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Reducing medications safely to meet life's changes | Moins de médicaments, sécuritairement – pour mieux répondre aux défis de la vie

The elderly at risk: reducing medications safely to meet life's changes

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Bruyère

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Disclosure

- Relevant financial relationships
  - None

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- **The views expressed in this presentation are the views of the author(s)/presenter(s) and do not necessarily reflect those of the Province.*

Self assessment questions

1. 'Deprescribing' is another term for 'nonadherence' (T/F)
2. Deprescribing steps consider the original indication for the medication (T/F)
3. Engaging patients in determining the deprescribing process is unlikely to have an effect on deprescribing success (T/F)

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Objectives

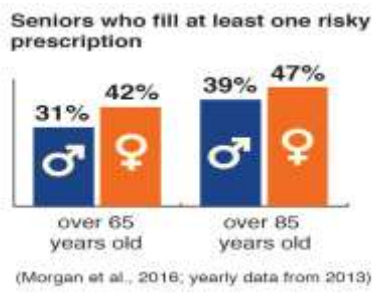
- Participants will be able to:
  1. **Explain systematic and patient-centred deprescribing processes**
  2. **Describe the steps involved in deprescribing**
  3. Demonstrate models of pharmacist involvement

What problem are we trying to solve[1,2]

- Polypharmacy: more medications than needed, or for which harm outweighs benefit
- Increases risk of:
  - Adverse drug reactions, drug interactions
  - Falls, fractures
  - Functional and cognitive decline
  - Nonadherence
  - Hospitalizations and higher healthcare costs
- Especially for the elderly who handle and respond to drugs differently, are often frail and not represented in research

How big is the problem?[3,4]

- 2/3 Canadian seniors are prescribed at least 5 prescription medications
- Who takes 10 or more?
  - 27% over 65 years
  - 40% over 85 years
  - 66% in long-term care homes
- $419 million spent on PIMs
- $1.4 billion in incremental health care expenditure due to PIMs



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Deprescribing

- "The planned and supervised process of dose reduction or stopping of medication that may be causing harm or no longer be of benefit. The goal of deprescribing is to reduce medication burden and harm, while maintaining or improving quality of life."
- **"Deprescribing is part of good prescribing – backing off when doses are too high, or stopping medications that are no longer needed."**

Evidence for deprescribing[5]

- Deprescribing has been shown to:
  - Be feasible and safe
  - Reduce falls
  - Reduce numbers of medications and costs
  - Possibly reduce mortality (with patient-specific deprescribing interventions) though association not borne out in RCTs
- Adverse drug withdrawal events may occur but are usually easily managed; monitoring is important!

Steps in deprescribing[6]

- Compile a medication history
- Identify potentially inappropriate medications, those with less evidence for benefit or those with harm
- Assess each medication for eligibility for deprescribing
- Prioritize medications for deprescribing
- Develop a plan for tapering and monitoring
- Monitor, support and document care

With the patient…

Identifying medications for deprescribing

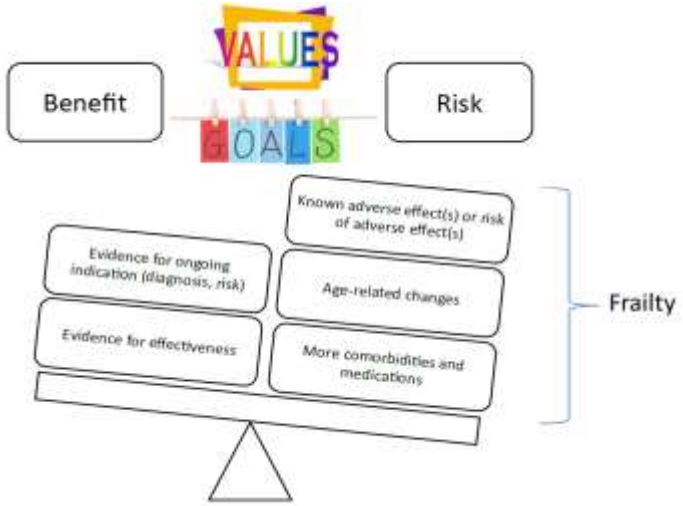
Explicit

- Screening criteria:
  - Beers
  - STOPP/START
- Anticholinergic load
  - Anticholinergic burden scale

Implicit

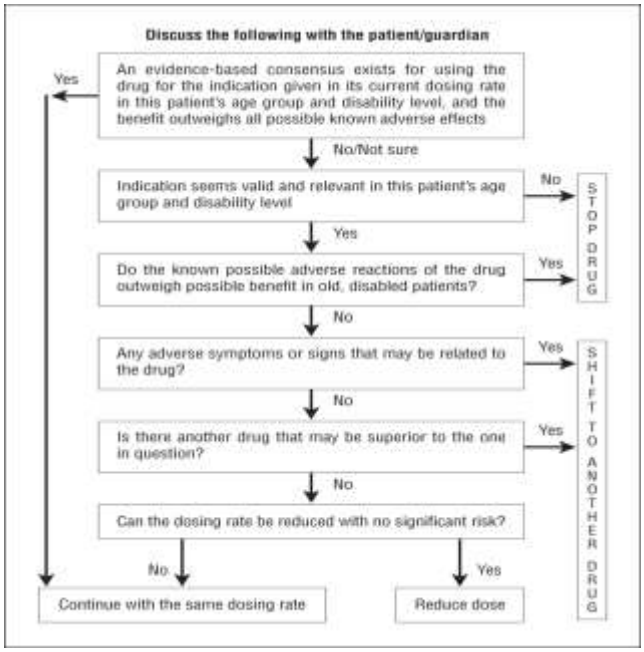
- Assess each medication
  - Indication, effectiveness, safety, compliance
- Assess each sign + symptom:
  - Can this be caused by a drug?
- Medication Appropriateness Index

Making deprescribing decisions



Systematic and patient-centred processes

- Many generic algorithms to guide deprescribing thought processes exist
- Application to individual patients and situations can be challenging
- Class-specific, evidence-based deprescribing guidelines could be useful



Good Palliative-Geriatric Practice Algorithm Garfinkel[7]

Estimate life expectancy <1 year and likely trajectory of decline

Determine goals of care with patient/carer

Obtain accurate list of current medications

For each medication, consider:
Adherence
Adverse reactions (present? Risk?)
Indication (active? treatment target? time to benefit? consistent with goals of treatment?)
Interactions (pharmacokinetic and pharmacodynamic)

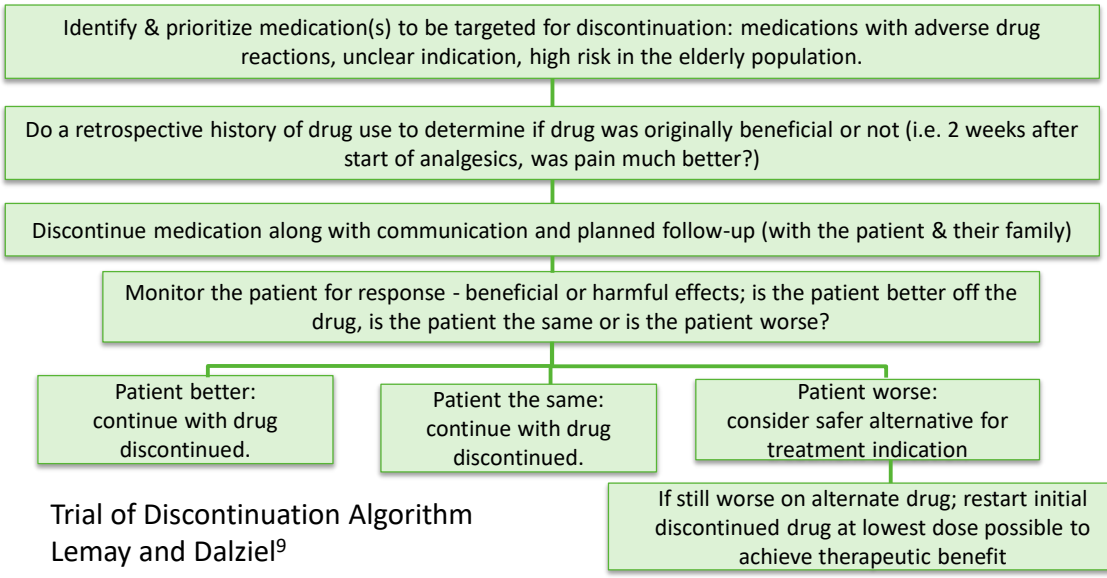
For medications to be ceased:
Immediate cessation vs weaning (long-term steroids, beta blockers, benzodiazepines, anticholinergics)

For medications to be continued:
Aim for daily administration
Optimize dose

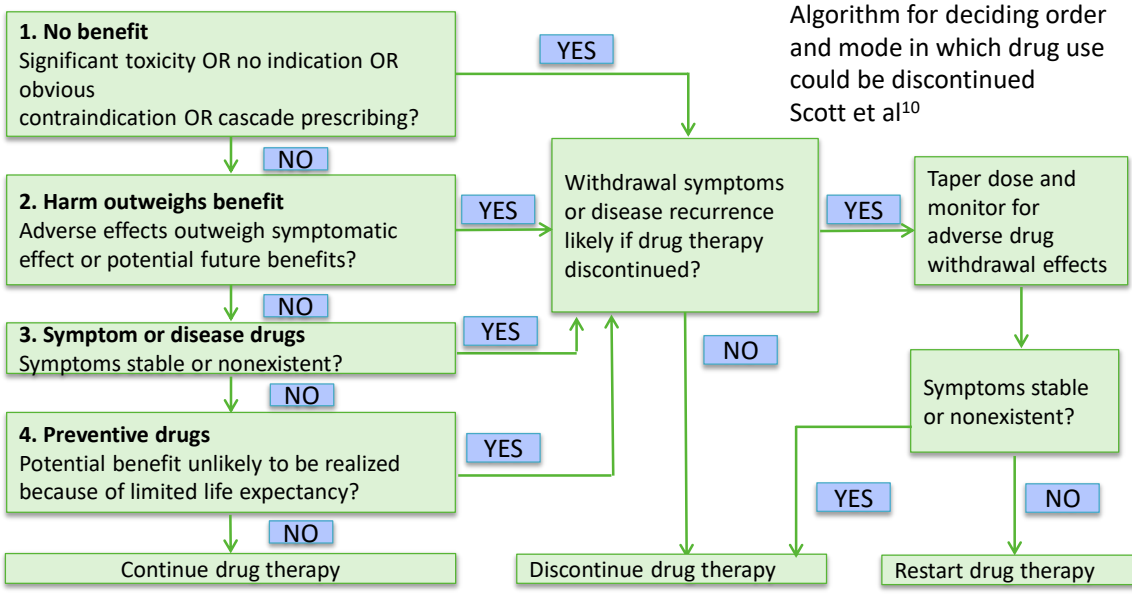
Follow-up to assess:
Adherence, Adverse withdrawal effects
Re-emergence of symptoms from the disease process
Achievement of goals of care

Repeat process regularly

Hardy and Hilmer[8]



Trial of Discontinuation Algorithm
Lemay and Dalziel[9]



Algorithm for deciding order and mode in which drug use could be discontinued
Scott et al[10]

Best Practice Journal guide[11]

- A practical guide to stopping medicines in older people
  http://www.bpac.org.nz/magazine/2010/april/stopGuide.asp
  - Patient wishes; Clinical indication and benefit; Appropriateness; Duration of use; Adherence; Prescribing cascade
- Four step process
  1. Recognize the need to stop
  2. Reduce or stop one medicine at a time
  3. Consider if medicine can be stopped abruptly or should be tapered
  4. Check for benefit or harm after each medicine stopped

Deprescribing safely

- Monitor for adverse drug withdrawal events
  - Symptoms or signs caused by the removal of a drug:
    1. Physiological - tachycardia (beta-blocker); rebound hyperacidity (PPI)
    2. Symptoms of underlying condition - arthritis pain after stopping an NSAID
    3. New symptoms - excessive sweating with stopping SSRI
  - Increased risk with:
    - Longer duration, higher doses, short half-life
    - History of dependence/abuse
    - Lack of patient 'buy-in' (may feel abandoned)
- See articles by Bain[12] and Graves[13]

Challenges and enablers[14]

- Prescribers
  - Awareness/insight
  - Inertia
  - Self-efficacy
  - Feasibility
  - Devolving responsibility
  - Patient and prescriber complexity
  - Treatment guidelines
- Patients
  - Vast majority hypothetically willing
  - Belief in appropriateness
  - Fear
  - Influences: GP, family, friends, media, previous experience
  - Medication dislike
  - Knowing there is a process

Evidence-based deprescribing guidelines[15-17]

- Class specific
- Developed using AGREE II and GRADE
- For proton pump inhibitors, benzodiazepine receptor agonists, antipsychotics and antihyperglycemics
- Address for whom deprescribing is appropriate, when and how to deprescribe, what to monitor and how often, and what to do if symptoms recur
- Consider patient engagement[18]

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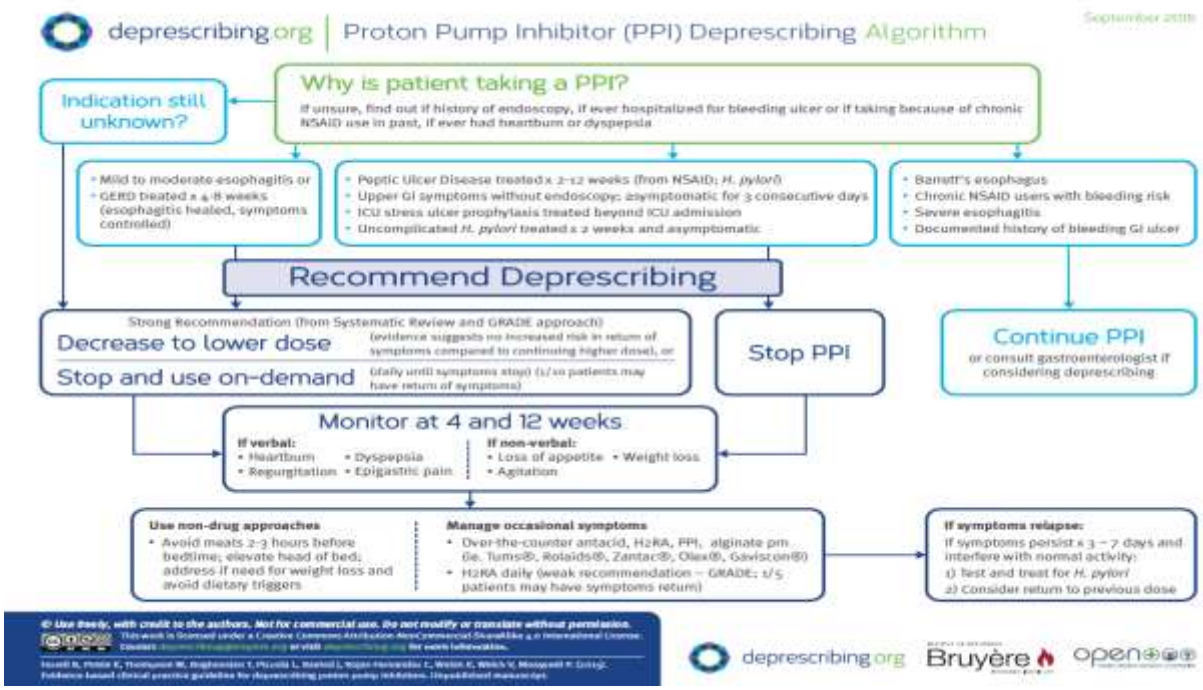
deprescribing.org | Proton Pump Inhibitor (PPI) Deprescribing Algorithm
September 2015
Why is patient taking a PPI?
If unsure, find out if history of endoscopy, if ever hospitalized for bleeding ulcer or if taking because of chronic NSAID use in past, if ever had heartburn or dyspepsia
Indication still unknown?
• Mild to moderate esophagitis or
• GERD treated x 4-8 weeks (esophagitis healed, symptoms controlled)
• Peptic Ulcer Disease treated x 2-12 weeks (from NSAID; H. pylori)
• Upper GI symptoms without endoscopy; asymptomatic for 3 consecutive days
• ICU stress ulcer prophylaxis treated beyond ICU admission
• Uncomplicated H. pylori treated x 2 weeks and asymptomatic
• Barrett's esophagus
• Chronic NSAID users with bleeding risk
• Severe esophagitis
• Documented history of bleeding GI ulcer
Recommend Deprescribing
Strong Recommendation (from Systematic Review and GRADE approach)
Decrease to lower dose
(evidence suggests no increased risk in return of symptoms compared to continuing higher dose), or
Stop and use on-demand
(daily until symptoms stop) (1/10 patients may have return of symptoms)
Stop PPI
Continue PPI
or consult gastroenterologist if considering deprescribing
Monitor at 4 and 12 weeks
If verbal:
• Heartburn • Dyspepsia
• Regurgitation • Epigastric pain
If non-verbal:
• Loss of appetite • Weight loss
• Agitation
Use non-drug approaches
• Avoid meals 2-3 hours before bedtime; elevate head of bed; address if need for weight loss and avoid dietary triggers
Manage occasional symptoms
• Over-the-counter antacid, H2RA, PPI, alginate prn (ie. Tums®, Rolaids®, Zantac®, Olex®, Gaviscon®)
• H2RA daily (weak recommendation – GRADE; 1/5 patients may have symptoms return)
If symptoms relapse:
If symptoms persist x 3 – 7 days and interfere with normal activity:
1) test and treat for H. pylori
2) Consider return to previous dose
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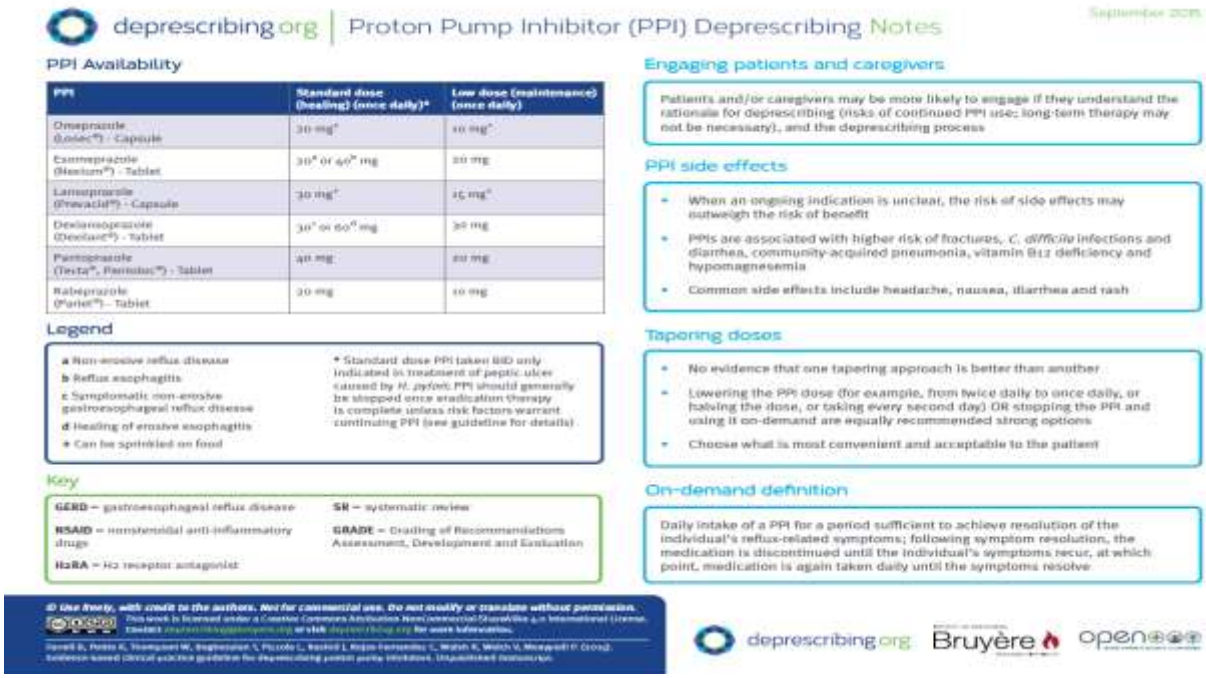
deprescribing.org | Proton Pump Inhibitor (PPI) Deprescribing Notes
September 2015
PPI Availability
PPI | Standard dose (healing) (once daily)* | Low dose (maintenance) (once daily)
Omeprazole (Losec®) - Capsule | 20 mg* | 10 mg*
Esomeprazole (Nexium®) - Tablet | 20* or 40* mg | 20 mg
Lansoprazole (Prevacid®) - Capsule | 30 mg* | 15 mg*
Dexlansoprazole (Dexilant®) - Tablet | 30* or 60* mg | 30 mg
Pantoprazole (Tecta®, Pantoloc®) - Tablet | 40 mg | 20 mg
Rabeprazole (Pariet®) - Tablet | 20 mg | 10 mg
Legend
a Non-erosive reflux disease
b Reflux esophagitis
c Symptomatic non-erosive gastroesophageal reflux disease
d Healing of erosive esophagitis
+ Can be sprinkled on food
* Standard dose PPI taken BID only indicated in treatment of peptic ulcer caused by H. pylori; PPI should generally be stopped once eradication therapy is complete unless risk factors warrant continuing PPI (see guideline for details)
Key
GERD = gastroesophageal reflux disease
NSAID = nonsteroidal anti-inflammatory drugs
H2RA = H2 receptor antagonist
SR = systematic review
GRADE = Grading of Recommendations Assessment, Development and Evaluation
Engaging patients and caregivers
Patients and/or caregivers may be more likely to engage if they understand the rationale for deprescribing (risks of continued PPI use; long-term therapy may not be necessary), and the deprescribing process
PPI side effects
• When an ongoing indication is unclear, the risk of side effects may outweigh the risk of benefit
• PPIs are associated with higher risk of fractures, C. difficile infections and diarrhea, community-acquired pneumonia, vitamin B12 deficiency and hypomagnesemia
• Common side effects include headache, nausea, diarrhea and rash
Tapering doses
• No evidence that one tapering approach is better than another
• Lowering the PPI dose (for example, from twice daily to once daily, or halving the dose, or taking every second day) OR stopping the PPI and using it on-demand are equally recommended strong options
• Choose what is most convenient and acceptable to the patient
On-demand definition
Daily intake of a PPI for a period sufficient to achieve resolution of the individual's reflux-related symptoms; following symptom resolution, the medication is discontinued until the individual's symptoms recur, at which point, medication is again taken daily until the symptoms resolve
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deprescribing.org | Is a Proton Pump Inhibitor still needed?

September 2016

What are Proton Pump Inhibitors (PPIs)?

Proton Pump Inhibitors, or PPIs, are a class of drugs that are used to treat problems such as heartburn or stomach ulcers.

There are many different types of PPI drugs:

- Lansoprazole (Prevacid®)
- Omeprazole (Losec®)
- Pantoprazole (Tecta®, Pantoloc®)
- Rabeprazole (Pariet®)
- Esomeprazole (Nexium®)
- Dexlansoprazole (Dexilant®)
- Omeprazole (Olex®)

Why use less of, or stop using a Proton Pump Inhibitor?

While PPIs are effective at treating many stomach problems, such as heartburn, they are often only needed for a short period of time.

Despite this, many people take PPIs for longer than they may need.

Research shows that for some people, doses can be safely lowered or the drug used just when needed for symptom relief.

PPIs are generally a safe group of medications; however, they can cause headache, nausea, diarrhea and rash. They may also increase risk of:

- Low vitamin B12 and magnesium blood levels
- Bone fractures
- Pneumonia
- Intestinal infections such as *C. difficile*

Stopping a Proton Pump Inhibitor is not for everyone

Some people need to stay on a PPI for a long time. However, others only need this medication for a short period of time.

When the ongoing reason for using a PPI is unclear, the risk of side effects may outweigh the chance of benefit.

People who should continue on a PPI include those with any of the following:

- Barrett's esophagus
- Long-term use of nonsteroidal anti-inflammatory drug (e.g. Advil®)
- Severe inflammation of the esophagus
- Documented history of bleeding stomach ulcer

How to safely reduce a Proton Pump Inhibitor

People over the age of 18 who have been taking a PPI for more than 4 to 8 weeks should talk to a doctor, nurse practitioner or pharmacist about whether stopping a PPI is the right choice for them.

Doctors, nurse practitioners or pharmacists can help to decide on the best approach to using less of a PPI. They can advise on how to reduce the dose, whether to stop it altogether, or how to make lifestyle changes that can prevent heartburn symptoms from returning.

Reducing the dose might involve taking the PPI once daily instead of twice daily, lowering the number of mg (e.g. from 30mg to 15mg, or 40mg to 20mg, or 20mg to 10mg depending on the drug), or taking the PPI every second day for some time before stopping.

Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid J, Rojas-Fernandez C, Walsh K, Welch V, Moayyedi P. (2015). Evidence-based clinical practice guideline for deprescribing proton pump inhibitors. Unpublished manuscript.

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September 2016

What to monitor after reducing a Proton Pump Inhibitor

After reducing or stopping a PPI with the help of a physician, nurse practitioner or pharmacist, it is important to check for, and report signs of:

- Heartburn
- Reflux
- Stomach pain

If the patient is not able to speak, check for, and report signs of:

- Loss of appetite
- Weight loss
- Agitation

Other ways to reduce heartburn, reflux or stomach pain

Lifestyle changes:

- Avoid triggers (e.g. coffee, alcohol, spicy foods, chocolate)
- Avoid food 2-3 hours before bedtime
- Elevate the head of the bed
- Lose weight

Manage occasional heartburn with over the counter drugs such as:

- Tums®
- Rolaids®
- Zantac®
- Olex®
- Gaviscon®

What to do if stomach problems continue

If heartburn, reflux, or stomach pain continues after 3-7 days and interferes with normal activities, please talk to a doctor, nurse practitioner or pharmacist. They can help decide whether to return to a previous PPI dose or whether to use the PPI 'on-demand' (daily until your symptoms stop). They may also suggest a test for a treatable condition called *H. pylori*.

Personalized PPI dose reduction strategy:

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This pamphlet accompanies a deprescribing guideline and algorithm that can be used by doctors, nurse practitioners, or pharmacists to guide deprescribing.

Visit
deprescribing.org
for more information.

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Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid J, Rojas-Fernandez C, Walsh K, Welch V, Moayyedi P. (2015). Evidence-based clinical practice guideline for deprescribing proton pump inhibitors. Unpublished manuscript.

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Self-efficacy for deprescribing[19]

Domain	Tasks
1 - Decide whether to deprescribe a medication (4 items)	• Weigh the benefits vs. harms of continuing a medication • Weigh the benefits vs. harms of deprescribing a medication • Determine the patient's (or carer's) preferences for continuing or deprescribing a medication • Determine whether a behavioural (non-pharmacological) intervention would facilitate deprescribing
2 - Develop a plan to deprescribe a medication (2 items)	• Determine the best dosing approach to deprescribing a medication • Develop a monitoring plan to determine the outcome of deprescribing a medication
3 - Implement the plan for deprescribing the medication (3 items)	• Communicate/negotiate a deprescribing plan • Carry out monitoring and follow up to determine outcome of deprescribing • Determine if/when medication should be restarted

Resources to help deprescribe

- http://www.bruyere.org/en/polypharmacy-deprescribing
- http://deprescribing.org/
- http://medstopper.com/

Answers to self assessment questions

1. 'Deprescribing' is another term for 'nonadherence' (T/F)

   FALSE
2. Deprescribing steps consider the original indication for the medication (T/F)

   TRUE
3. Engaging patients in determining the deprescribing process is unlikely to have an effect on deprescribing success (T/F)

   FALSE

Take home messages

- Polypharmacy in the elderly carries numerous risks
- Deprescribing is feasible and safe when supervised and monitored
- All deprescribing algorithms and 'steps' include: evaluating need for ongoing indication of each medication, weighing benefit and harm of continuing, developing and communicating a plan for deprescribing, carrying out deprescribing actions and monitoring

Contacts

- http://deprescribing.org/ (Evidence-based guideline algorithms, EMPOWER brochures, other resources e.g. Medstopper, CaDeN, research summaries etc.)
- For deprescribing guidelines research:
  - http://www.open-pharmacy-research.ca/research-projects/emerging-services/deprescribing-guidelines/
  - deprescribing@bruyere.org
  - Follow us on twitter: @Deprescribing
- For CaDeN: annie.webb@criugm.qc.ca and @DeprescribeNet

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