

**OAK TREE CLINIC
INFORMATION FOR PATIENTS/PARENTS**

DRUG NAME: RITONAVIR

BRAND NAME: NORVIR

THIS MEDICATION IS:

An antiviral drug that slows the growth of HIV, the virus associated with AIDS
Ritonavir belong to a group of drugs called protease inhibitors. Protease inhibitors work by inhibiting the enzyme protease (also called proteinase) which is needed for HIV to multiply. Inhibiting this enzyme produces incomplete, noninfectious HIV particles. Other protease inhibitors are indinavir, nelfinavir and saquinavir. Ritonavir is always used in combination with other anti-HIV agents

BENEFITS OF RITONAVIR

It reduces the amount of HIV virus (viral load) and increases the number of CD4 cells (T cells or immune cells) in the blood. By reducing the amount of HIV virus it decreases the chance of death or infections that happen when the immune system is weak (opportunistic infections).

AVAILABILITY AND STORAGE OF RITONAVIR

- Ritonavir is available as 100 mg soft gelatin capsules. The capsules should be stored in the fridge, but they can be stored at room temperature (less than 25 degrees) for up to 30 days.
- Ritonavir is also available as a peppermint/caramel tasting liquid which contains 80 mg/mL. Do NOT put the liquid in the fridge. Remember to shake the liquid up before each use. This product contains some alcohol. Please discuss this with your pharmacist if you are concerned about this.

DOSING OF RITONAVIR

Your dose of ritonavir is _____ mg / mL _____ times a day.

It is sometimes recommended that you slowly increase the ritonavir dose up. Please follow these instructions:

Starting with ritonavir _____ for _____ days
Then ritonavir _____ for _____ days
Then ritonavir _____ for _____ days
Then ritonavir _____ for _____ days

Sometimes we give ritonavir in combination with another protease inhibitor (**dual PI regimen**). Your doctor or pharmacist will explain the reasons in more detail.

HOW TO TAKE RITONAVIR

Try to take your ritonavir with food if possible. This will help minimize the side effects.

The oral solution can be taken alone or mixed with a glass of chocolate milk, Ensure or Advera to improve the taste. It is important to measure the dose accurately with an oral syringe. Remember to rinse this syringe with water after each dose and let it air dry. You may notice that the ritonavir will form a cloudy solution when it is mixed with water or another clear liquid. This is okay.

IF YOU MISS A DOSE

Ritonavir once a day:

- Take the dose as soon as you remember that day.

- If it is almost time for the next dose (within 12 hours), skip the missed dose and take the next dose at the regular time.
- **DO NOT** double the dose.
- If you vomit within 30 minutes of taking a dose or if you see bits of the medicine, then you should repeat the dose.

Ritonavir twice a day:

- Take the dose as soon as you remember that day.
- If it is almost time for the next dose (within 6 hours), skip the missed dose and take the next dose at the regular time.
- **DO NOT** double the dose.
- If you vomit within 30 minutes of taking a dose or if you see bits of the medicine, then you should repeat the dose.

*****It is very important you take all the medications as prescribed. If you are having trouble remembering to take your doses, talk to your pharmacist to get some tools/ideas to help you remember (for example: beepers/pill dosette container/dose schedule calender)**

PROBLEMS WHICH MAY BE ENCOUNTERED:

This list of side effects is NOT complete. If you have questions about side effects, please contact your doctor, nurse or pharmacist.

Check with your doctor IMMEDIATELY if any of the following side effects occur:

- nausea, vomiting or severe abdominal pain. These may be signs of pancreatitis.

The following side effects sometimes happen. Call the clinic pharmacist, nurse, or doctor if they continue or are very bothersome.

- abnormal stools (bowel movements), diarrhea, feeling weak/tired, headache and nausea.
- children may get a skin rash

The following side effects may occur and will be monitored by your doctor with regular blood tests:

It is important that the doctors visits be kept as scheduled so that the blood can be checked regularly, especially when the drug is first started.

- liver enzyme tests may become elevated.
- some patients have large increases in triglycerides and cholesterol.
- diabetes and high blood sugar (hyperglycemia) may occur. If you notice increased thirst, hunger and urination, contact your doctor as soon as possible.

Lipodystrophy:

- some patients that have been on antiretroviral therapy for a long time (usually more than 6 months) notice changes in the location of their body fat - this is called lipodystrophy.
- patients may notice a loss of fat in their face, arms or legs, while others notice increased fat in the stomach, neck or breast areas. Talk to your doctor if you notice these changes. These changes may not be reversible.

Increased bleeding episodes:

- patients with hemophilia may have increased bleeding with protease inhibitors. If you have hemophilia, make sure you report any increase in bleeding episodes to your doctor.

DRUGS WHICH CAN CAUSE PROBLEMS WHEN TAKEN WITH RITONAVIR:

There are many drugs that may interact with ritonavir. Please discuss **ALL** medications that you are currently taking with your doctor or pharmacist.

DO NOT take the following medications while you are on ritonavir. Serious or life threatening

reactions may result when ritonavir is combined with these medications.

Ritonavir SHOULD NOT BE TAKEN WITH THE FOLLOWING MEDICINES:

Drug class	Generic Name(s)	Brand Name(s)
Antihistamines (allergy medicine)	Astemizole Terfenadine	Hismanal Seldane
Benzodiazepines (sleeping pills)	Alprazolam Diazepam Triazolam Flurazepam Clorazepate	Xanax Valium Halcion Dalmane Tranxene
Stomach medications	Cisapride	Prepulsid
Pain medications	Fentanyl Meperidine Piroxicam Propoxyphene	Duragesic Demerol Feldene Darvon
Migraine medications	Ergotamine Dihydroergotamine	Cafergot, Megral
Heart medications	Amiodarone Flecainide Propafenone Quinidine	Cordarone Tambacor Rhythmol Quinate, Cardioquin, Quinidex
Psychiatric and other	Clozapine Bupropion Rifabutin	Clozaril Wellbutrin, Zyban Rifadin, Rimactane

Special Considerations:

DO NOT combine these medications:

Drugs	Effect	Action
St. John's Wort (hypericum perforatum)	St. John's Wort may decrease ritonavir levels and make it less effective	Do not take with St. John's Wort
Lipid lowering agents: Mevacor (lovastatin), Zocor (simvastatin), Lipitor (atorvastatin) and Baycol (cerivastatin)	Lovastatin and simvastatin may cause serious reactions. Atorvastatin and cerivastatin have an increased risk of drug interactions.	Do not take with lovastatin or simvastatin.
Flagyl (metronidazole) or Antabuse (disulfiram)	Ritonavir oral solution contains alcohol. Severe nausea and vomiting may occur.	This is not a concern with the capsule formulation
Videx (didanosine)	The antacid in didanosine can interfere with the absorption of ritonavir.	Take didanosine one hour before or two hours after ritonavir.

Dosage adjustment is required with these medications:

Drugs	Effect	Action
Rimactane, Rifadin, Rifater or Rifamate (rifampin)	Rifampin may lower the amount of ritonavir in your blood and make it less effective	
Viagra (sildenafil)	Ritonavir will increase the side effects of sildenafil (low blood	If an erection lasts longer than 4 hours, seek immediate medical

	pressure, vision changes, penis erection)	help. You should not take more than 25 mg of sildenafil in any 2 day period.
Oral Contraceptives (“the pill”)	Ritonavir may decrease the effectiveness of oral contraceptives.	Additional birth control is required. A non-hormonal method of birth control should be used (ie. male or female condoms)
Mycobutin (rifabutin)	Ritonavir can increase rifabutin levels and possibly cause toxicity.	The dose of rifabutin should be lowered.
Anticonvulsants: phenobarbital, Dilantin (phenytoin) and Tegretol (carbamazepine)	Some anticonvulsants lower the levels of Ritonavir making it less effective. Ritonavir may increase the levels of anticonvulsants.	Additional blood tests may be required to monitor the effect of ritonavir on blood levels.

CAUTIONS:

- Throw away any expired or leftover medication.
- Keep out of reach of children.
- Your doctor or Poison Control Centre should be contacted in the event of accidental overdose of this or any other drug.

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