

Rosiglitazone

Why should I use this medication?

- You should take this medication if you are having trouble keeping your blood sugar down to a normal level. You should use rosiglitazone if you can't take other medications like metformin or glyburide or if you are taking other medications like metformin or glyburide but they are not working their best to keep your blood sugars close to the normal level.
- Taking this medication will decrease your blood sugars, make you feel better, and decrease your risk of complications.
- Taking rosiglitazone and/or other medications is only one part of a 3 point plan in the battle against diabetes. You should also make positive lifestyle changes and manage stress.

How will it make my life better?

- In the first month or two, it will be a trade-off. If you are going to have side-effects, it tends to happen in the beginning. After a while, you will experience fewer side-effects.
- Rosiglitazone may make your life better because of the way in which it works. When you have type 2 diabetes, your body is resistant to the effects of insulin and this medication decreases that resistance to improve your blood sugar.
- As well, this medication is being extensively studied as it is thought that it may have some benefit in the long-run in reducing serious consequences of diabetes such as heart disease, high blood pressure, high cholesterol and kidney disease. Although we don't have any information right now to say that this drug improves these consequences, experts believe positive results will come out of ongoing studies.

How do I know it's working?

It takes time for this medication to start working. Do not get discouraged if you don't see any changes within the first month or two of taking the medication. It will likely take up to 8 – 12 weeks (2-3 months) to see its full effect.

You can tell if the drug is working by:

1. Checking your blood sugar on a regular basis. When the drug is working, you should start to see the numbers come down. This medication can lower your blood sugar by up to 4 units (mmol/l), but typically around 1-2 units. Your own results depend on many things so it's not possible to say for sure how well this drug will work for you.

Example: If your blood sugar in the morning is usually around 11 mmol/l, you may see a decrease to 7-9 mmol/l.

2. You start to feel better. Once your blood sugars come down, you'll feel less tired and not so thirsty all the time. You'll also stop going to the bathroom so often.

Your doctor or healthcare provider can tell if the drug is working by:

1. Reviewing your day to day blood sugars with you (it is very helpful if you can jot down your numbers regularly and bring them with you to the clinic).
2. Ordering a blood test called your Hemoglobin A1C. Your A1C is the best "big picture" test for your blood sugar control. It looks at your blood sugar control over the last 2 to 3 months. Rosiglitazone can typically lower this number by 1-2 %.

Dr. Mike's Key Points

- Rosiglitazone takes a while to work- at least 3 weeks before you would see much change in your own blood sugar testing. Adjusting your dose can usually wait until you have been on 3 months of therapy.
- As pointed out above, about 5-6% of people taking rosiglitazone have a problem with retaining extra water, which can lead to ankle swelling and some weight gain. For people that tend to get fluid in their lungs because of heart problems, this can be especially problematic.

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Is there any reason why I shouldn't take this drug?

You should not use this drug if you are allergic to rosiglitazone, pioglitazone or troglitazone. Tell your doctor specifically if you have or have ever had:

- a history of alcohol abuse
- edema (swelling of the ankles, feet or legs)
- congestive heart failure
- high cholesterol
- problems with your liver (including cirrhosis and hepatitis)
- a condition called macular edema or diabetic retinopathy
- a condition called polycystic ovary disease

What about possible side effects?

Generally the drug is considered to be well-tolerated. However, there are some potential side effects that may be more of a concern to some patients. The most common side effects to rosiglitazone are swelling of the ankles or feet (less than 5% of people) and weight gain (about 3.5 kg). We call this swelling "edema". These side effects are related to the dose and the edema can occur more frequently if you have other risk factors, such as other drugs and medical conditions. Talk to your doctor or pharmacist about whether you have any risk factors that may make you more sensitive to edema.

Since the edema may bother some people more than others, be sure to call your doctor if experience increased tiredness, weakness, or shortness of breath at rest, with activity or when lying down.

Other side effects, some of which occur less often include

- headache (about 5% of patients)
- anemia (about 1%)
- liver problems (very rare: some case reports): Call your doctor if you experience unexplained nausea, vomiting, stomach pain, fatigue, loss of appetite, dark urine, yellowing of the skin and/or eyes
- a condition called macular edema (very rare: some recent case reports): Call your doctor if you experience changes or worsening of vision

- low blood sugar: rare and only when used with other medications for type-2 diabetes

This is not a complete list of side effects. If you are concerned about these or other unusual symptoms, ask your doctor and/or pharmacist for more information and advice.

What if I am taking other drugs?

Always provide your doctor with a list of all other drugs you are taking (including over-the-counter medications and herbal/natural products) as they may interact and may change the safety or effectiveness of either drug. Tell your doctor specifically if you are taking any of these drugs as he/she may need to make changes or check you more closely:

- Prednisone, dexamethasone, cortisone, high dose hydrochlorothiazide (>25mg), albuterol, pseudoephedrine, olanzapine, risperidone, niacin. (These drugs may increase your blood sugar and interfere with how acarbose works).
- Other medications for type 2 diabetes (i.e. insulin, glyburide, repaglinide, metformin, acarbose, gliclazide, glimepiride)
 - In some cases, you may need to have your medication changed to prevent your blood sugar from going too low. This may not happen right away so check your blood sugars more often and contact your physician if you experience frequent episodes of dizziness, sweating, headache, rapid heart beat, shaking hands or confusion
 - If you are using insulin, you have a higher likelihood of experiencing edema
- gemfibrozil
- rifampin
- fenugreek, licorice, bitter melon, eucalyptus, ginseng, St. John's wort

This is not a complete list of drug interactions. Ask your doctor or pharmacist to review your list of medications.

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Dr. Christine's Pharmacist Tips:

- It takes a lot longer for this medication to start working compared to other medications
- If you are also using insulin, monitor yourself for increased swelling in your ankles or feet. Using insulin and rosiglitazone together significantly increases the chances of having edema. This combination should be used with caution if you have a medical condition such as congestive heart failure or severe kidney disease.
- This medication on its own does not cause low blood sugar. However, if you are started on another medication or rosiglitazone is added to another medication, you may start to see some episodes of low blood sugar.
- If you do develop symptoms of low blood sugar (shaking hands, fast heartbeat, sweating, confusion, dizziness, feeling hungry, feeling tired and drowsy) then take any of the following:
 - 3 glucose tablets, 6 life-savers, 3 teaspoons or packets of tablet sugar in water, 3/4 cup juice
 - Recheck your blood sugar again in 15 minutes, if it is still $< 4\text{mmol/l}$ then repeat the above.
 - Once the blood sugar is normalized (and not too high), you should have a small snack or a meal if it is around that time. This will help prevent another low blood sugar episode.
- This medication may not work as well if you are sick or you may have a greater chance for low blood sugar if you have diarrhea, vomiting or can't eat because of illness. It is best to check your blood sugars more frequently when you are sick. Call your doctor or pharmacist if you have any questions.
- The maximum amount of this medication is usually 8mg per day. If you have not seen an improvement in your blood sugars after at most 4 months of being at your current dose, then you should go see your doctor. He/she may need to make changes.

Dr. Mike's Key Points

- Women with Polycystic Ovary Disease (PCO) often find their bodies don't use insulin that well and medications like rosiglitazone can help them. However, at this time there is more experience with Metformin.
- If you are like most of my patients, you don't really like taking medications. Taking pills is easier when you can see an immediate benefit. For example, if you take a pill for arthritis, you feel better within an hour. Taking rosiglitazone lowers your overall blood sugar levels (and therefore your A1C) but you may not feel all that different. But make no mistake; lowering your A1C is critical for your long term quality of life.
- Think of taking medications to lower your blood sugar like an investment: it requires some effort and commitment but it will provide large returns in the long run.