

Unanswered research questions

Research is needed to determine whether there are features of dysmenorrhoea in adolescence that predict whether a woman will have fertility problems and endometriosis in her 20s and 30s

Further RCTs should focus on comparing oral contraceptives combined with non-steroidal anti-inflammatory drugs (NSAIDs) with NSAIDs alone or with the levonorgestrel intrauterine system

Future RCTs should also consider the effectiveness of the alternative and complementary therapies

location, duration, and characteristics of pain, plus any aggravating or relieving factors. A physical examination including pelvic examination is not generally indicated in adolescent women but should be done in all other women.

NSAIDs relieve symptoms in up to 70% of women, so should be the first line treatment⁵ unless there are contraindications (for example, history of hypersensitivity to aspirin or other NSAIDs, serious comorbidity, and gastrointestinal ulcers or bleeding).

Paracetamol may offer some relief in women who cannot tolerate NSAIDs, although there is less evidence for its efficacy. If contraceptives are required then the combined oral contraceptive may be considered. It may be helpful to give the patient additional information on alternative treatments that evidence supports (for example, heat, thiamine, magnesium, and vitamin E) and information about risk factors that increase the severity of dysmenorrhoea (for example, smoking, obesity, and alcohol consumption). Menstrual cycle suppressants, such as progestogens, danazol, and gonadotrophin releasing hormone analogues, may be considered for resistant dysmenorrhoea, but should normally be used only on specialist advice.

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- Proctor M, Farquhar C. Dysmenorrhoea. In: *Clinical evidence*. Issue 11. London: BMJ Publishing, 2004.
- Harlow SD, Park M. A longitudinal study of risk factors for the occurrence, duration and severity of menstrual cramps in a cohort of college women. *Br J Obstet Gynaecol* 1996;103:1134-42.
- Weissman AM, Hartz AJ, Hansen MD, Johnson SR. The natural history of primary dysmenorrhoea: a longitudinal study. *BJOG* 2004;111:345-52.
- Zhang WY, Li Wan Po A. Efficacy of minor analgesics in primary dysmenorrhoea: a systematic review. *Br J Obstet Gynaecol* 1998;105:780-9.
- Marjoribanks J, Proctor ML, Farquhar C. Nonsteroidal anti-inflammatory drugs for primary dysmenorrhoea. *Cochrane Database Syst Rev* 2003;(4):CD001751.
- Proctor ML, Roberts H, Farquhar CM. Combined oral contraceptive pill (OCP) as treatment for primary dysmenorrhoea. *Cochrane Database Syst Rev* 2001;(2):CD002120.
- Vercellini P, Trespidi L, Colombo A, Vendola N, Marchini M, Crosignani PG. A gonadotrophin-releasing hormone agonist versus a low-dose oral contraceptive for pelvic pain associated with endometriosis. *Fertil Steril* 1993;60(1):75-9.
- Goldzieher JW, Moses LE, Averkin E, Scheel C, Taber BZ. A placebo-controlled double-blind crossover investigation of the side effects attributed to oral contraceptives. *Fertil Steril* 1971;22:609-23.
- Baldaszi E, Wimmer-Puchinger B, Loschke K. Acceptability of the long-term contraceptive levonorgestrel-releasing intrauterine system (Mirena): a 3-year follow-up study. *Contraception* 2003;67:87-91.

- Vercellini P, Frontino G, De Giorgi O, Aimi G, Zaina B, Crosignani PG. Comparison of a levonorgestrel-releasing intrauterine device versus expectant management after conservative surgery for symptomatic endometriosis: a pilot study. *Fertil Steril* 2003;80:305-9.
- Prentice A, Deary AJ, Bland E. Progestagens and anti-progestagens for pain associated with endometriosis. *Cochrane Database Syst Rev* 2000;(2):CD002122.
- Vercellini P, De Giorgi O, Oldani S, Cortesi I, Panazza S, Crosignani PG. Depot medroxyprogesterone acetate versus an oral contraceptive combined with very-low-dose danazol for long-term treatment of pelvic pain associated with endometriosis. *Am J Obstet Gynecol* 1996;175:396-401.
- Selak V, Farquhar C, Prentice A, Singla A. Danazol for pelvic pain associated with endometriosis. *Cochrane Database Syst Rev* 2001;(4):CD000068.
- Prentice A, Deary AJ, Goldbeck-Wood S, Farquhar C, Smith SK. Gonadotrophin-releasing hormone analogues for pain associated with endometriosis. *Cochrane Database Syst Rev* 1999;(2):CD000346.
- Sandahl B, Ulmsten U, Andersson KE. Trial of the calcium antagonist nifedipine in the treatment of primary dysmenorrhoea. *Arch Gynecol* 1979;227:147-51.
- Proctor ML, Murphy PA. Herbal and dietary therapies for primary and secondary dysmenorrhoea. *Cochrane Database Syst Rev* 2001;(2):CD002124.
- Bandolier. Vitamin E for dysmenorrhoea. www.jr2.ox.ac.uk/bandolier/band136/b136-6.html (accessed 27 Apr 2006).
- Barnard ND, Scialli AR, Hurllock D, Bertron P. Diet and sex-hormone binding globulin, dysmenorrhea, and premenstrual symptoms. *Obstet Gynecol* 2000;95:245-50.
- Proctor ML, Smith CA, Farquhar CM, Stones RW. Transcutaneous electrical nerve stimulation and acupuncture for primary dysmenorrhoea. *Cochrane Database Syst Rev* 2002;(1):CD002123.
- Akin MD, Weingand KW, Hengehold DA, Goodale MB, Hinkle RT, Smith RP. Continuous low-level topical heat in the treatment of dysmenorrhoea. *Obstet Gynecol* 2001;97:343-9.
- Akin M, Price W, Rodriguez G Jr, Erasala G, Hurley G, Smith RP. Continuous, low-level, topical heat wrap therapy as compared to acetaminophen for primary dysmenorrhea. *J Reproductive Med* 2004;49:739-45.
- Proctor ML, Hing W, Johnson TC, Murphy PA. Spinal manipulation for primary and secondary dysmenorrhoea. *Cochrane Database Syst Rev* 2001;(4):CD002119.
- Proctor ML, Latthe PM, Farquhar CM, Khan KS, Johnson NP. Surgical interruption of pelvic nerve pathways for primary and secondary dysmenorrhoea. *Cochrane Database Syst Rev* 2005;(4):CD001896.
- Brouard R, Bossmar T, Fournie-Loret D, Chassard D, Akerlund M. Effect of SR49059, an orally active V1a vasopressin receptor antagonist, in the prevention of dysmenorrhoea. *BJOG* 2000;107:614-9.
- Transdermal Nitroglycerine/Dysmenorrhoea Study Group. Transdermal nitroglycerine in the management of pain associated with primary dysmenorrhoea: a multinational pilot study. *J Int Med Res* 1997;25(1):41-4.

Corrections and clarifications

Vaccines against cervical cancer provoke US controversy
In this news article by Janice Hopkins Tanne (*BMJ* 2006;332:814, 8 Apr), we gave the wrong name for the GlaxoSmithKline vaccine submitted for approval to the European Agency for the Evaluation of Medicinal Products. The correct name is Cervarix.

Minerva

We misspelt one of the authors' names in the photo item in this Minerva (*BMJ* 2006;332:862, 8 Apr). Emma Thomson does not spell her name with a "p".

Short cuts

More than one reader spotted that we slipped up in the third item of these Short Cuts by Alison Tonks (*BMJ* 2006;332:1025-6, 29 Apr). Candesartan is an angiotensin II receptor antagonist, not an angiotensin converting enzyme inhibitor as we stated.

Hypertension and ethnic group

A mix-up in drug types went uncorrected in this Practice review by Morris J Brown (*BMJ* 2006;332:833-6, 8 Apr). In the second paragraph of the "Treatment" section (p 835) we stated that AB drugs include calcium blockers. They don't—we should have said they include β blockers. Calcium blockers are in fact CD drugs, as we had stated earlier in that paragraph.