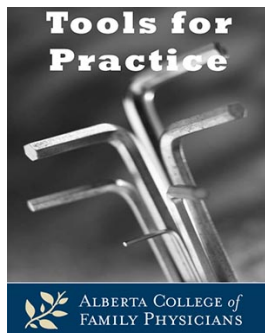


Tools for Practice is proudly sponsored by the Alberta College of Family Physicians (ACFP). ACFP is a provincial, professional voluntary organization, representing more than 4,000 family physicians, family medicine residents and medical students in Alberta. Established over fifty years ago, the ACFP strives for excellence in family practice through advocacy, continuing medical education and primary care research. www.acfp.ca

Reviewed: July 13, 2016
Evidence Updated: No new evidence
Bottom Line: No change
First Published: August 15, 2009



Are some 2nd generation antidepressants more equal than others?

Clinical Question: In adults suffering from depression, are any of the 2nd generation antidepressants better than others?

Bottom-line: Among 2nd generation antidepressants, there is little or no reliable difference in the efficacy or frequency of adverse events, but the types of adverse events do vary. Clinicians should select antidepressants based on adverse effects profile and cost, not on efficacy differences.

Evidence:

- Two groups compared the benefits and harms associated with 2nd generation antidepressants.
 - 2011 systematic review¹ (234 trials):
 - No important difference in efficacy. The few statistical differences found were not clinically important.
 - E.g. Escitalopram 1.13 points better than citalopram on the 60-point MADRS scale (minimal clinically important difference ≥ 2).
 - Sponsorship may have played a role in these subtle differences.
 - Similar number of patients had adverse events (61% had ≥ 1), but types varied
 - E.g. Venlafaxine 11% more nausea and vomiting, sertraline 3% more diarrhea.
 - 2009 systematic review² (117 trials):
 - Identified some small differences in efficacy and acceptability.
 - Efficacy top four: Mirtazapine, escitalopram, venlafaxine, sertraline.
 - Acceptability top four: Escitalopram, sertraline, bupropion, citalopram.
 - Cochrane reviews by the same authors suggested small efficacy advantages for sertraline³ and escitalopram⁴, whereas other agents (e.g. fluvoxamine⁵) did not show any benefit over other antidepressants.

Context:

- Antidepressant evidence suffers from significant bias. For example:
 - $\leq 10\%$ are high-quality studies.^{1,2}
 - Selective publication (and re-publication) of positive trials (publication bias).^{6,7}
 - Interpretation of results in favor of the sponsor (funding bias).⁸

- The 2009 review² has important concerns regarding validity, including:
 - Treated all depression scales as the same (and they are not).
 - Using odds ratios exaggerated the differences they found.
 - When they tried to account for sponsorship bias, differences between the drugs were reduced.
- Both reviews^{1,2} performed some indirect comparisons of drugs from different studies, which is less reliable than direct comparison in the same trial.
- The 2011 review was more robust overall.

Original Authors:

G Michael Allan MD CCFP, Adil S Virani BSc(Pharm) PharmD FCSHP

Updated:

Ricky D Turgeon BSc(Pharm) ACPR PharmD

Reviewed:

G. Michael Allan MD CCFP

References

1. Gartlehner G, Hansen RA, Morgan LC, *et al.* Ann Intern Med. 2011; 155:772-85.
2. Cipriani A, Furukawa TA, Salanti G, *et al.* Lancet. 2009; 373:746-58.
3. Cipriani A, La Ferla T, Furukawa TA, *et al.* Cochrane Database Syst Rev. 2009; (2):CD006117.
4. Cipriani A, Santilli C, Furukawa TA, *et al.* Cochrane Database Syst Rev. 2009; (2):CD006532.
5. Omori IM, Watanabe N, Nakagawa A, *et al.* Cochrane Database Syst Rev. 2010; (3):CD006114.
6. Melander H, Ahlqvist-Rastad J, Meijer G, *et al.* BMJ. 2003; 326:1171-3.
7. Turner EH, Matthews AM, Linardatos E, *et al.* N Engl J Med. 2008; 358:252-60.
8. Jureidini JN, Doecke CJ, Mansfield PR, *et al.* BMJ. 2004; 328:879-83.

Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practicing family physicians who are joined occasionally by a health professional from another medical specialty or health discipline. Each article is peer-reviewed, ensuring it maintains a high standard of quality, accuracy, and academic integrity.

The ACFP has supported the publishing and distribution of the Tools for Practice library since 2009. If you are not a member of the ACFP and would like to receive the TFP emails, please sign up for the distribution list at <http://bit.ly/signupfortfp>. Archived articles are available at no extra cost on the [ACFP website](#).