Pharmacotherapy of adult attention deficit/hyperactivity disorder: a review

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Authors' objectives
To review the effectiveness and dosing parameters of medication treatment for adult attention deficit/hyperactivity disorder (ADHD).

Searching
A 'systematic computerised search' was undertaken with search terms including 'hyperactivity', 'hyperkinesis', 'impulsivity', 'attention deficit disorder' and 'attention deficit hyperactivity disorder', cross-referenced with 'adults'.

Study selection
Study designs of evaluations included in the review
Controlled and uncontrolled studies (including retrospective studies) were included. Case reports were excluded unless they contained otherwise unavailable data.

Specific interventions included in the review
Stimulants (specifically methylphenidate and pemoline), tricyclic antidepressants (desipramine, nortriptyline and bupropion), monoamine oxidase inhibitor antidepressants (pargyline and deprenyl), other antidepressants (S-adenosylmethionine and nomifensine), antihypertensives (propanolol), amino acids (L-dopa, phenylalanine and tyrosine) and combined pharmacotherapy are considered.

Participants included in the review
Adults with ADHD were included.

Outcomes assessed in the review
'Response', response rates and side-effects were assessed.

How were decisions on the relevance of primary studies made?
Studies with 'sufficient description of study methodology and statistical analysis to permit a critical evaluation' were selected.

Assessment of study quality
The authors do not report the criteria used to assess validity, or how the validity assessment was performed.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
A narrative review is presented in which the different classes of drugs are considered separately.

How were differences between studies investigated?
Methodological differences are acknowledged in the text.

Results of the review
Stimulants: 6 controlled (randomisation not mentioned) trials (160 participants) and 2 uncontrolled studies (33 participants). Antidepressants: 6 uncontrolled studies (1 retrospective; 115 participants). Antihypertensives: 1 uncontrolled study (13 participants). Amino acids: 1 controlled trial (19 participants) and 1 uncontrolled trial (13 participants).

Stimulants: results from the controlled trials found responses ranging from 25 to 78%.

Antidepressants: the uncontrolled studies found response rates ranging from 66 to 100%.

Antihypertensives: the uncontrolled study found 84% improved.

Amino acids: the controlled trial found 43% initially responded; the uncontrolled trials results ranged from no benefit to 85% improved.

Authors' conclusions
The literature appears to support the use of robust doses of both stimulants and antidepressants for ADHD in adults. Further controlled studies applying stringent diagnostic criteria and outcome methodology are necessary to define the range of pharmacotherapeutic options for adults with ADHD.

CRD commentary
The quality of the primary research on which this review is based is extremely poor, only 7 of the 17 included studies are controlled and the outcomes of the studies are not clearly defined. This means that any conclusions drawn are tentative. The details of the search employed are very sketchy: the databases searched, and the dates and language parameters imposed, are not specified. Consequently, it cannot be ascertained how comprehensive this review is. In addition, no explicit details are given of either the inclusion or validity criteria used by the authors.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.