

Evidence based treatments in geriatrics (link with Cochrane Library)

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EAMA**



The question

- **What does « evidence-based treatments in geriatrics » imply and where can one find such information?**



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Outline

- Definition of evidence based healthcare
- What makes geriatric patients different?
- The Cochrane Collaboration
 - Cochrane Fields
 - Health Care of Older People Field
 - Cochrane Groups
 - Pain, Palliative and Supportive Care Group
 - The Cochrane Library
- Other EBM sites and geriatric medicine

Evidence-based healthcare

As opposed to

- Eminence based medicine
- Vehemence based medicine
- Eloquence based medicine
- Providence based medicine
- Diffidence based medicine
- Nervousness based medicine
- Confidence based medicine

<http://www.studentbmj.com/issues/00/01/reports/1618.php>

Evidence-based healthcare

- **"Evidence based health care takes place when decisions that affect the care of patients are taken with due weight accorded to all valid, relevant information."**

*Dr Nicholas Hicks
Department of Public Health and Health Policy
Oxfordshire Health Authority
Bandolier 1998*

Evidence-based healthcare

**Extends the application of the principles of evidence-based medicine
(integration of patient preference, clinical expertise and best available external evidence)
to all professions associated with health care, including purchasing and management.**

Can EB healthcare be applied to geriatrics ?

- **University Hospital of Geneva gerontopharmacology consult service**
- **1272 consults from 1996-2008**
- **152 (12%) requests for information on the indication to treat and the effectiveness of drug therapies**

Questions on therapy

- **Which is the best antibiotic for UTI?**
- **How to prevent antibiotic-induced diarrhea?**
- **How to treat restless leg syndrome?**
- **How to treat fecal impaction?**
- **What cures hiccups?**
- **Does megestrol increase cancer patient's appetite and weight gain?**
- **Are COX-2 inhibitors effective treatment for a villous adenoma?**
- **Pharmacologic treatment of dementia with Lewy bodies?**
- **Should old patients on oral anticoagulants and aspirin be systematically given a proton pump inhibitor ?**

Questions on the general pharmacology of a (new) drug and it's usefulness in geriatrics

- Should fentanyl lollypops be used in palliative care of elderly adults ?
-
- What is the effectiveness
 - of oral E.Coli bacterial extracts for prevention of UTIs ?
 - of fondaparinux ?
 - of memantine in Alzheimer's disease?

Questions on unlabeled indications or unlabeled routes of administration

- valproate and aggressiveness in dementia
- gabapentine to treat agitation in dementia
- thalidomide for multiple myeloma

- topical opiates for wound pain
- topical NSAID for arthritis pain
- oral administration of vitamin B12
- Should hyaluronidase be given with SC hydration?

Questions on the use of drugs in « special populations »

- Low molecular weight heparin in renal failure
- Aspirin in 1ary prevention of CV disease in diabetics
- Best pain medicine in a patient with cirrhosis and methadone substitution for addiction
- Which antibiotic for a patient with myasthenia gravis
- Unsafe drugs in amyotrophic lateral sclerosis?
- Can carvedilol be given for unstable angina in a patient with severe peripheral arterial disease?
- What antiemetic in the presence of an extrapyramidal syndrome?
- Can one extrapolate the results of the PROSPER trial to very elderly patients?

Alternative medicine in geriatrics

- What are the effects, side effects and interactions of kawa?
- Is *Valeriana officinalis* (garden heliotrope) effective and safe for insomnia?
- Can Propolis (bees secretion & beeswax) and Asiatic (chinese plant sarcandrae) be safely administered with carboplatin chemotherapy?

Can EB healthcare be applied to geriatrics ? THoM

- It can be tricky...
- Geriatric populations are heterogeneous, often polymorbid (relative contraindications)
- Impaired drug handling (renal/liver dz)
- Decreased life expectancy (NNT → do look at time)
- Exclusion of elderly patients from research
- Death rate high, especially in PC (drop-outs)
- Use of alternative medicines (herbal meds)

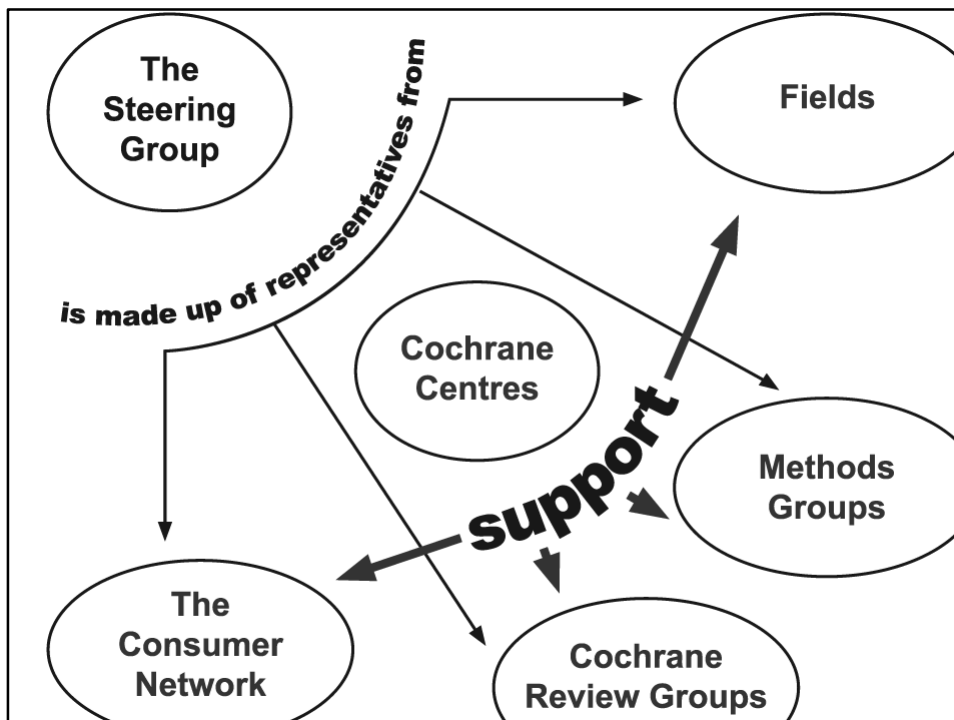
but yes, EB healthcare is a sensible choice, even in geriatrics!

The Cochrane Collaboration

- The Cochrane Collaboration is an international not-for-profit organisation, providing up-to-date information about the effects of health care.
- A small staff
- A HUGE international network of volunteers (FUN!!!)

Small staff

- **Cochrane Collaboration Steering Group (CCSG), sub-groups, and Secretariat**
- **Methods Groups**
- **Fields**
- **Consumer Network**



Volunteers : could be you!

- **Those who prepare the reviews are mostly healthcare professionals who volunteer to work in one of the many Cochrane Review Groups, with editorial teams overseeing the preparation and maintenance of the reviews, as well as application of the rigorous quality standards.**

You and Cochrane...

You can get involved : -

- **By preparing or assisting with the preparation of a systematic review.**
- **By peer refereeing a protocol and/or a completed review.**
- **By hand searching a journal for controlled studies and trials- particularly those that are not listed in MEDLINE and those published in languages other than English.**
- **By searching abstracts, books and conference proceedings for controlled studies and trials within the scope of the Group.**
- **By providing a consumer perspective about planned, on-going, or completed reviews.**
- **By becoming a member of a 'Clinicians Peer Referee Panel'**

Wish you had a subject? WANTED ! Authors for the following titles...

- **CERA (continuous erythropoiesis receptor activator) for chronic kidney disease**
- **Ibopamine for preventing chronic kidney disease**
- **Dietary interventions for preventing and treating bone disease in chronic kidney disease**
- **Erythropoietin for chronic kidney disease**
- **L-arginine supplements for chronic kidney disease**
- **Levocarnitine for chronic kidney disease**
- ***(withdrawn protocol, new authors required)***
- **Aldosterone blockers for preventing the progression of diabetic kidney disease**
- ***Etc etc....***

51 Cochrane “review groups” CC Groups

- **Dementia and Cognitive Improvement Group**
- **Pain, Palliative and Supportive Care Group**
- **Stroke Group**

The Cochrane Pain, Palliative and Supportive Care Group (PaPaS)

focuses on reviews for

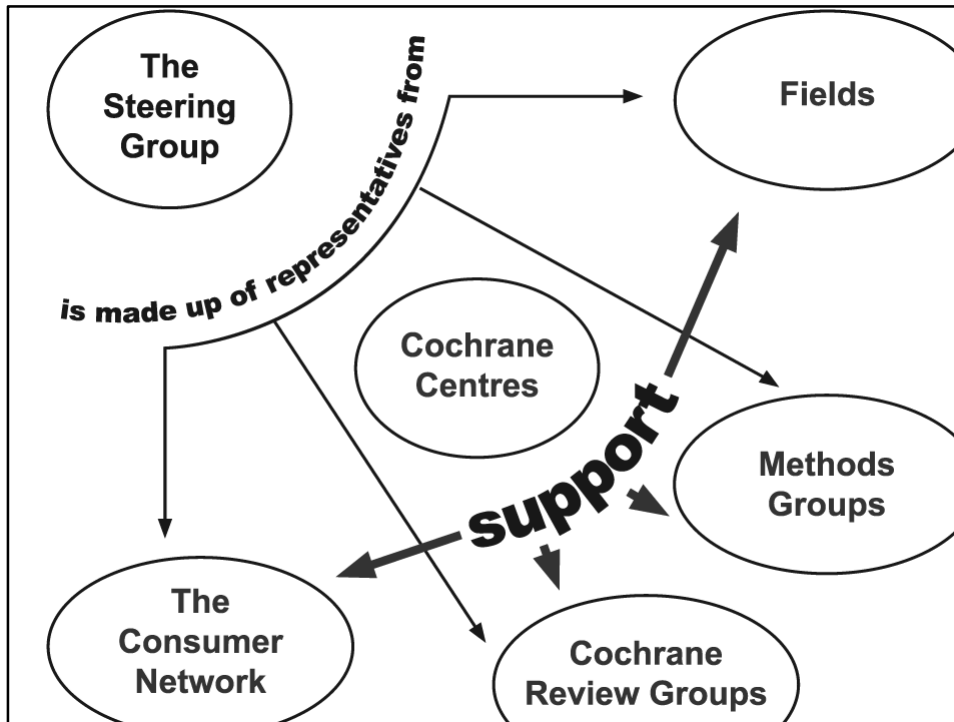
- **the prevention and treatment of pain**
-
- **the treatment of symptoms at the end of life**

- **supporting patients, carers and their families through the disease process.**

Groups hold Specialized Registers

Aim

- **To establish and maintain a truly comprehensive Specialised Register of Stroke Trials containing published, unpublished, ongoing and planned trials of interventions in the prevention of stroke, and the acute treatment and rehabilitation of stroke patients**



CC Fields/Networks

Fields and Networks emerge around areas of interest which extend across a number of health problems.

- **Rehabilitation and Related Therapies Field**
- **Health Care of Older People Field**

Health Care of Older People Field

- David J Stott
Academic Section of Geriatric Medicine
University of Glasgow
3rd floor Queen Elizabeth Building
Glasgow Royal Infirmary
Glasgow
Strathclyde
G31 2ER
UK
Phone: +4 141 211 4976
Fax: +4 141 211 4033
Email: d.j.stott@clinmed.gla.ac.uk
Web: www.effectiveolderpeoplecare.org

The Cochrane Library

- **Systematic reviews are the Cochrane Collaboration's main product.**
- **Published electronically in successive issues of The Cochrane Library**
- **A Cochrane systematic review is an up-to-date summary of reliable evidence of the benefits and risks of a particular treatment**

Cochrane reviews

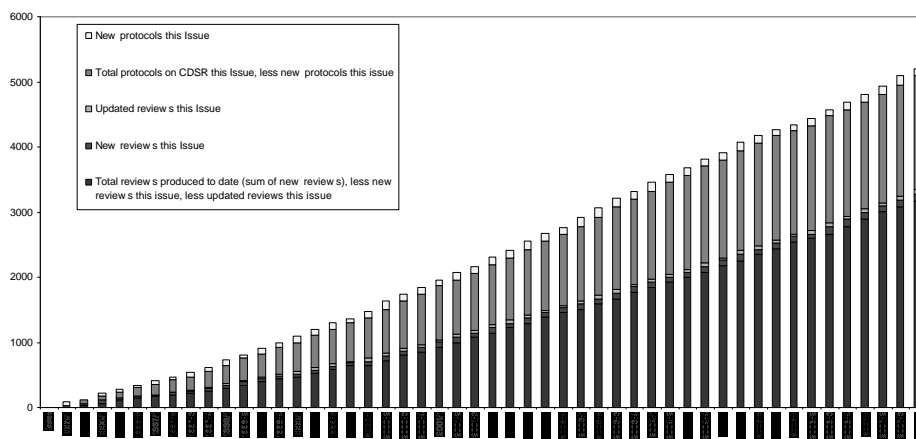
bring together

- all the available evidence relating to a
- clearly formulated healthcare question for evaluation and synthesis,
- using predetermined criteria and
- explicit methods designed to limit bias.



THE COCHRANE
COLLABORATION

Reviews and protocols for reviews on the
Cochrane Database of Systematic Reviews



Meta-analysis : the graphics



**THE COCHRANE
COLLABORATION®**

- **Horizontal line = result of one trial**
- **The shorter the line → the more certain the result**
- **Diamond = the combined results of all trials**
- **Vertical line = « no difference in efficacy »**

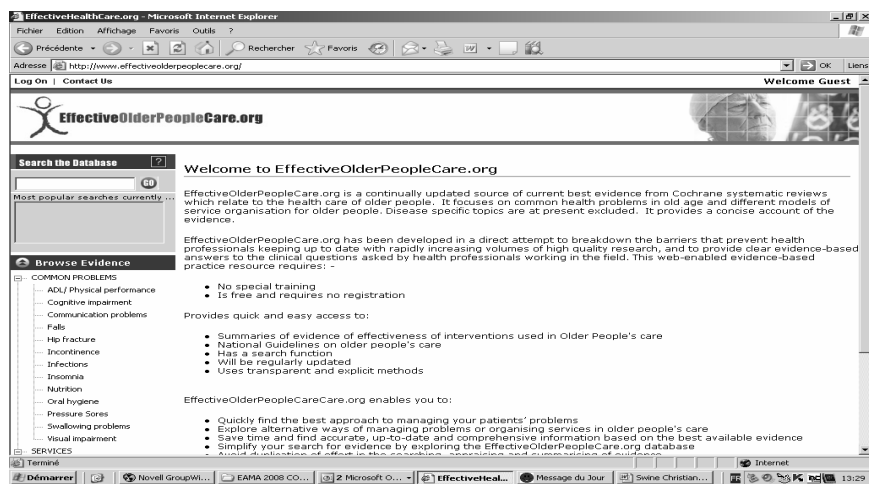
• **If a horizontal line touches the vertical line, it means that that particular trial found no clear difference between the treatments**

Sources of information

- **The practical usefulness of an information source is equal to it's pertinence, multiplied by it's validity and divided by the quantity of work that is needed to extract the information.**

*Shaughnessey AF et al
J Fam Pract 1994 ;39 :489-499*

<http://www.effectiveolderpeoplecare.org/>



<http://www.effectiveolderpeoplecare.org/Insomnia>

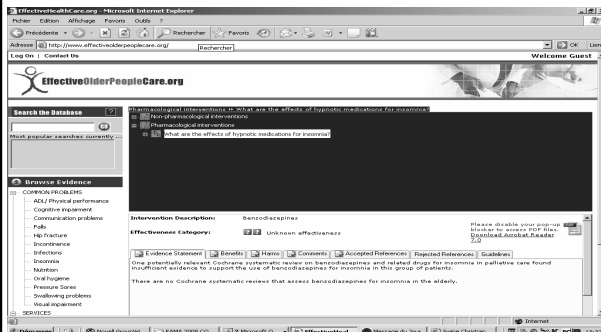
Non-pharmacological interventions

- What are the effects of complementary therapies for insomnia?
- What are the effects of light therapy for insomnia?
- What are the effects of physical therapies for insomnia?
- What are the effects of psychological interventions for insomnia?

Pharmacological interventions

- What are the effects of hypnotic medications for insomnia?
- Benzodiazepines

Insomnia : pharmacological treatments



There are no Cochrane systematic reviews that assess benzodiazepines for insomnia in the elderly.

One potentially relevant Cochrane systematic review on benzodiazepines and related drugs for insomnia in palliative care found insufficient evidence to support the use of benzodiazepines for insomnia in this group of patients.

Didn't find what you hoped for ?

Other EBM sites and geriatric medicine

<http://www.shef.ac.uk/scharr/ir/scebm.html>

SCHARR-Lock's Guide to the Evidence

- a World Wide Web Guide to printed sources of evidence, which identifies material less likely to appear in the the Cochrane Library or on MEDLINE.
- Priority is given to sources that are difficult to find through any other route.
- Types of material include reports, guidelines and bulletins, but not individual journal articles.
- All material is UK in origin, and must demonstrate evidence of a literature search and explicit review or appraisal criteria.



Bandolier

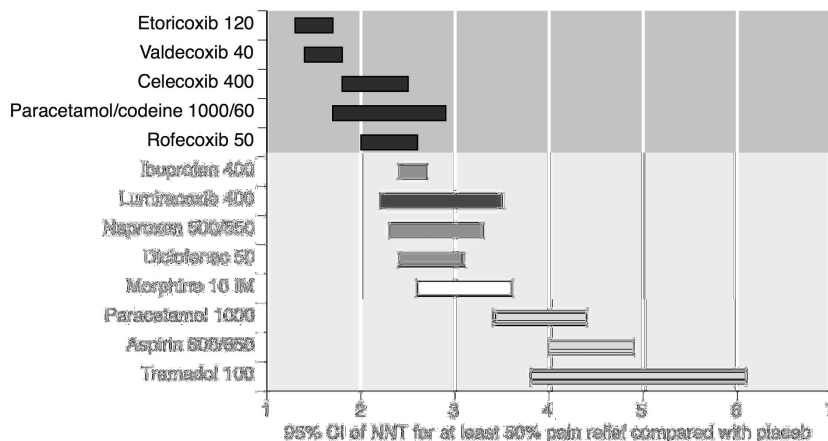
"Evidence based thinking about health care"

<http://www.jr2.ox.ac.uk/bandolier/index.html>

- Bandolier is a website about the use of evidence in health, healthcare, and medicine.
- It sounds easy, but it isn't.
- Wherever you look people are making decisions on the basis of belief (never a good idea), or on evidence that is flawed.
- What is on this site may help understand how easy it is to be misled.

<http://www.jr2.ox.ac.uk/bandolier/booth/painpag/Acutrev/Analgesics/Leagtab.html>

2007 League table of number needed to treat (NNT) for at least 50% pain relief over 4-6 hours in patients with moderate to severe pain, all oral analgesics except IM morphine



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@HON Health On the Net Foundation
Non Governmental Organization
Medical information you can trust! www.hon.ch

Accédé 29 octobre 2003

Awareness: International Association of Breast Cancer, Activity in Geneva promoted by Swiss Commission on Cancer, Accredited by World Summit on the Information Society (Geneva 2003 - Turin 2005)

Patients/Individuals Medical Professionals Web Publishers

Go HONcode
Enter any keyword to retrieve trustworthy medical documents

MediHunt Medical documents
HONdossier Special in-depth reports
Surveys E-health trends
Hosting Sharing our expertise
HONproject Initiatives and services
Daily News Medical articles

HONselect Retrieve selected sources by medical terms
HONmedia Multimedia center
Conferences & Events Medical conferences

HON organizes MEDLINE@PubMed® Library of medicine (Geneva 4-7 December 2003)

HON's recommendation to Internet users: Before consulting healthcare information, click on a website's HONcode accreditation.

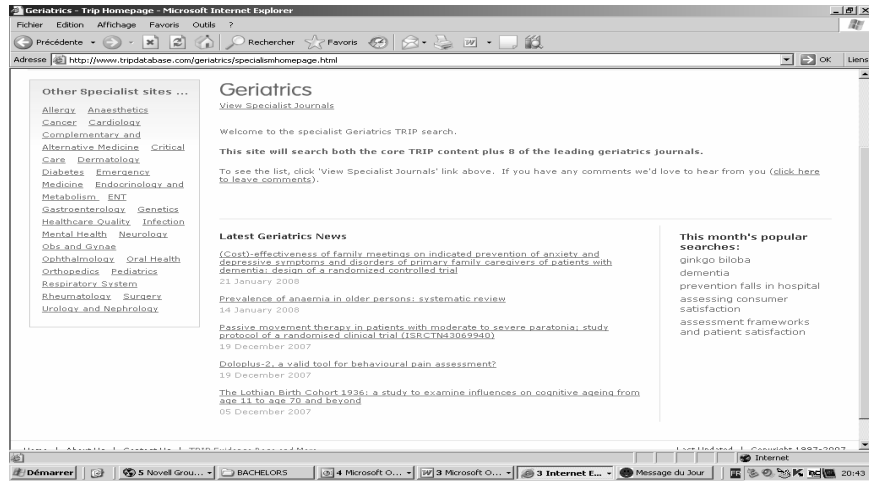
The Health On the Net Foundation (HON), created in 1995, is a Non-Governmental Organization under the aegis of the Direction générale de la santé Département de l'Action Sociale et de Santé (DASS - République et canton de Genève, Switzerland). HON's mission is to guide lay persons or non-medical users and medical practitioners to useful and reliable online medical and health information. HON provides leadership in setting ethical standards for Web site developers. (Read more about HON). HON thanks the support of the Geneva University Hospital, and the Swiss Institute of Bioinformatics.



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<http://www.tripdatabase.com/index.html>



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Trip database : « elderly insomnia »

- Filter by:
- **Systematic Reviews 59**
- **Evidence Based Synopses 86**
- Guidelines -
- **North America 34 -**
- **Europe 42 -**
- **Other 19**
- **Clinical Questions 44**
- **Core Primary Research 2**
- **E-Textbooks 345**
- **More 26**



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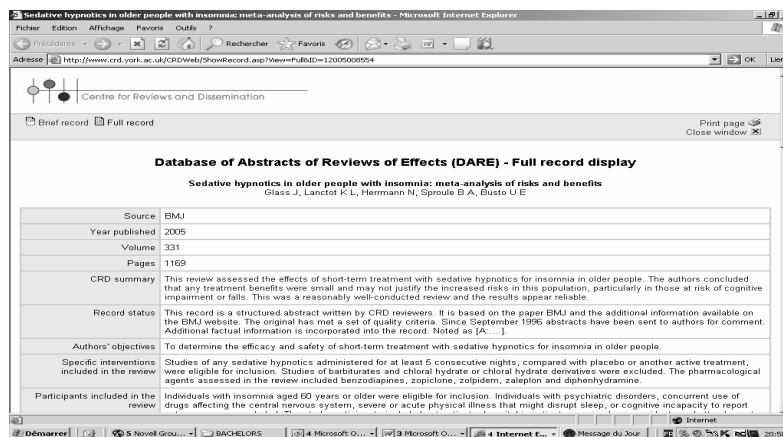
Trip Database

- **Review: sedative hypnotics may improve sleep quality but increase adverse effects in elderly people with insomnia**
 - Evidence-Based Nursing (Requires free registration). 2006
- **Review: sedative hypnotics increase adverse effects more than they improve sleep quality in older persons with insomnia**
 - Evidence-Based Medicine (Requires free registration). 2006

DARE

Database of Abstracts of Reviews of Effects

Sedative hypnotics in older people with insomnia: meta-analysis of risks and benefits (2005)



Centre for Reviews and Dissemination

Database of Abstracts of Reviews of Effects (DARE) - Full record display

Sedative hypnotics in older people with insomnia: meta-analysis of risks and benefits
Glass J, Lanctot K L, Hermann N, Sproule B A, Gusto U E

Source	BMJ
Year published	2005
Volume	331
Pages	1189
CRD summary	This review assessed the effects of short-term treatment with sedative hypnotics for insomnia in older people. The authors concluded that any treatment benefits were small and may not justify the increased risks in this population, particularly in those at risk of cognitive impairment or falls. This was a reasonably well-conducted review and the results appear reliable.
Record status	This record is a structured abstract written by CRD reviewers. It is based on the paper BMJ and the additional information available on the BMJ website. The original has met a set of quality criteria. Since September 1996 abstracts have been sent to authors for comment. Additional factual information is incorporated into the record. Noted as [A...]
Authors' objectives	To determine the efficacy and safety of short-term treatment with sedative hypnotics for insomnia in older people.
Specific interventions included in the review	Studies of any sedative hypnotics administered for at least 5 consecutive nights, compared with placebo or another active treatment, were eligible for inclusion. Studies of barbiturates and chloral hydrate or chloral hydrate derivatives were excluded. The pharmacological agents assessed in the review included benzodiazepines, zopiclone, zolpidem, zaleplon and diphenhydramine.
Participants included in the review	Individuals with insomnia aged 60 years or older were eligible for inclusion. Individuals with psychiatric disorders, concurrent use of drugs affecting the central nervous system, severe or acute physical illness that might disrupt sleep, or cognitive incapacity to report

THoM

For information on evidence based geriatric healthcare

- **Cochrane, yes**

but also use gates such as

- **Trip Database**
- **Health on the net Foundation (HON)**
- **and do not disregard databases such as DARE (comes with Cochrane Library)**

The End

Thank-you!

