

1. What is tolvaptan?

Tolvaptan is a new drug available in Canada for treatment of Autosomal Dominant Polycystic Kidney Disease (ADPKD).

2. How does tolvaptan work?

Tolvaptan blocks a hormone called vasopressin. Vasopressin does many things in the body such as helping it retain water. It is also one of many factors that leads to growth of kidney cysts in patients with ADPKD.

3. Has tolvaptan been studied?

Health Canada has approved tolvaptan for use in ADPKD based on clinical studies that have been completed.

The largest study lasted 3 years and included 1,445 patients aged 18 to 50 with early stage ADPKD. All the people in the study had large kidneys, but still had good kidney function*. Compared to those who did not take tolvaptan, those who took it had:

- Less growth in total kidney volume (TKV) each year
- Fewer episodes of pain in the kidneys
- Slower decline in kidney function

Not all patients could tolerate the drug. Side effects the patients reported include:

- Problems with thirst (some patients found they could not drink enough water)
- Problems with excessive urination
- Changes in liver function (measured in blood test)

Other studies are being done with patients who have lower levels of kidney function. Results of these studies are not available yet.

4. Will tolvaptan prevent end stage renal disease or need for a kidney transplant?

No long-term study has shown that tolvaptan will reduce or delay the need for dialysis or kidney transplant.

Other studies have shown that the size of kidneys and growth of kidney cysts are related to lower kidney function over time. If tolvaptan slows the growth of kidneys, the hope is that it will enable patients to delay the need for dialysis or transplant; however, this is not proven.

At this stage it is unknown if tolvaptan will prevent or delay end stage renal disease or the need for a kidney transplant in patients with ADPKD.

5. What side effects could occur from taking tolvaptan?

The expected side effects of tolvaptan are:

- Thirst
- Urinating large amounts
- Urinating frequently and at night

*TEMPO 3:4 study details:

Patients had large kidneys (total kidney volume greater than 1500 mL) and good kidney function (mean eGFR of 80 mL/min/1.73 m²)

TOLVAPTAN

FREQUENTLY ASKED QUESTIONS (FOR PATIENTS)

Other side effects that occur less often include:

- **Irregular heartbeats, muscle weakness and generally feeling unwell:** these are signs of increased levels of potassium in the blood.
- **Joint pain often in the big toe, followed by redness, swelling or warmth:** these are signs of increased levels of uric acid in the blood (gout).
- **Yellowing of the skin or eyes, dark urine, abdominal pain, nausea, vomiting or loss of appetite:** these are signs of a liver problem.

Patients who take tolvaptan are monitored closely by their doctors. This will include mandatory blood tests and regular follow-up.

6. Is tolvaptan a good medication for me?

Tolvaptan is not for all patients with ADPKD. It may help patients who have good kidney function and already have large kidneys; in these patients based on the clinical study mentioned above, tolvaptan:

- May slow the increase in kidney size caused by cyst growth in ADPKD patients.
- May reduce episodes of pain

Based on what we know from studies to date, BC nephrologists believe the patients most likely to benefit from the drug are:

- Those with large kidneys (TKV greater than 1500 mL)
- Between the ages of 18 to 50
- With well-preserved kidney function (an eGFR greater than 60 mL/min)

The decision to use tolvaptan is based on each patient's medical history and status. It is important to balance the risks and the benefits. Factors to consider include history of other health conditions and medications.

In some people, the use of tolvaptan may be limited because of its side effects. Frequent blood tests are required while taking tolvaptan to detect changes in liver function and to prevent serious liver injury. If you are unable to comply with the regular blood work requirement, your pharmacy will not be able to dispense tolvaptan to you.

7. What can I do to ensure tolvaptan is safe for me?

Talk to your nephrologist. If you choose to take tolvaptan, you will be asked to sign an agreement. The agreement will state that you understand the risks to the liver and agree to take blood tests to check liver function as follows:

- Monthly for the first 18 months
- Every 3 months for the following year
- Every 3 to 6 months thereafter

If you do not complete the blood tests, the pharmacy cannot dispense tolvaptan to you.