

Taking too many medications can pose health risks. Here's how to avoid them

July 3 2024, by Caroline Sirois



Credit: Anna Shvets from Pexels

When we see an older family member handling a bulky box of medications sorted by day of the week, we might stop and wonder, is it too much? How do all those pills interact?

The fact is, as we get older we are more likely to develop different chronic illnesses that require us to take several different medications. This is known as [polypharmacy](#). The concept applies to people taking five or more medications, but there are all sorts of [definitions with different thresholds](#) (for example, four, 10 or 15 medicines).

I'm a pharmacist and pharmacoepidemiologist interested in polypharmacy and its impact on the population. The research I carry out with my team at the Faculty of Pharmacy at Université Laval focuses on the appropriate use of medication by older family members. We have published this [study](#) on the perceptions of older adults, family caregivers and clinicians on the use of medication among persons over 65.

Polypharmacy among older adults

Polypharmacy is very common among older adults. In 2021, a quarter of persons over 65 in Canada were prescribed [more than ten different classes of medication](#). In Québec, persons over 65 used an average of [8.7 different drugs in 2016](#), the latest year available for statistics.

Is it a good idea to take so many drugs?

According to [our study](#), the vast majority of seniors and family caregivers would be willing to stop taking one or more medications if the doctor said it was possible, even though most are satisfied with their treatments, [have confidence in their doctors](#) and feel that their doctors are taking care of them to the best of their ability.

In the majority of cases, medicine prescribers are helping the person they are treating. Medications have a positive impact on health and are essential in many cases. But while the treatment of individual illnesses is often adequate, the whole package can sometimes become problematic.

The risks of polypharmacy: Five points to consider

When we evaluate cases of polypharmacy, we find that the quality of treatment is often compromised when many medications are being taken.

1. Drug interactions: polypharmacy increases the risk of drugs interacting, which can lead to undesirable effects or reduce the effectiveness of treatments.
2. A drug that has a positive effect on one illness may have a negative effect on another: what should you do if someone has both illnesses?
3. The greater the number of drugs taken, the greater the risk of undesirable effects: for adults over 65, for example, there is an increased risk of confusion or falls, which have significant consequences.
4. The more medications a person takes, the more likely they are to take a [potentially inappropriate medication](#). For seniors, these drugs generally carry more risks than benefits. For example, benzodiazepines, medicine for anxiety or sleep, are the [most frequently used class](#) of medications. We want to reduce their use as much as possible [to avoid negative impacts](#) such as confusion and increased risk of falls and car accidents, not to mention the risk of dependence and death.
5. Finally, polypharmacy is associated with various adverse health effects, such as an [increase in frailty, hospital admissions and emergency room visits](#). However, studies conducted to date have not always succeeded in isolating the effects specific to polypharmacy. As polypharmacy is more common among people with multiple illnesses, these illnesses may also contribute to the observed risks.

Polypharmacy is also a combination of medicines. There are almost as

many as there are people. The risks of these different combinations can vary. For example, the risks associated with a combination of five potentially inappropriate drugs would certainly be different from those associated with blood pressure medication and vitamin supplements.

Polypharmacy is therefore complex. [Our studies attempt to use artificial intelligence](#) to manage this complexity and identify combinations associated with negative impacts. There is still a lot to learn about polypharmacy and its impact on health.

Three tips to avoid the risks associated with polypharmacy

What can we do as a patient, or as a caregiver?

1. Ask questions: when you or someone close to you is prescribed a new treatment, be curious. What are the benefits of the medication? What are the possible side effects? Does this fit in with my treatment goals and values? How long should this treatment last? Are there any circumstances in which discontinuing it should be considered ?
2. Keep your medicines up to date: make sure they are all still useful. Are there still any benefits to taking them? Are there any side effects? Are there any [drug interactions](#)? Would another [treatment](#) be better? Should the dose be reduced?
3. Think about de-prescribing: this is an increasingly common clinical practice that involves stopping or reducing the dose of an inappropriate drug after consulting a health-care professional. It is a shared decision-making process that involves the patient, their family and health-care professionals. The [Canadian Medication Appropriateness and Deprescribing Network](#) is a world leader in this practice. It has compiled a number of tools

for patients and clinicians. You can find them on their website and subscribe to the newsletter.

Benefits should outweigh the risks

Medications are very useful for staying healthy. It's not uncommon for us to have to take more medications as we age, but this shouldn't be seen as a foregone conclusion.

Every medication we take must have direct or future benefits that outweigh the risks associated with them. As with many other issues, when it comes to polypharmacy, the saying, "everything in moderation," frequently applies.

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