
Too much of a good thing?

How to successfully deprescribe



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Presenter Disclosure

- **Faculty:**
 - Camille Gagnon, PharmD
- **Relationships with commercial interests:**
 - None, either related or unrelated to this presentation
- **Other**
 - Assistant-Director, CaDeN

Learning Objectives

1. Explain the risks of over-medication and the benefits of deprescribing to patients and caregivers.
2. Develop an approach to deprescribing common high-risk medications in older adults across the care continuum.
3. Manage and foster safe medication use in older adults.

Is medication use good or bad?

- Good
 - Provides symptomatic relief
 - Treats conditions to reduce morbidity
 - Reduces mortality when used correctly
 - Helps with patient expectations
 - Makes the prescriber feel like they are “helping”

Why is there an issue?

- High drug utilization
 - More chronic diseases
 - Use of more preventative therapies
 - Self-medication with OTC products
 - Use of increasing numbers of complementary and alternative medications

Why? Because longer life expectancy, more *chronic* conditions...

In Canada:

- 1-in-4 seniors have ≥ 3 chronic conditions
- Persons with 1-2 chronic conditions take 3-4 prescription medications on average
- Persons with 3 or more conditions take 6 different medications on average
- ER visits and hospitalizations result in new medications being added

Top 10 medications in seniors - Canada

Rank	Drug class	Rate of use	Rate of chronic use
1	HMG-CoA reductase inhibitors	48.4%	43.5%
2	Proton pump inhibitors	32.1%	23.5%
3	ACE inhibitors	24.5%	21.1%
4	Beta-blocking agents, selective	23.5%	20.6%
5	Dihydropyridine derivatives	21.9%	18.8%
6	Thyroid hormones	19.1%	17.9%
7	Angiotensin II antagonists	15.7%	13.8%
8	Natural opium alkaloids	15.1%	2.5%
9	Biguanides	14.9%	12.9%
10	Benzodiazepine derivatives	12.9%	6.1%



Problems with polypharmacy

More medication leads to more...



1. Side effects
2. Drug interactions
3. Hospitalizations
4. Costs



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Medications and Falls

Which medications increase the risk of falls?

Diuretics: 7% increased risk

Opioid painkillers: 10% increased risk

Anti-inflammatory drugs: 21% increased risk

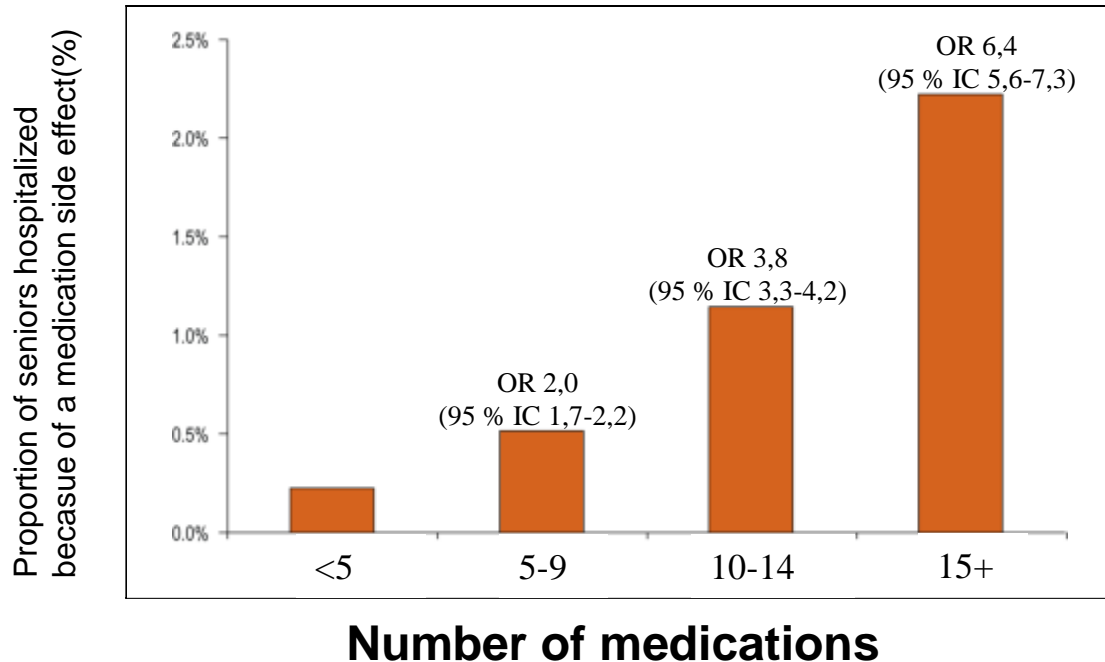
Blood pressure medication: 24% increased risk

Sleeping pills (benzodiazepines): 47-57% increased risk

Antipsychotics: 59% increased risk

Antidepressants: 68% increased risk

Risk of hospitalization because of side effects increases with # of meds



Potentially inappropriate medications

- Also identified as “PIM”
- A medication or medication class where harm outweighs the benefit, and there are safer alternatives available.
 - Include both drug and non-drug alternatives



The cost of potentially inappropriate medication

\$419 million

Canadians spend \$419M per year on potentially harmful prescription medications. This does not include hospital costs.

\$1.4 billion

Canadians spend \$1.4B per year in health care costs to treat harmful effects from medications, including fainting, falls, fractures and hospitalizations.

Morgan *et al.* 2016.
CMAJ Open; 4: E346-
E51.

Deprescribing

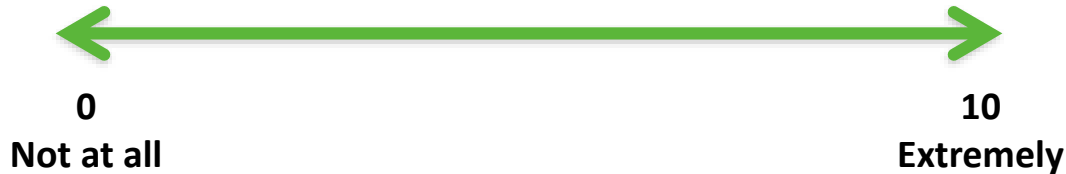
Deprescribing means reducing or stopping medications that may not be beneficial or may be causing harm. The goal of deprescribing is to maintain or improve quality of life.

Deprescribing involves patients, caregivers, healthcare providers and policy makers.



Self-evaluation

On a scale of 0 to 10, how confident are you about your deprescribing skills?



Here is Mrs S, aged 74

Active medical conditions

- DM II
- HTN
- OA (knee)
- Depression (2013)
- Urinary incontinence
- Itchy skin (especially after showering)
- **Fell last week while going to the washroom (at night)**



Mrs S's medication list

- Metformin 850mg po tid
- Lorazepam 1mg po hs
- Perindopril-erbumine 8mg po od
- Naproxen EC 500mg po BID regular
- Dexilant 60mg po od
- Rosuvastatine 10mg po od
- Glyburide 5mg po BID
- Hydroxyzine 25mg po hs PRN (*for pruritus*)
- Citalopram 20mg po od
- Carbocal D 400 po BID
- Oxybutynin 5mg po BID



How many medications would you consider deprescribing?

- Metformin 850mg po tid
- Lorazepam 1mg po hs
- Perindopril-erbumine 8mg po od
- Naproxen EC 500mg po BID regular
- Dexilant 60mg po od
- Rosuvastatine 10mg po od
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How many prescribing cascades or interactions?

- Metformin 850mg po tid
- Lorazepam 1mg po hs
- Perindopril-erbumine 8mg po od
- Naproxen EC 500mg po BID regular
- Dexilant 60mg po od
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3 easy steps to become a deprescriber

1

IDENTIFY which drugs to deprescribe

2

Use **EVIDENCE-BASED** deprescribing algorithms

3

ENGAGE your patients and other health care providers in the deprescribing process using effective communication tools and techniques



Step 1 : Identify which drugs to deprescribe - potentially inappropriate medications

- Various tools are available:
 - Implicit (Judgement based)
 - Medication Appropriateness Index
 - Explicit (Criterion based)
 - Beers list (used by CIHI)
 - STOPP / START
 - Drug Burden Index (*Hilmer SN et al 2007 Arch Int Med*)



Medication Appropriateness Index

- Questions:
 - What is indication?
 - Recognized effectiveness for condition?
 - Correct dosage/duration
 - Correct & practical instructions?
 - Significant ADR's & drug-disease interactions?
 - Duplication?
 - Cost?



AGSBEERS

AGS Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults (2015) – 53 drug classes



Benzodiazepines

Temazepam
Oxazepam
Lorazepam
Alprazolam
Clonazepam
Diazepam
Flurazepam
Clorazepate



Non-benzodiazepine sedative-hypnotics

Zolpidem
Zopiclone
Zaleplon

Sulfonylurea oral hypoglycemics

Glyburide
Glipizide
Chlorpropamide



All antipsychotics

Tricyclic antidepressants

Amitriptyline
Nortriptyline
Imipramine



1st generation antihistamines

Hydroxyzine
Diphenhydramine



Cardiovascular agents

Amiodarone
Digoxin > 0.125 mg/day



STOPP/START tool (2015)

- Screening Tool of Older Persons Prescriptions/
Screening Tool to Alert to Right Treatment
- Screening tool for patients 65 and over
- 114 criteria in last version
 - 80 STOPP
 - Long-term use of NSAID (> 3 months) for relief of mild joint pain in osteoarthritis
 - Proton pump inhibitor at treatment dose for peptic ulcer disease at full therapeutic dosage for > 8 weeks
 - 34 START
 - Calcium supplement and bisphosphonate in patients at high risk of osteoporosis due to long term treatment with steroids



Drug Burden Index (DBI)

- Anticholinergic activity: calculates cumulative exposure for a given patient
 - Associated with a reduced function, falls, higher frailty score, a higher utilization of health care resources and in some studies, with an increased risk of mortality

Tell your neighbour where you want to start and what your 6-month plan is

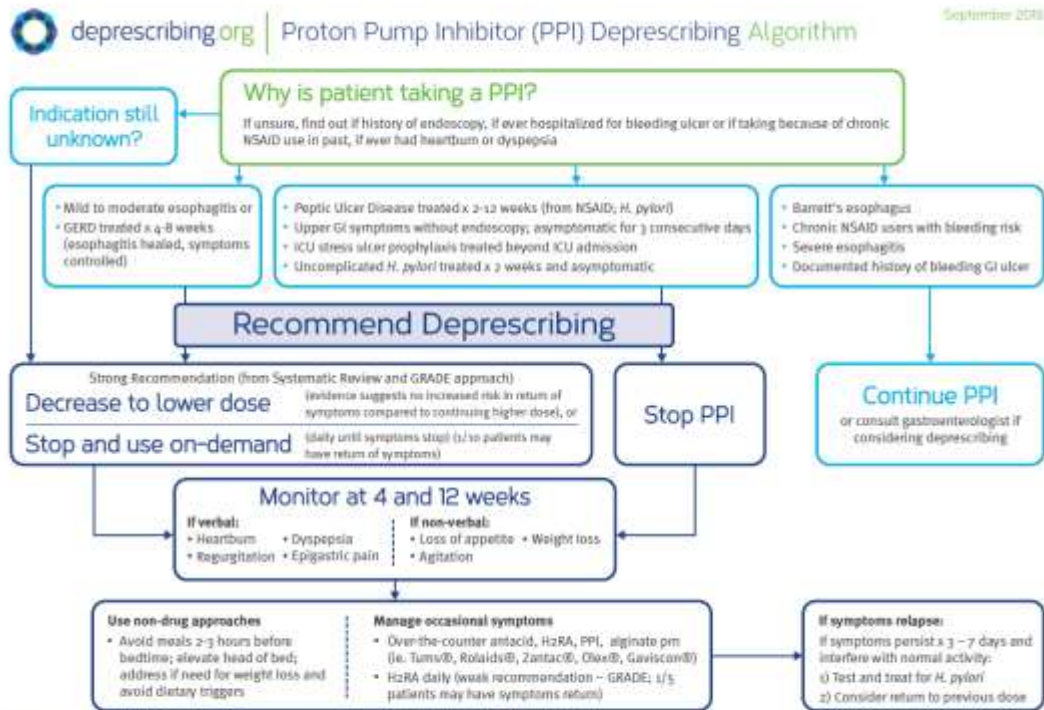
- Metformin 850mg tid
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What to do first?

- Decide what should be tapered or stopped
- Stop the easy ones (no longer needed, have long half-lives, don't cause withdrawal symptoms)
 - Oxybutynin
- Make a schedule for those that need to be **tapered**:
 - Beta-blockers, benzodiazepines, proton-pump inhibitors, diuretics, narcotics, anticonvulsants
- **Follow an evidence-based algorithm**

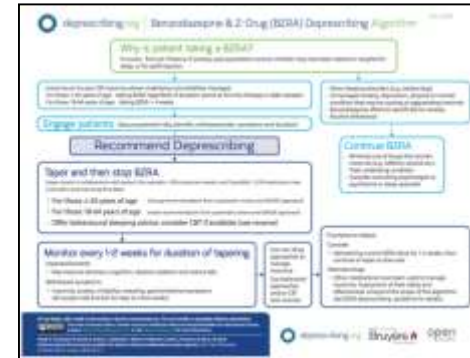
Step 2 : Use EVIDENCE-BASED deprescribing algorithms



Choose all that apply

An evidence-based deprescribing algorithm exists for:

- 1) Proton pump inhibitors
- 2) Antipsychotics
- 3) Benzodiazepine receptor agonists
- 4) Antihyperglycemic agents



Choose all that apply

I am familiar with the following deprescribing tools and resources:

- 1) EMPOWER brochures for patients
- 2) The MedStopper website
- 3) The deprescribing.org and deprescribingnetwork.ca websites
- 4) Sleepwell.ca
- 5) None of the above

www.medstopper.com



www.choosingwiselycanada.org



Sleepwell

Insomnia Sleeping Pills CBT



www.mysleepwell.ca

Tapering sedative-hypnotic medications

TAPERING-OFF PROGRAM

We recommend that you follow this schedule under the supervision of your doctor, nurse or pharmacist.

WEEKS	TAPERING SCHEDULE							✓
	MO	TU	WE	TH	FR	SA	SU	
1 and 2	●	●	●	●	●	●	●	
3 and 4	●	●	●	●	●	●	●	
5 and 6	●	●	●	●	●	●	●	
7 and 8	●	●	●	●	●	●	●	
9 and 10	●	●	●	●	●	●	●	
11 and 12	●	●	●	●	●	●	●	
13 and 14	●	●	●	●	●	●	●	
15 and 16	×	●	×	×	●	×	●	
17 and 18	×	×	×	×	×	×	×	

EXPLANATIONS

● Full dose ● Half dose ● Quarter of a dose × No dose



Tackling benzos....TRUE or FALSE?

- ① Night-time consumption of benzodiazepines does not increase the risk of motor vehicle accidents
- ② Only the long-acting benzodiazepines are associated with memory impairment, falls and fractures in the elderly
- ③ Episodic use of benzodiazepines incurs less harm than chronic use
- ④ The Z-drugs (zopiclone, zolpidem) confer the same risk of fractures as classic benzodiazepines, so are not a safer alternative for older people.

What does research evidence tell us about patients not wanting to taper benzos?

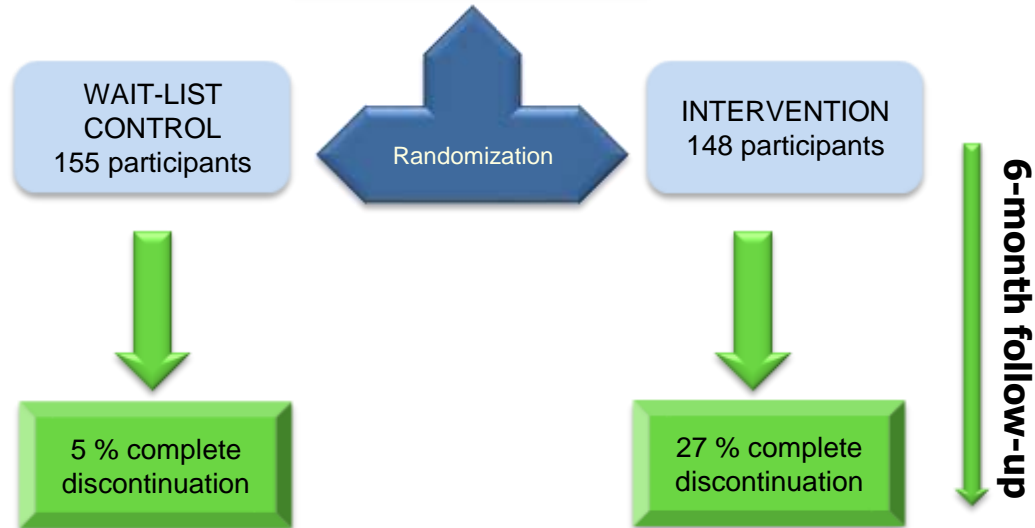


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EMPOWER = “Eliminating medications through patient ownership of end results”

30 community pharmacies around Montreal 2,716 chronic benzo users 65+,
303 participants, benzo users 3 months+, aged 65 years and older
no dementia, not on antipsychotics



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W
CC
155 p

**Prevalence difference = 23 %
(95 % CI 14 %-32 %)**
NNT = 4 for complete discontinuation
NNT = 3 for discontinuation or dose reduction

5 % complete
discontinuation

27 % complete
discontinuation

6-month follow-up



Step 3 : Engage your patients and other health care providers in the deprescribing process



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Role Play:

Talk to the patient next to you (Mrs. S.)
about getting off the sleeping pill she
has been taking for 30 years



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Which way did you start the deprescribing conversation?

- ① Direct deprescribing method: *“I see you are taking a lot of pills, I want to discuss getting you off some of them”*



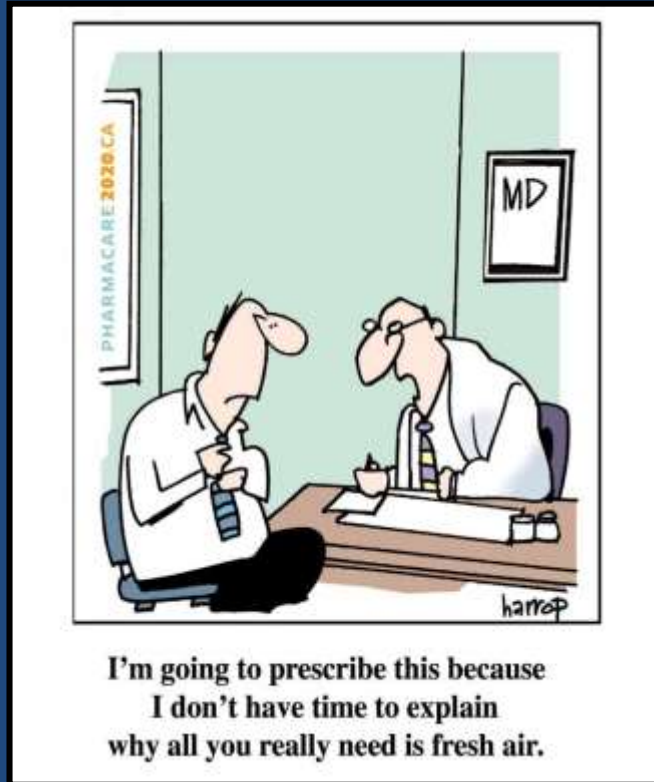
71% of Canadian seniors are willing to stop a medication if their doctor says it is possible.

(Sirois *et al.*, 2016)

Which way did you start the deprescribing conversation?

- ① Direct deprescribing method: *“I see you are taking a lot of pills, I want to discuss getting you off some of them”*
- ② Indirect method: *“How’s your sleep?....There is some new research about sleeping pills that I want to discuss with you. I’d like to try switching you to non-drug therapy”*
- ③ Emotional method *“About your memory problems, falls, etc....I’m **worried** that...”*
- ④ Use the EMPOWER brochure: *“Read this for next time”*

“But what can I take instead?”



What about other sleeping pills?

- ✓ Neither quetiapine nor trazodone are indicated for sleep
 - ✓ Off-label prescribing
 - ✓ Associated with adverse effects (falls, fractures)
- ✓ Over the counter sleep remedies' (diphenhydramine/acetaminophen (eg Tylenol PM®) and dimenhydrinate (eg Gravol®)) active ingredient is 1st generation antihistamines – with equally powerful cognitive effects
- ✓ Melatonin
 - ✓ reduced sleep latency by 9 minutes [95% CI 4-10]
 - ✓ increased total sleep time by 8 minutes [95% CI 1 – 15]]
 - ✓ Side effects: headaches, confusion, irritability, depression and stomach upset
 - ✓ No significant effect on the success of tapering benzos

TAPERING-OFF PROGRAM

We recommend that you follow this schedule under the supervision of your doctor, nurse or pharmacist.

WEEKS	TAPERING SCHEDULE							✓
	MO	TU	WE	TH	FR	SA	SU	
1 and 2								
3 and 4								
5 and 6								
7 and 8								
9 and 10								
11 and 12								
13 and 14								
15 and 16								
17 and 18								

EXPLANATIONS

Full dose
 Half dose
 Quarter of a dose
 No dose

Tips for tapering benzos:
 Go slow! Reducing by 25% every 2 weeks is too fast. Prepare your patient for withdrawal symptoms.

Handling withdrawal symptoms

- Common withdrawal symptoms include:
 - Sleeplessness, anxiety/irritability, nightmares, depression, depersonalisation, hallucinations, irritable bowel symptoms, muscle, tension
 - Worse in the last ¾ of the taper
 - **NO NEED to schedule a follow up visit until taper is finished**
- Should the patient be “updosed” during withdrawal?
 - NO. This will only exacerbate withdrawal symptoms.
 - Be firm. Be tough. ‘I know you can do it’
 - If patients hit a "sticky patch" during the course of withdrawal, staying on the same dose for a longer period (not more than a few weeks) before resuming the withdrawal schedule allows them to overcome this obstacle. This is the “grit your teeth” and carry on approach.
- The use of SSRIs for anxiety, unmasking depression?

The role of the sleep diary

	Example	Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday
1. Yesterday, I took a nap from ____ to _____. (Record all naps.)	1:50 pm to 2:30 pm							
2. Yesterday, I took ____ mg of medication and/or ____ oz of alcohol to help me sleep.	Immovane 3.75 mg							
3. (a) I went to bed at ____ h and (b) I turned off the lights at ____ h.	10:45 pm 11:15 pm							
4. After turning off the lights, I fell asleep after ____ minutes.	60 min							
5. I woke up ____ times during the night. (Indicate the number of times)	3							
6. I stayed awake ____ min each time. (Indicate how many minutes you stayed awake each time.)	10, 5, 45							
7. This morning, I woke up at ____ h. (Record the last time you woke up.)	6:20 am							
8. This morning I got out of bed at ____ h.	6:40 am							
9. When I got up, I felt: 1 = exhausted, 2 = tired, 3 = average, 4 = rested, 5 = very well rested	2							
10. Overall, my sleep last night was: 1=very restless, 2=restless, 3=average, 4=deep, 5=very deep	3							

Sleep efficiency = $\frac{\text{Total time asleep}}{\text{Total time in bed}}$



What is cognitive behavioural therapy for insomnia (CBT-i)?

- More than sleep hygiene
 - Don't drink caffeinated beverages before bed
 - Don't exercise before bed
 - Use relaxation tapes, warm bath, to de-stress before bed
- 6-12 individual or group sessions that:
 - Combat myths: e.g. unrealistic to expect to sleep 8-10 hours per night
 - Sleep restrict: Fixed bedtime (11 p.m.) and wake time (6 a.m.)
 - Introduce stimulus control: If you are lying in bed and not sleeping – get up and go write down your worries, read a book in a chair until you feel tired, above all don't panic
 - Maximize sleep efficiency = time asleep/total time in bed , aim for >85%
- Achieves a clinical response in 70-80% of patients
 - Clinical remission in 40%
 - **NO SIDE EFFECTS**

Effectiveness of CBTi versus sedative-hypnotics

CBTi

- **Sleep onset latency**
 - Post-treatment **-23 minutes** (-37 to -10)
 - 12 months -17 (-30 to -4)
- **Total wake time at night**
 - Post **-68 minutes** (-96 to -40)
 - 12 months -31 (-58 to -4)
- **Sleep efficiency**
 - Post +10% (5% to 15%)
 - 12 months +5% (0.5% to 10%)

Benzos & Z-drugs

- **Sleep onset latency**
 - **-22 minutes** (95% CI 11-33 minutes), compared to placebo
- **NNT** to improve sleep quality = 13
- **Total wake time at night**
 - Post **-25 minutes** (-38 to -13) vs placebo
- **Decrease in total number of awakenings**
 - 0.63 (- 0.48 to - 0.77) vs placebo



How to refer your patient for CBTi

- ✓ Download and distribute a CBT brochure
- ✓ Ask your patient to download an app
- ✓ Set up group coaching in your practice
- ✓ Refer to a specialist



<http://mysleepwell.ca/>

Deprescribing is a team sport



- **Physiotherapist** – help with pelvic floor muscle exercises, assist with exercise program and fall prevention
- **Social Worker** – help with anxiety, depression, isolation affecting sleep and depression
- **Occupational therapist** – help with mobility aids if needed
- **Dietician** – help to use dietary approaches for GERD, weight loss if needed
- **Nurse** – monitor impact of medication changes, provide education re: nonpharmacologic approaches (CBTi, GERD management, heart failure self-management)
- **Psychologist** – conduct group CBT sessions for insomnia or anxiety, memory testing
- **Pharmacist** – help to identify drug-related problems, develop plans for medication changes, tapering and glucose monitoring if required



Post-test

On a scale of 0 to 10, how confident are you about your deprescribing skills?



Embrace your inner deprescriber

- Deprescribe at least 1 drug per day
- Track your stats/develop a quality improvement project
- Commit to launching group CBTi sessions for your practice
- Download the EMPOWER brochures and algorithms!
- Subscribe to the Canadian Deprescribing Newsletter (deprescribingnetwork.ca)





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