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HOW TO APPROACH BENZODIAZEPINE USE IN GERIATRIC PATIENTS

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GENERAL DISCLOSURES

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SPEAKER DISCLOSURES

- ✓ Any conflicts of interest?

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✓ No conflicts of interest

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OBJECTIVES

1. Understand the epidemiology of benzodiazepine use in the elderly
2. Appreciate the risks of benzodiazepine and other psychotropic drug use in the elderly
3. Discuss tapering and/or alternative strategies to psychotropic drug use in the elderly

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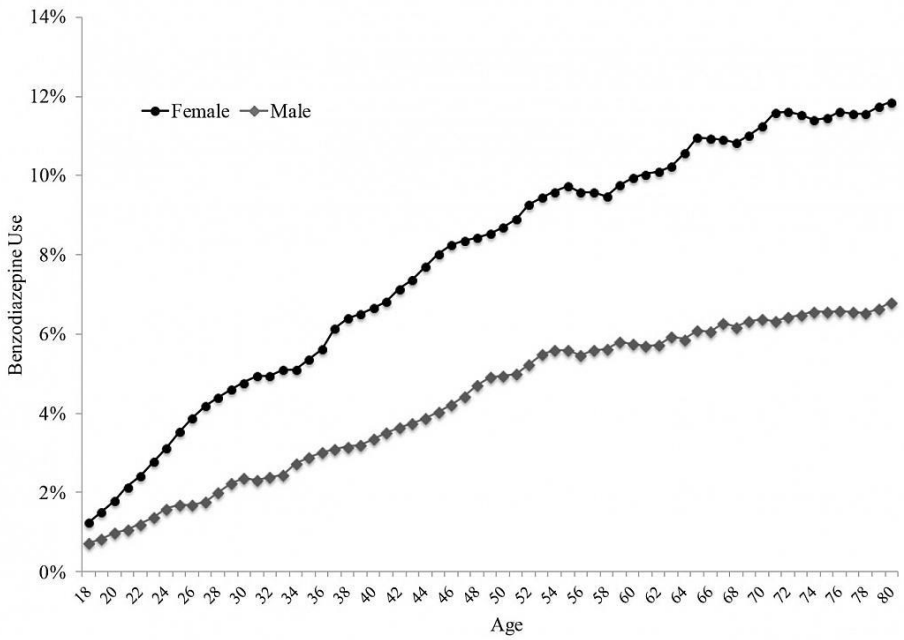
WHO USES BENZODIAZEPINES?

Figure 1: Percent of population with any benzodiazepine use by sex and age, United States, 2008



Data Source: IMS LifeLink® Information Assets-LRx Longitudinal Prescription Database, 2008, IMS Health Incorporated.

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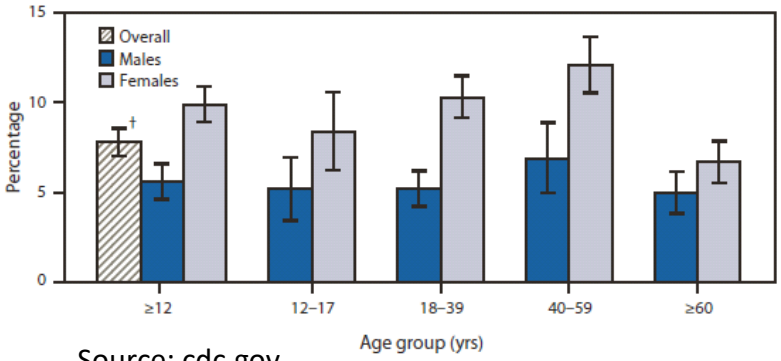
WHY?

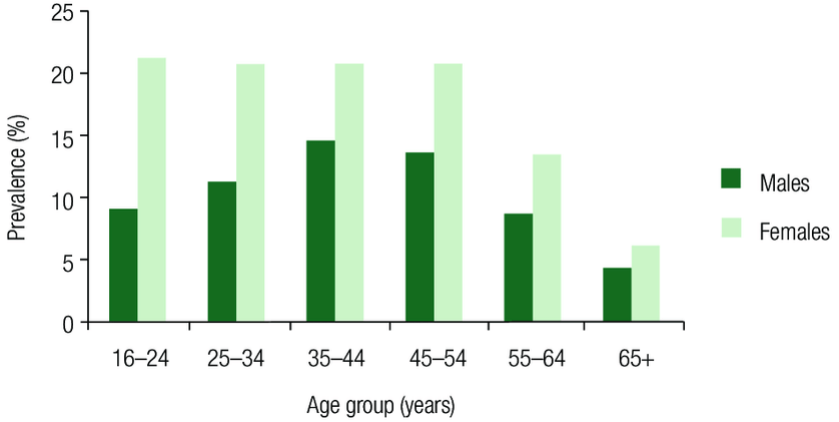
Depression



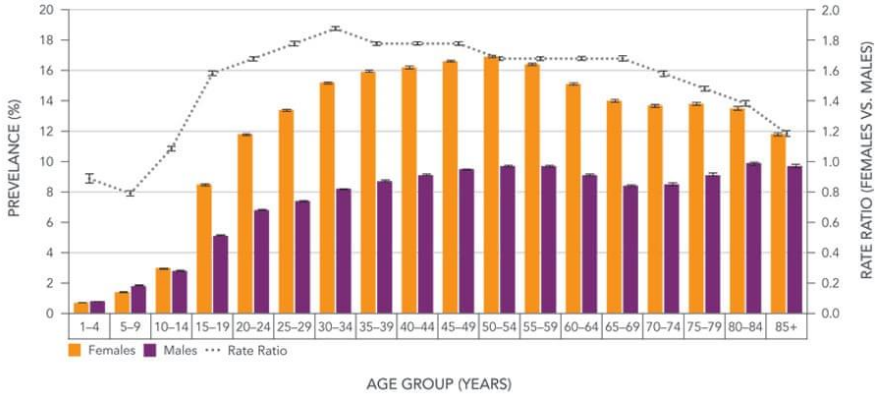
Source: cdc.gov

Distributions do not match

Anxiety



Slade, Timothy & Johnston, Amy & Teesson, Maree & Whiteford, Harvey & Burgess, Philip & Pirkis, J. & Saw, S.. (2009). The Mental Health of Australians 2: Report on the 2007 National Survey of Mental Health and Wellbeing.



Age-specific annual prevalence (%) and rate ratios of the use of health services for mood and anxiety disorders among people aged one year and older, by sex, Canada, 2009-2010, source: The Guardian Online

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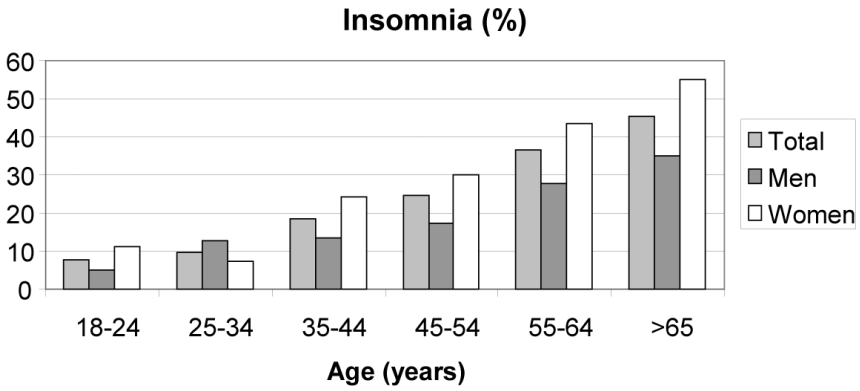
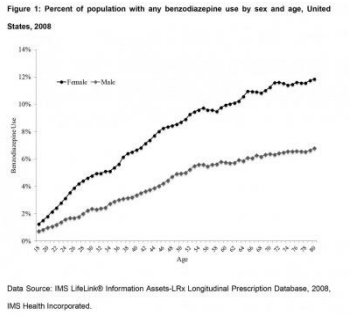
INSOMNIA BY AGE GROUP

Greece

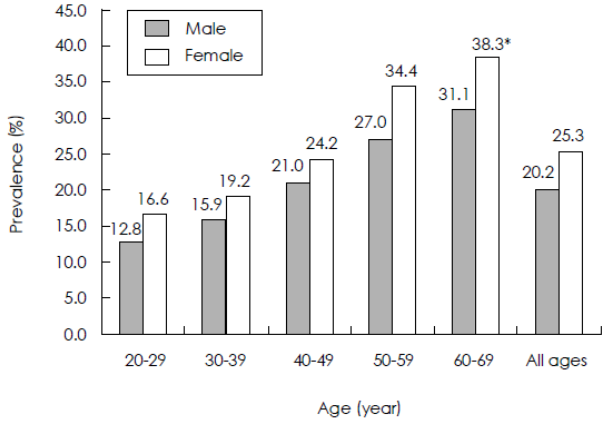


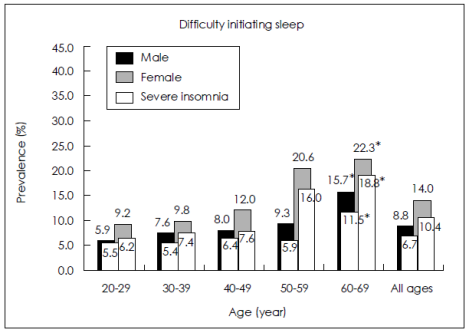
Insomnia and its correlates in a representative sample of the Greek population. Thomas Paparrigopoulos, Chara Tzavara, Christos Theleritis, Constantin Psarros, Constantin Soldatos, Yiannis Tountas

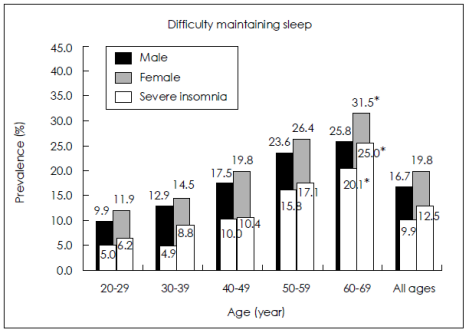


Distributions match
Also: consider “legacy use”

Korea







Epidemiology of Insomnia in Korean Adults: Prevalence and Associated Factors. Yong Won Cho, Won Chul Shin, Chang Ho Yun, Seung Bong Hong, Juhan Kim, Christopher J. Earley

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HOW HARMFUL ARE BENZODIAZEPINES IN THE ELDERLY? – GOOD EVIDENCE OF HARM

- Increased risk of falls (details to follow)
- Increased risk of fractures (Meta-analysis: relative risk 1.25, 95% CI [1.17-1.34], $p < 0.001$, Xing et al. Osteoporosis Int. 2014, 25.1)
- Increased risk of mortality (Meta-analysis: hazard ratio 1.6, 95% CI [1.03-2.49], Parsaik at al. Aust N Z J Psychiatry 2016, 50.6)

Brief case discussion at the end!

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FALLS – THE COMPLEX STORY

Table 1
Summary of Meta-Analysis of Adjusted Data and Subgroup Analysis

	Antipsychotics			Antidepressants			Benzodiazepines		
	No.	OR (95% CI)	I^2	No.	OR (95% CI)	I^2	No.	OR (95% CI)	I^2
All studies	16*	1.54 (1.28–1.85)	67%	22	1.57 (1.43–1.74)	76%	14	1.42 (1.22–1.65)	67 %
Outcome									
Any fall	11	1.43 (1.15–1.77)	54%	14	1.35 (1.28–1.42)	0%	12	1.38 (1.17–1.63)	66%
Recurrent fall	5*	1.70 (1.21–2.38)	69%	6	1.90 (1.42–2.54)	52%	3	1.45 (1.20–1.76)	0%
Injurious fall	1	1.66 (0.17–16.21)	N/A	5*	1.72 (1.51–1.96)	72%	1*	1.70 (1.03–2.81)	67%
Population									
Community	4	2.30 (1.24–4.26)	0%	5	1.48 (1.24–1.77)	63%	6*	1.40 (1.18–1.66)	36%
Long term care	6	1.18 (0.97–1.43)	88%	11	1.46 (1.26–1.69)	33%	3	1.11 (0.84–1.47)	0%
Hospital	4	1.57 (1.01–2.43)	67%	2	1.57 (1.43–1.74)	76%	4	1.69 (1.06–2.68)	84%
Other	2*	1.82 (1.10–3.00)	86%	4*	1.75 (1.54–1.99)	73%	1	1.93 (1.24–1.65)	N/A

CI, confidence interval.
*Study calculated only once in number of studies if results of men and women or different age groups separately reported. Both results pooled.

Take-home: All psychotropic drugs increase fall risk. If a patient requires psychotropic medication, benzodiazepines are not necessarily the worst choice.

For further confirmation, also see: Meta-analysis of the Impact of 9 Medication Classes on Falls in Elderly Persons. John C. Woolcott, Kathryn J. Richardson, Matthew O. Wiens, Bhavini Patel, Judith Marin, Karim M. Khan, Carlo A. Marra

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HOW HARMFUL ARE BENZODIAZEPINES IN THE ELDERLY? – POOR EVIDENCE OF HARM

- Increased risk of dementia?
- Meta-analyses suggest an increased risk.
- However: dementia is associated with increased depression, anxiety, insomnia, agitation, which are drivers of benzodiazepine use.
- My conclusion: benzodiazepine use is a marker and not a causative factor for dementia.
- Ancillary evidence: Meta analysis suggests that benzodiazepines are associated with cancer. Rather than causing cancer, I think benzodiazepines are more often given to people who are unwell for any reason.

SHOULD I GET MY OLDER PATIENTS OFF BENZODIAZEPINES?

But: Getting your patient off benzodiazepines is not more important than reducing their exposure to psychotropic drugs in general.

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HOW DO I GET MY PATIENT TO STOP TAKING BENZOS?

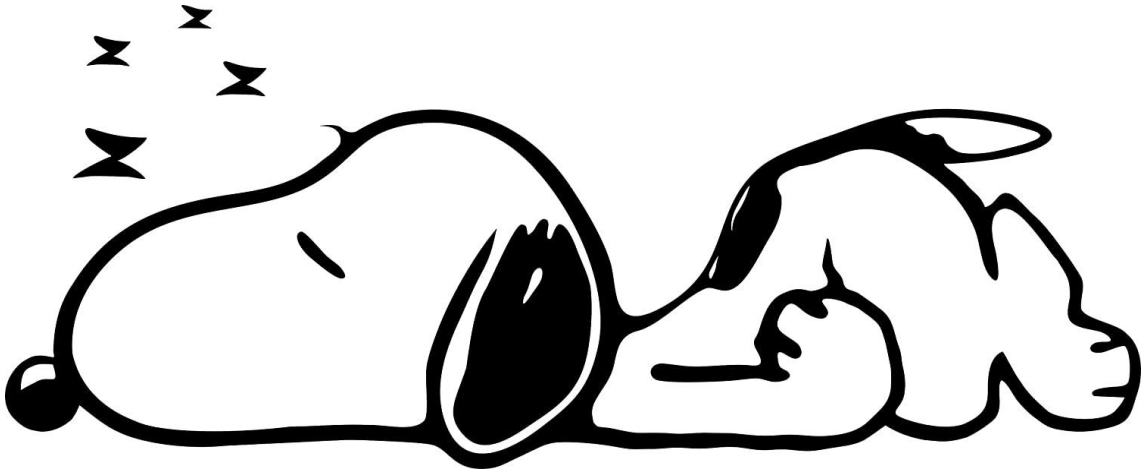
- Sometimes a single consultation is enough (Mugunthan et al. Br J Gen Pract. 2011, 61.590)
- Supervised withdrawal with psychotherapy is the gold standard (Gould et al. The British Journal of Psychiatry 2014, 214)
- Alternative treatments for insomnia – 2 slides from here

HOW SLOW SHOULD YOU GO?

- Many tapering schemes suggested (4 weeks to several years) – I would aim for a few months. Develop the scheme collaboratively with your patient.
- Cochrane review: No good evidence for pharmacological interventions during benzodiazepine discontinuation in chronic users. Poor quality evidence that valproate might help – but what is the fall risk of valproate?

INSOMNIA:

- Z-drugs (zolpidem, zopiclone, eszopiclone, zaleplon)
- In-person or internet-delivered CBT for insomnia
- Physical activity
- Music, meditation
- Acupuncture



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CASE

- 90-year old woman with chronic depression and anxiety, approximately 30 year history of continuous antidepressant (escitalopram 20 mg per night) and benzodiazepine use (alprazolam 0.5 mg per night). Mood and anxiety somewhat controlled on medications.
- Developed intermittent dizziness/vertigo and gait unsteadiness, occasional falls.
- Latest fall led to hip fracture, surgery, loss of cognitive function and permanent nursing home placement.

TAKE-HOME

- Eventual stopping of this patient's alprazolam and reduction of escitalopram to 10 mg reduced dizziness and gait unsteadiness, but this came too late to save the patient's independence.
- Stopping alprazolam abruptly possibly led to one day of agitated delirium in the midst of protracted somnolent delirium.
- Reducing escitalopram had no effect whatsoever on mood and anxiety.
- ALL PSYCHOTROPICS ARE UNSAFE IN THE ELDERLY. USE THEM WITH EXTREME CAUTION AND DO NOT BE AFRAID TO REDUCE OR STOP THEM.

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