

## Schizophrenia Society of Ontario (SSO) Medication Resource Centre

The **Medication Resource Centre** provides information on antipsychotic and other psychotropic medications available in Ontario which are used to treat schizophrenia and other psychotic illnesses. It includes general information on all medications approved by Health Canada as well as detailed information on specific medications.

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*SSO defines treatment holistically, including medical support, community support, and social support. Medication is just one part of the medical support piece and the overall care pathway in schizophrenia and psychotic illnesses.*

*Always consult your physician or a qualified member of your healthcare team for specific and current information. The naming or omission of any organization, product, resource, or alternative therapy on this site does not imply endorsement or disapproval by SSO.*

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### ABOUT ANTIPSYCHOTIC MEDICATIONS

#### What are Antipsychotic Medications?

Antipsychotic medications are an important part of the treatment plan for people living with schizophrenia and other psychotic illnesses. They are used to treat symptoms and help improve quality of life. Schizophrenia can have many different symptoms. Antipsychotic medications work best on the positive symptoms of schizophrenia such as hallucinations, disorganized thinking, paranoia and delusions. Some individuals also experience negative symptoms, such as lack of motivation and low mood. Antipsychotics may help improve these symptoms for some individuals, however they may not eliminate them completely. It is important to understand what symptoms the antipsychotic medication will help so you can monitor your response.

Antipsychotics can also be used to treat other conditions such as major depression and bipolar disorder. It is important to discuss with your doctor the reason why you are taking antipsychotic medication.

Antipsychotics can control many symptoms of schizophrenia and other mental illnesses but they cannot cure the illnesses. These medications help reduce symptoms so that you can feel better, but they may not eliminate the symptoms completely. Antipsychotic medications work best when taken regularly, even when you start to feel better.

It is important to know that all antipsychotic medications have two names. The first name is the brand name. This is the original name given to the medication by the pharmaceutical company that discovered the medication. The second name is the chemical name of the medication. This name represents the active ingredient in the medication. The chemical name should not be confused with “generic” brand medications, which are medications that are copies of the brand name medications made by different companies and sold for lower prices. The chemical name of a medication stays the same for brand and generic brand medications.

***Example: Zyprexa (olanzapine); Apo-Olanzapine (olanzapine)***

In the above example, Zyprexa is the brand name of an antipsychotic discovered by the pharmaceutical company Eli Lilly.

The generic or chemical name of the medication is olanzapine, which is the active ingredient in the medication.

Apo-Olanzapine is the name of an antipsychotic medication produced by the generic pharmaceutical company Apotex. In this case, the chemical name is still olanzapine as that is the active ingredient.

**Brand Name and Generic Antipsychotic Medications**

Generic medications are essentially copies of brand name medications. They have the same active ingredients, dosages, side effects and intended uses as the brand name medications. Sometimes generic medications have different colours, flavours, shapes or combinations of inactive ingredients compared to the brand name medication; however, the main ingredients responsible for the effect are the exact same. The only reason the generic medications are sold for less is because the generic drug manufacturers did not have the expenses of developing and marketing the new medication. Just like brand name medications, all generic medications go through a rigorous approval process by Health Canada to ensure their quality and safety.

**Label and Off-Label Use**

All medications that are approved for sale in Canada have been approved by Health Canada to be used for a specific medical illness. This is called “label indication”. This means that the medication was studied and shown to be beneficial for a particular illness.

Sometimes, prescribers use medications to treat illnesses and/or populations for which the medication was not originally studied. This use of the medication is called “off-label”. Off-label use of medication does not mean there is no evidence for the medications. In most cases there is research to support the use of medications for illnesses and/or populations that were not originally studied.

Off-label use of medication is quite common in psychiatry. For example, the use of antipsychotics to treat behavioural issues associated with moderate to severe Alzheimer’s Disease is considered “off-label” use of antipsychotics. Another example of off-label use is the use of the antipsychotic quetiapine for insomnia or difficulties sleeping. *The use of most antipsychotic medications in children and adolescents is off-label as well because the original studies for these medications were not done with children or adolescents.*

It is important to understand why your doctor is prescribing a certain medication for you and which symptoms the medication is going to address. You should discuss with your doctor the risks and benefits of the prescribed medication for your illness, age, etc.

## History and Different Types of Antipsychotic Medications<sup>1</sup>

### First-Generation of Antipsychotics: The “Typicals”

In 1950, the first antipsychotic medication, chlorpromazine, was developed. It was originally used to increase the effects of anesthesia in people undergoing surgery. Because of its calming effect, psychiatrists began using it to treat psychosis.

Chlorpromazine was marketed under the name Largactil<sup>®</sup> in 1952 and Thorazine<sup>®</sup> in 1954. Access to this medication was a major breakthrough in the treatment of mental illnesses. Prior to the development of this medication many individuals with mental illnesses lived in hospitals. One reason for this is because the symptoms experienced by individuals were significant and impacted their ability to live independently in the community. The introduction of chlorpromazine was crucial as it showed society that the symptoms of mental illnesses could be treated successfully and individuals could live productive lives in the community.

By the early 1970s, chlorpromazine was the most widely used antipsychotic medication, with many other similar medications available. Early on in their use, doctors noticed that these first-generation antipsychotic medications frequently caused movement-related side effects, also called *extrapyramidal symptoms*.

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<sup>1</sup> Shen, W. (1999). A history of antipsychotic drug development. *Comprehensive Psychiatry*, 40(6), 407-414.

## Second-Generation Antipsychotics: The “Atypicals”

Clozapine was the first antipsychotic medication developed that caused fewer movement-related side effects (extrapyramidal symptoms). This was a significant discovery. Prior to this it was believed that for an antipsychotic medication to treat symptoms of schizophrenia, it must cause movement side effects. Clozapine showed that this theory was false, as it was very effective. Because of this difference in side effects, clozapine became the first *atypical antipsychotic*. Clozapine was initially developed in the 1960s, and inspired the discovery of several other atypical antipsychotics. Atypical antipsychotic medication is like clozapine in that they cause less movement side effects compared to the typical medications.

## Medications Today

Since the introduction of chlorpromazine, many other typical and atypical antipsychotic medications have been developed. The main difference between typical and atypical antipsychotics is that the atypicals have milder movement-related side effects compared to the typicals. While both categories of medications work well, no single medication works well for everyone who takes it. In some cases, someone may have to try several medications before finding the one that works best for them.

While antipsychotics are the main class of medications used to treat schizophrenia and other psychotic illnesses, there are other types of medications that may also be used to treat specific symptoms such as depression, anxiety, or insomnia.

## How do Antipsychotic Medications Work?

Our brains have billions of nerve cells that communicate with each other through nerve endings. These messages are transmitted by chemicals called neurotransmitters. In schizophrenia, it is thought that something goes wrong with this complex communication system.

Antipsychotics work by helping to rebalance the communication system. Typical antipsychotics work mostly by blocking the action of the neurotransmitter dopamine. Atypical antipsychotics also block dopamine, along with other neurotransmitters such as serotonin and noradrenaline.

While there are similarities between medications within each group of antipsychotics, it is important to understand that each individual medication is different. Each medication will affect everyone differently. What works for one person may not work for you. It is important to discuss your response to your medication with your doctor. It can take several weeks for antipsychotic medications to have an effect. It is important to be patient during the first 4-8 weeks of treatment as it takes time to see improvements. In some cases, medications may work for several months to years and then stop working. It is not uncommon to have changes in medications over the course of your illness.

## ACCESS TO ANTIPSYCHOTIC MEDICATIONS

### How do Medications Become Available in Ontario?

The first step for medications to become available is for them to be approved by Health Canada. In this step, which can take several years, Health Canada evaluates the medication to make sure it works and that it is safe.

Once a medication is approved by Health Canada, the pharmaceutical company that discovered it can sell the medication in Canada. However, it is also important that medications are accessible to Canadians from a cost perspective. To determine this, there are two separate processes – at federal and provincial/territorial levels – in addition to the approval by Health Canada.

#### Private Insurance Plans

To help Canadians afford medications, they are often covered by different types of insurance. Many full-time employees in Canada have private insurance that covers part or all their medication costs. Each private insurance company creates its own list of what medications they will cover on their plan and what amount (if any) you will have to co-pay. They also determine what conditions or illnesses are eligible for coverage. The cost and coverage criteria are set by the insurance company and may be different depending on where you are employed and who your insurance provider is. *Your pharmacist is not involved with determining these costs. The amount they charge you is based on the claim they submit to your insurance company on your behalf for your prescribed medication.*

#### Public (Provincial) Insurance Plans

Older people, people who live in long-term care facilities, people with disabilities, or those with lower incomes, may have their medication costs partially or wholly covered by a number of provincial insurance plans.

The medications that are reimbursed by the provincial insurance plans must be listed on the Ontario Drug Benefit Formulary. The approval process for a medication to be listed on the formulary can take many months, even years. The decision about whether to list a medication is based on many factors, including cost, and how well the medication works compared to others that are already available.

#### Medications Available in Other Countries

Sometimes medications are approved for sale in other countries before Canada. Therefore, you may see advertisements for medications available in the United States on television or in magazines. You may also have lived in another country and been receiving a medication there that is not available in Canada. It is important to check with your doctor or pharmacist to determine what is available in Canada. In many cases medications approved in other countries do come to Canada, but it can take time. Doctors in Canada can only prescribe medications approved by Health Canada, so it is important for them to know if you have been receiving

something in another country that is not available. *It is not a good idea to order medications over the internet from other locations as you cannot be sure of their quality and safety.*

### **What Is the Ontario Drug Benefit Formulary?**

The formulary (<https://www.formulary.health.gov.on.ca/formulary/>) is a list of approved prescription medications (both generic and brand name products) available in Ontario. It sets the provincial standard for price and quality, and decides what generic medication products can be exchanged for brand name products.

### **Drug Plans in Ontario**

The costs of many antipsychotic medications are covered through various provincial insurance plans in Ontario: Ontario Drug Benefit Program, Exceptional Access Program, Trillium Drug Program, and Special Drugs Program. More information about medication coverage can be found on the Ontario Ministry of Health and Long-Term Care's website (<http://www.health.gov.on.ca/>). It is a good source of helpful information, application forms and contact numbers.

Please note that to be eligible for coverage under many of these plans, it is necessary to be an Ontario resident with a valid Ontario Health Insurance Plan (OHIP).

### **Ontario Health Insurance Plan (OHIP)**

Most people living and/or working in Ontario are eligible for OHIP. If you are new to Ontario, you must apply for OHIP coverage. There is a 3-month waiting period for OHIP to start, so you should apply as soon as you arrive. In order to receive OHIP you must be a Canadian citizen, permanent resident or among one of the newcomers to Canada groups who are eligible for OHIP as set out in Ontario's Health Insurance Act (<https://www.ontario.ca/laws/statute/90h06#BK87>). In addition, you must be in Ontario for 153 days in any 12-month period and Ontario must be your primary place of residence.

Ontario residents need a health card that entitles them to healthcare services provided by OHIP. OHIP covers all medically necessary services covered by physicians. However, OHIP does not cover the costs of prescription medications unless you are hospitalized. All in-patient medications are covered by OHIP. Once discharged from the hospital, you will need a form of insurance to pay for your medications and/or you may need to pay for them yourself.

### **OHIP+**

As of January 1, 2018, OHIP+ will provide drug coverage for children and youth who are covered by OHIP and aged 24 and under. More information can be found on the Ontario Ministry of Health and Long-Term Care's (<http://www.health.gov.on.ca/>) website.

## **Ontario Drug Benefit Program (ODB)**

The ODB provides coverage for most of the cost of medications listed on the Ontario Formulary. If you are eligible to receive benefits from the ODB, you may still need to pay a small fee for a prescription.

If the medication prescribed is not listed on the Ontario formulary, a special funding request can be submitted through the Exceptional Access Program (EAP) (<https://www.ontario.ca/page/applying-exceptional-access-program>), which handles such funding requests on a case-by-case basis. This includes cases where medications on the ODB list have been tried and do not work or where an alternative medication is not available through ODB. The funding request is usually prepared by a pharmacist or a physician, however it must be submitted by a physician. The response is faxed to the physician with an approval or a rejection for coverage. If approved, the form must be sent to the community pharmacy for their files and to ensure they can submit the claims to the government for coverage.

If you are an Ontario resident with a valid Ontario health card, you are eligible for ODB coverage if at least *one* of the following statements applies:

- You are older than 65 years of age
- You live in a long-term care home or home for special care, or you are receiving professional homecare services
- You have high drug costs relative to your income and are registered in the Trillium Drug Program
- You are on Ontario Disability Support Program and/or Ontario Works

## **Trillium Drug Program (TDP)**

This plan is for residents of Ontario who have a valid OHIP card and who have high prescription drug costs in relation to their net household income.

Trillium provides coverage for prescription medication products that are listed on the ODB formulary. To register for this program, *all* the following must apply:

- You have a valid Ontario health card and are a resident of Ontario
- You are *not* eligible for medication coverage as another category recipient under the Ontario Drug Benefit Program (i.e., you are not a senior over 65 years of age; you are not a social assistance recipient; you are not receiving professional homecare services, and you are not a resident of a long-term care home or home for special care)
- You do not have private insurance that covers 100% of your prescription drug costs

Only eligible medication costs count towards the TDP deductible or are covered as program benefits. To

ensure coverage under the program, check with a pharmacist or healthcare provider to make sure your prescriptions fit into *one* of the following categories:

- They are listed in the ODB formulary/Comparative Drug Index
- They are on the Facilitated Access List of HIV/AIDS drugs
- They have been approved for coverage through the ministry's Exceptional Access Program

### **What Costs Will I Pay?**

Under the TDP you will pay two different fees each year:

- You will pay a set amount of your prescription drug costs each year. This amount is called your "deductible". The amount of your deductible is based on your household income (usually around 4% of your household's combined net income). The deductible you have to pay is divided into 4 equal amounts over the year starting on August 1<sup>st</sup>. As you fill prescriptions, the cost for eligible medications will count towards your deductible. Once the deductible is paid, the ODB program will pay for most of the cost of your medications.
- After you pay your deductible, you may be asked to pay up to \$2 for each prescription that ODB covers. This is called a co-pay. Some pharmacies charge this co-pay, however many are currently waiving this fee.

### **Special Drugs Program**

The Special Drugs Program covers the full cost of certain outpatient medications used in the treatment of specific illnesses. If you meet *all* the following criteria, your medication costs are covered through this program:

- You are an Ontario resident with a valid Ontario health card
- You have one of the diseases or conditions covered (including schizophrenia)
- You meet the established clinical criteria
- You are approved for clozapine

*Please note that clozapine is the only antipsychotic medication covered under the Special Drugs Program.*

### **Other Drug Plans**

#### **Non-Insured Health Benefits (NIHB) Program**

The Non-Insured Health Benefits (NIHB) is a national benefit program that provides benefit claims for medications, dental care, vision care, medical supplies, mental health crisis counselling and other important health services for eligible First Nations people and Inuit.



The NIHB program covers prescription medication products and some over-the-counter products listed in the NIHB Drug Benefit List.

To access medication coverage through this program you must be eligible. An eligible recipient is defined as a resident of Canada and one of the following:

- A registered First Nations person (status) according to the Indian Act
- An Inuk recognized by one of the Inuit Land Claim organizations
- An infant less than a year of age, whose parent is an eligible recipient

If you are eligible for benefits under another private insurance plan or public health or social program, claims must first be submitted to these plans and programs prior to the NIHB program.

### **Interim Federal Health Program**

The Interim Federal Health Program (IFHP) provides limited temporary coverage of healthcare costs to protected persons who are not eligible for provincial health insurance plans and where a claim cannot be made under private health insurance. The program is paid for by Immigration, Refugees and Citizenship Canada. A protected person may include any of the following:

- Resettled refugees
- Refugee claimants
- Certain persons detained under the *Immigration and Refugee Protection Act*
- Victims of human trafficking
- Certain other groups

The coverage provided to individuals through this program is similar to health coverage provided to Ontario citizens. The level of coverage is similar to those who are receiving social assistance. This program acts like a bridging program to provide services until the individual becomes eligible for provincial health insurance.

Under this program eligible individuals will be covered for hospital services, services of a doctor or registered nurse, laboratory, diagnostic and ambulance services. In addition, individuals receive coverage for prescription medications and some other pharmacy products; limited dental and vision care; prosthetics and devices to assist mobility; psychological counselling; and post-arrival health assessments.

In order to receive coverage under this program you must show your Interim Federal Health Program eligibility document to your healthcare provider.

For more information on eligibility and coverage please go to the following website:

<https://www.canada.ca/en/immigration-refugees-citizenship/services/refugees/help-within-canada/health-care/interim-federal-health-program/coverage-summary.html>

## For More Information on Drug Plans in Ontario

Please visit [www.drugcoverage.ca](http://www.drugcoverage.ca) for detailed information on all the available provincial and federal health plans and programs; specifically, information on reimbursement for prescription drugs in Ontario under the following programs:

- Private Insurance/Third Party Insurance
- Ontario Drug Benefit Program/Trillium Drug Program
- Non-insured Health Benefits Program
- Veterans Affairs Canada
- Public Service Health Care Plan
- Interim Federal Health Program
- Correctional Service Canada

## SPECIFIC ANTIPSYCHOTIC MEDICATIONS

### General Information about Antipsychotic Medications

The aim of antipsychotic treatment is to reduce and control symptoms while keeping side effects at a minimum. Combining antipsychotic medication with other therapy and support can help people to manage symptoms and improve their quality of life. Counselling, peer support, family therapy, and housing and employment supports can all be helpful.

Any prescription or non-prescription treatment (e.g., over-the-counter treatments including herbal supplements, pain relievers, vitamins, cold and flu remedies) has the potential to interact with antipsychotic medications. It is important to always consult a doctor or pharmacist to check these interactions before taking the medications.

It is very important for you to carry a complete list of ALL your medications – prescription and non-prescription; herbal products and vitamins. This list is very helpful if you are hospitalized for any reason and/or need treatment in an area other than where you live (e.g., vacation, visiting family or friends).

The issue of street/recreational drug and alcohol use and/or misuse is another important subject. A good rule of thumb is that it is *never* a good idea to mix alcohol or street drugs with prescription medications. Mixing alcohol or using drugs like cocaine or marijuana with antipsychotics can be dangerous. It is important to discuss any recreational drug or alcohol use with your physician and pharmacist to determine the risk of drug interactions. Taking your antipsychotic medication regularly is very important, hence anything that may interfere with that should be discussed with your healthcare provider.

Ultimately, staying as healthy as possible, both mentally and physically, is the main goal of treatment for people living with schizophrenia and other mental illnesses. People with mental illness are at an increased risk for heart disease, metabolic syndrome and diabetes, and some antipsychotic medications can increase this risk.<sup>2</sup>

Maintaining a healthy weight, stopping smoking, and getting adequate exercise can help reduce this risk.

Individuals should discuss their risks with their healthcare provider early on and have regular medical checkups to stay as healthy as possible.

### **How Should Antipsychotics be Taken?**

Having a diagnosis of schizophrenia or other psychotic illness often requires long-term treatment with antipsychotic medication, but the experience varies from person to person. What works for one person may not work for another. Your healthcare provider will work with you to determine the type and length of treatment that is best for you.

Antipsychotics are available in a number of different dosage forms, such as tablets, liquid, fast-acting injections, or long-acting injections. Most antipsychotic medications have to be taken daily. However, long-acting injections, also called *depot medications*, can be given once every few weeks because the medication is slowly released into the body over time. You and your doctor will work together to decide which medication, dosage form and dose is best for you.

In any case, it is very important to take antipsychotic medications exactly as prescribed to help prevent relapse. Medication should not be stopped and the dose should not be changed without first speaking to your healthcare provider. It is also not a good idea to double up on a missed dose to “catch up”. If you miss a dose of your medication call your pharmacist and ask them what you should do to get back onto your regular schedule.

Keeping appointments and communicating openly about questions or concerns are also very important. It may be useful to keep track of medications using a calendar or pill box, or asking a friend or family member to help with reminders.

### **How Long Does it Take for Antipsychotics to Work?**

Everyone will respond differently to different medications. Some may see some improvement right away, but

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<sup>2</sup> De Hert, M., Dekker J., Wood D., Kahl K., Holt R., & Möller H. (2009). Cardiovascular disease and diabetes in people with severe mental illness position statement from the European Psychiatric Association (EPA), supported by the European Association for the Study of Diabetes (EASD) and the European Society of Cardiology (ESC). *European Psychiatry*, 24(6), 412-424.

for many people it can take several months before the full benefit of any antipsychotic medication is seen.

### **Do Antipsychotic Medications Interact with Other Drugs?**

Antipsychotic medications have the potential to interact with many other medications, herbal products, vitamins, recreational drugs, alcohol or food. It is difficult to know the risk of each interaction as there is not a lot of research in this area. It is very important for your doctor and pharmacist to know all the medications, herbal products and vitamins you take. It is also important that they know how often you drink alcohol, smoke cigarettes and/or use recreational drugs. Having all the information is important so that your healthcare team can review the potential interactions and the risks and benefits of the treatments for you.

Be cautious if you are using the internet to determine drug interactions. Many individuals are on combinations of medications that could interact, however, with monitoring, they are often safe and the benefits are bigger than the risks. In the sections below on individual antipsychotic medications some potential drug interactions are listed. The list does not include every possible drug interaction. Therefore, it is very important for you to have your medications reviewed for interactions regularly by your doctor and pharmacist.

### **Adults Over 65**

Doctors are cautious when prescribing antipsychotic medications for older people. Other age-related illnesses like arthritis, high or low blood pressure, and problems with vision, memory, or balance may also require medications. This can increase the potential for drug interactions. Therefore, planning and implementing medication schedules may require help from healthcare professionals, such as nurses and pharmacists.

### **How Do Antipsychotics Interact with Pregnancy and Breastfeeding?**

It is important to inform your doctor if you become pregnant to determine the best treatment for you and your baby. Individuals with schizophrenia and other psychotic illnesses who become pregnant are often treated successfully with antipsychotic medications. You and your doctor will determine the risk of medication versus the risk of your illness being untreated. Untreated illness puts you at risk, but it can also put the unborn baby at risk.

No medication is completely safe and very close monitoring is important throughout pregnancy and after delivery. However, individuals can often continue to take antipsychotic medication during pregnancy and both mom and baby can do very well. Some antipsychotic medications can also be used safely while breastfeeding. If you want to breastfeed your baby discuss the risks and benefits with your doctor.

Some studies suggest, in some rare cases, babies born to mothers taking antipsychotic medications during pregnancy may experience withdrawal symptoms that may cause them to be hospitalized. This is often successfully addressed through treatment.

Antipsychotics can pass into breast milk and may cause similar withdrawal symptoms in some cases. For these reasons, close relationships with your treatment team are important to maximize safety if you choose to breastfeed.

For more information on this topic, you can visit:

[http://knowledgex.camh.net/primary\\_care/guidelines\\_materials/Pregnancy\\_Lactation/Documents/psychmed\\_preg\\_lact.pdf](http://knowledgex.camh.net/primary_care/guidelines_materials/Pregnancy_Lactation/Documents/psychmed_preg_lact.pdf) or contact Motherisk (<http://www.motherisk.org/women/index.jsp>)

at 1-877-439-2744.

## Specific Antipsychotic Medications

### Atypical Antipsychotic Medications

#### **Abilify (aripiprazole)**

**Brand name:** Abilify®

**Active ingredient name:** Aripiprazole

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Bristol-Myers Squibb Canada

**Form:** Oral tablets

**Generic:** No

**Listed on Ontario formulary:** Yes

**Note:** Abilify® is also available as a long-acting injectable called Abilify® Maintena®.

#### **What is Abilify used for?**

Abilify is used to treat the symptoms of schizophrenia in adults and adolescents (15 to 17 years of age). It can be used alone or in combination with other therapies for schizophrenia. It is also used to treat adults with bipolar disorder and as adjunctive (add-on) therapy for adults with major depressive disorder. It is also used to treat adolescents (13-17 years of age) with bipolar I disorder. Abilify is sometimes used to treat other conditions. Talk to your doctor to understand why you are taking Abilify.

#### **How should I take Abilify?**

You can take Abilify with or without food, preferably with a full glass of water. The tablet cannot be crushed, chewed or cut. Swallow whole. If you have difficulties swallowing please speak to your doctor or pharmacist to discuss other options.

#### **How much Abilify should I take?**

Abilify is available in 2, 5, 10, 15, 20, and 30 mg tablets in Canada. It is also available in a long-acting injection formulation which is discussed in detail in the next section.

Of note, Abilify is available in a short-acting injection and liquid in the United States. It is not yet available in Canada in these other formulations, but that is something that may occur in the near future.

*Adults:* The dose range for Abilify is 2-30 mg daily. The usual dose for adults is 10 to 15 mg once per day, up to a maximum of 30 mg per day. Your doctor may prescribe doses that are higher than 30 mg based on your individual situation.

*Adolescents (15 to 17 years of age):* The usual dose in adolescents is typically 10 mg once a day. Your doctor may prescribe you a lower dose (2 mg) to start. The dose will likely be increased to 5 mg after a few days, then to 10 mg after that. Depending on how you respond and tolerate the 10 mg dose, your doctor may adjust the dose up or down, to a maximum of 30 mg once a day.

### **What are the common side effects seen with Abilify?**

The most common side effects of Abilify include:

- Feeling of restlessness (akathisia)
- Headache
- Abnormal movements (extrapyramidal side effects)
- Nausea, vomiting, upset stomach
- Insomnia
- Constipation
- Anxiety

### **What are rare, but potentially serious side effects seen with Abilify?**

- Decrease in white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic Ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

### **Warnings/Precautions**

New information has become available from the U.S. Food and Drug Administration to suggest that some individuals taking Abilify may experience compulsive or uncontrollable urges to gamble, binge eat, shop and have sex. These urges were reported to have stopped when the dose of the medication was reduced or the medication was discontinued. These impulse-control problems or urges are rare, however it is important to inform your physician if you or a family member/friend experience any of these urges while taking Abilify.

More information on this topic can be found at:

[http://www.fda.gov/Drugs/DrugSafety/ucm498662.htm?source=govdelivery&utm\\_medium=email&utm\\_source=govdelivery](http://www.fda.gov/Drugs/DrugSafety/ucm498662.htm?source=govdelivery&utm_medium=email&utm_source=govdelivery)

Elderly individuals with dementia-related psychosis who are treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Abilify is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Abilify?**

Tell all your doctors, pharmacists, and dentists that you are taking Abilify. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.

The following medications might increase the levels of Abilify in your bloodstream:

- Ketoconazole (antifungal)
- Quinidine (antiarrhythmic)

The following medications might decrease the levels of Abilify in your bloodstream:

- Carbamazepine (anticonvulsant)
- St. John's Wort (herbal medication)

### **Other types of medications that may interact with Abilify:**

- Antiparkinson agents (dopamine agonists)
- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

### **Abilify Maintena (aripiprazole extended release)**

**Brand name:** Abilify Maintena®

**Active ingredient name:** Aripiprazole

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Otsuka and Lundbeck Alliance

**Form:** Long-acting depot injection

**Generic:** No

**Listed on Ontario formulary:** Yes (with suggested criteria for coverage\*)

\*This product has a therapeutic note, which suggests a physician should prescribe it for the treatment of schizophrenia in individuals with a history of non-adherence and either

(1) inadequate control or significant side effects from 2 or more oral antipsychotics including at least one atypical or

(2) inadequate control or significant side effects from one or more typical depot antipsychotics.

What this means is that for most individuals with schizophrenia, Abilify Maintena will not be a first-line medication choice. Each physician will assess the use of this medication on a case-by-case basis. If this medication is deemed appropriate for you it will be covered by the Ontario Drug Benefit program.

*Abilify® Maintena® is also available in tablet form called Abilify®.*

### **What is Abilify Maintena used for?**

Abilify Maintena is used as maintenance treatment for the symptoms of schizophrenia and other psychotic disorders in adults. It may also be used to treat other conditions such as bipolar disorder. Talk to your doctor to understand why you are taking Abilify Maintena.

### **How should I take Abilify Maintena?**

Abilify Maintena is a long-acting depot injection. It is an intramuscular injection. It must be administered by a healthcare provider, most often a nurse. You may receive the injection in a clinic, in a hospital, in your doctor's office or in your home. The injection is usually given once every 4 weeks.

### **How much Abilify Maintena should I take?**

Abilify Maintena injection is available as a 300 mg/vial and 400 mg/vial dose in Canada. The usual initial and maintenance dose for schizophrenia and other psychotic illnesses is 400 mg every 4 weeks. When you are just beginning Abilify Maintena you may receive oral therapy with Abilify Maintena or another oral antipsychotic with the initial injection. You will likely continue with the oral medication for about 14 days, to allow the depot medication to get into your system and begin to work. After 14 days the oral medication will likely be stopped and you will be maintained on an injection every 4 weeks.

### **What are the common side effects of Abilify Maintena?**

The most common side effects of Abilify Maintena include:

- Feeling of restlessness (akathisia)
- Headache
- Abnormal movements (extrapyramidal side effects)
- Nausea, vomiting, upset stomach
- Insomnia
- Constipation
- Anxiety
- Pain at injection site

### **What are rare, but potentially serious side effects seen with Abilify Maintena?**

- Decrease in white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)



- Anaphylactic reaction (severe allergy)
- Diabetic Ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

### **Warnings/Precautions**

New information has become available from the U.S. Food and Drug Administration to suggest that some individuals taking Abilify Maintena may experience compulsive or uncontrollable urges to gamble, binge eat, shop and have sex. These urges were reported to have stopped when the dose of the medication was reduced or the medication was discontinued. These impulse-control problems or urges are rare, however it important to inform your physician if you or a family member/friend experience any of these urges while taking Abilify Maintena.

More information on this topic can be found at:

[http://www.fda.gov/Drugs/DrugSafety/ucm498662.htm?source=govdelivery&utm\\_medium=email&utm\\_source=govdelivery](http://www.fda.gov/Drugs/DrugSafety/ucm498662.htm?source=govdelivery&utm_medium=email&utm_source=govdelivery)

Older adults with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Abilify Maintena is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Abilify Maintena?**

Tell all your doctors, pharmacists, and dentists that you are taking Abilify Maintena. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.

The following medications might increase the levels of Abilify Maintena in your bloodstream:

- Ketoconazole (antifungal)
- Quinidine (antiarrhythmic)

The following medications might decrease the levels of Abilify Maintena in your bloodstream:

- Carbamazepine (anticonvulsant)
- St. John's Wort (herbal medication)

### **Other types of medications that may interact with Abilify Maintena:**

- Antiparkinson agents (dopamine agonists)
- Certain medications for allergies (e.g., Benadryl [diphenhydramine])

- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

### **Clozaril (clozapine)**

**Brand name:** Clozaril®

**Active ingredient name:** Clozapine

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** HLS Therapeutics Inc.

**Form:** Oral tablets

**Generic:** Yes: Apo-Clozapine (Apotex Inc.); Gen-Clozapine (Mylan Pharmaceuticals ULC)

**Listed on Ontario formulary:** No Special Drugs Program

### **What is Clozaril used for?**

Clozaril is most often used to treat the symptoms of treatment-resistant schizophrenia in adults over 18 years old. Treatment-resistant schizophrenia is diagnosed in individuals who do not respond to or experience serious side effects with at least 2 other antipsychotic medications. In these individuals Clozaril is considered to be more effective at improving symptoms. Clozaril can also be used to treat other mental illnesses. Talk to your doctor to understand why you are taking Clozaril.

### **How should I take Clozaril?**

You can take Clozaril with or without food. It can be taken once daily, usually in the evening as it can make people very sleepy. In people who take doses greater than 500 mg per day, the dose is often split into twice daily dosing to decrease the risk of having a seizure.

### **How much Clozaril should I take?**

Clozaril is available in 25 and 100 mg tablets.

The usual dose is 300 to 450 mg per day.

Most people start with half of a 25 mg tablet once or twice on the first day. Your doctor will gradually increase the dose until your ideal dose is established, to a maximum of 900 mg per day. In some cases, doses can go above 900 mg per day. If your dose is higher than 900 mg discuss the reasons with your doctor.

### **What are the common side effects seen with Clozaril?**

The most common side effects of Clozaril include:

- Drowsiness
- Increased heart rate
- Constipation
- Weight gain
- Drooling (mostly at night)

**Other Side Effects that may occur with Clozaril:**

- Wetting the bed (nocturnal enuresis)
- Orthostatic Hypotension

**What are rare, but potentially serious side effects seen with Clozaril?**

- Clozaril may cause a potentially life-threatening decrease in white blood cell count. This is important because white blood cells help fight infections and keep us healthy. If your white blood cell count drops too low, you could develop an infection and your body may not be able to fight it off. While you are using Clozaril, you will undergo regular blood tests to ensure your white blood cell levels remain healthy.
- Clozaril has also been associated with potentially serious heart problems and should not be used in people with a history of heart disease unless discussed with your psychiatrist and a heart doctor. Your doctor will assess your risk and monitor as needed.
- Clozaril can also reduce the seizure threshold, increasing likelihood of seizures. This is a dose-related side effect; hence the risk is higher at higher doses. In order to minimize the risk, doses larger than 500 mg will be divided into two-three times per day.
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Clozaril is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Clozaril?**

Tell all your doctors, pharmacists, and dentists that you are taking Clozaril. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

The following medications or types of medication may interact with Clozaril:

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Certain antibiotics (e.g., Ciprofloxacin)
- Certain anticonvulsants (e.g., Carbamazepine)

**Other potential interactions with Clozaril:**

Smoking cigarettes also interacts with clozapine, by decreasing the clozapine levels in the blood. If you smoke regularly, inform your healthcare provider and indicate approximately how many cigarettes you smoke per day. If you decide to quit and/or reduce the number of cigarettes you smoke, it is important to tell your doctor or pharmacist as your clozapine dose may need to be adjusted.

Avoid drinking alcohol or using illegal drugs while taking Clozaril.

### **Invega (paliperidone)**

**Brand name:** Invega®

**Active ingredient name:** Paliperidone

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Janssen Inc.

**Form:** Oral tablets

**Generic:** No

**Listed on Ontario formulary:** Yes

**Note:** *Invega® is also available as a long-acting injectable called Invega® Sustenna®.*

#### **What is Invega used for?**

Invega is used to treat the symptoms of schizophrenia and related psychotic illnesses in adults. Your doctor may prescribe Invega for other conditions. Discuss with your doctor the reason you are taking Invega.

#### **How should I take Invega?**

Invega can be taken once daily with or without food.

#### **How much Invega should I take?**

Invega is available in 3, 6, and 9 mg tablets.

The usual dose range for Invega is 3 to 12 mg per day. Your doctor may prescribe doses higher than 12 mg based on your individual clinical situation. Discuss your dose with your doctor.

#### **What are the common side effects seen with Invega?**

The most common side effects of Invega include:

- Headache
- Feeling of restlessness (akathisia)
- Abnormal movements (extrapyramidal symptoms)
- Insomnia
- Dizziness
- Nausea
- Dry mouth
- Constipation

- Weight gain

#### **What are rare, but potentially serious side effects seen with Invega?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

#### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Invega is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

#### **What medications interact with Invega?**

Tell all your doctors, pharmacists, and dentist that you are taking Invega. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.

The following types of medications may interact with Invega:

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Invega.

#### **Invega Sustenna (paliperidone palmitate)**

**Brand name:** Invega® Sustenna®

**Active ingredient name:** Paliperidone palmitate

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Janssen Inc.

**Form:** Injection

**Generic:** No

**Listed on Ontario formulary:** Yes

**Note:** *Invega® Sustenna® is also available in tablet form as Invega®.*

**What is Invega Sustenna used for?**

Invega Sustenna is used to treat the symptoms of schizophrenia and psychotic illnesses in adults. It may be used to treat other conditions as well. Discuss the reason you are taking Invega Sustenna with your doctor.

**How much Invega Sustenna should I take?**

Invega Sustenna is available in prefilled syringes containing 50, 75, 100, and 150 mg of paliperidone palmitate. You will receive a monthly injection, so you do not need to take medication every day. The injection will be given to you by a healthcare provider, usually a nurse. You may receive the injection in a clinic, in your doctor's office or you may have a community nurse who comes to your home. After you receive your first dose of Invega Sustenna you will need to get a second dose one week later. From then on, you will only need to get a dose once a month.

Your doctor will decide on the best dosage for you and will adjust the dose based on your response.

**What are the common side effects seen with Invega Sustenna?**

The most common side effects of Invega Sustenna include:

- Headache
- Insomnia
- Constipation
- Nausea
- Vomiting
- Injection-site pain
- Weight gain
- Feeling of restlessness (akathisia)
- Dizziness
- Abnormal movements (extrapyramidal side effects)

**What are rare, but potentially serious side effects seen with Invega Sustenna?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotic medication. Most deaths appear to be either cardiovascular or infectious. Invega Sustenna is not approved for the treatment of dementia-related psychosis.

Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What drugs interact with Invega Sustenna?**

Tell all your doctors, pharmacists, and dentist that you are taking Invega Sustenna. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.

### **The following types of medications may interact with Invega Sustenna:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Invega Sustenna.

### **Invega Trinza (paliperidone palmitate)**

**Brand name:** Invega® Trinza®

**Active ingredient name:** Paliperidone palmitate

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Janssen Inc.

**Form:** Injection

**Generic:** No

**Listed on Ontario formulary:** No

**Note:** *Invega® Trinza® is also available in tablet form as Invega®.*

### **What is Invega Trinza used for?**

Invega Trinza is the newest antipsychotic medication on the Canadian market. It was approved by Health Canada on June 23, 2016. It is used to treat the symptoms of schizophrenia and psychotic illnesses in adults. It may be used to treat other conditions as well. Discuss the reason you are taking Invega Trinza with your doctor.

### **How much Invega Trinza should I take?**

Invega Trinza is a long-acting depot injection. It is available in prefilled syringes containing 175, 263, 350, and 525 mg of paliperidone palmitate.

You will receive an injection every 3 months, so you do not need to take medication every day. The injection will be given to you by a healthcare provider, usually a nurse. You may receive the injection in a clinic, in your doctor's office or you may have a community nurse who comes to your home.

Before you begin Invega Trinza you will most likely be treated with Invega Sustenna (once monthly injections) for about 4 months to be sure you tolerate the medication and to ensure your symptoms improve. After that you may be switched to Invega Trinza, which you will then receive every 3 months. Your doctor will decide on the best dosage for you and will adjust the dose based on your response.

### **What are the common side effects seen with Invega Trinza?**

The most common side effects of Invega Trinza include:

- Headache
- Insomnia
- Constipation
- Nausea
- Vomiting
- Injection-site pain
- Weight gain
- Feeling of restlessness (akathisia)
- Dizziness
- Abnormal movements (extrapyramidal side effects)

### **What are rare, but potentially serious side effects seen with Invega Trinza?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotic medication. Most deaths appear to be either cardiovascular or infectious. Invega Trinza is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What drugs interact with Invega Trinza?**

Tell all your doctors, pharmacists, and dentist that you are taking Invega Trinza. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.



**The following types of medications may interact with Invega Trinza:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Invega Trinza.

**Latuda (lurasidone)**

**Brand name:** Latuda®

**Active ingredient name:** Lurasidone

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Sunovion Pharmaceuticals Canada Inc.

**Form:** Oral tablets

**Generic:** No

**Listed on Ontario formulary:** Yes (with suggested criteria for coverage\*)

\*This product has a therapeutic note, which suggests a physician should prescribe it for the treatment of schizophrenia in individuals who have not responded to or have not tolerated another less expensive antipsychotic medication.

What this means is that for most individuals with schizophrenia, Latuda will not be a first-line medication choice. Each physician will assess the use of this medication on a case-by-case basis. If this medication is deemed appropriate for you it will be covered by the ODB program.

**What is Latuda used for?**

Latuda is used to treat the symptoms of schizophrenia in adults. It can be used alone or in combination with other therapies for schizophrenia. Latuda is sometimes used to treat other conditions such as bipolar disorder. Talk to your doctor to understand why you are taking Latuda.

**How should I take Latuda?**

Latuda should be taken with food to increase the absorption of the medication into the bloodstream.

**How much Latuda should I take?**

Latuda is available in 40, 80 and 120 mg tablets in Canada.

*Adults:* The dose range for Latuda is 40-160 mg daily. The usual dose for most adults is 40 to 80 mg once per day. Your doctor may prescribe doses that are higher than 160 mg based on your individual situation. Talk to your doctor about your dose.

**What are the common side effects seen with Latuda?**

The most common side effects of Latuda include:

- Drowsiness
- Abnormal movements (extrapyramidal side effects)
- Restlessness (akathisia)
- Nausea
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females

**What are rare, but potentially serious side effects seen with Latuda?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Latuda is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Latuda?**

Tell all your doctors, pharmacists, and dentist that you are taking Latuda. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication’s efficacy and safety.

The following drugs might increase the levels of Latuda in your bloodstream:

- Ketoconazole (antifungal)
- Diltiazem
- Grapefruit juice

The following drug might decrease the levels of Latuda in your bloodstream:

- Carbamazepine (anticonvulsant)
- St. John’s Wort (herbal medication)
- Rifampin

**The following are other types of medications that may interact with Latuda:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents (e.g., dopamine agonists)

### **Rexulti (brexpiprazole)**

**Brand name:** Rexulti®

**Active ingredient name:** Brexpiprazole

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Otsuka and Lundbeck Alliance

**Form:** Oral tablets

**Generic:** No

**Listed on Ontario formulary:** No\*

\*What this means is that for most individuals with schizophrenia, Rexulti will not be a first-line medication choice as it is not covered on the provincial Formulary. Physicians will assess each patient on a case-by-case basis.

### **What is Rexulti used for?**

Rexulti is used to treat the symptoms of schizophrenia in adults. It can be used alone or in combination with other therapies for schizophrenia. Rexulti is sometimes used to treat other conditions, such as major depressive disorder. Talk to your doctor to understand why you are taking Rexulti.

### **How should I take Rexulti?**

Rexulti can be taken with or without food. It is usually taken once daily, preferably at a similar time each day.

### **How much Rexulti should I take?**

Rexulti is available in 0.25, 0.5, 1, 2, 3, and 4 mg tablets in Canada.

*Adults:* The dose range for Rexulti is 2-4 mg daily. The usual dose for most adults is 4 mg once per day. Your doctor may prescribe doses that are higher than 4 mg based on your individual situation. Talk to your doctor about your dose.

### **What are the common side effects seen with Rexulti?**

The most common side effects of Rexulti include:

- Weight gain
- Increased triglycerides
- Abnormal movements (extrapyramidal side effects)
- Restlessness (akathisia)
- Headache

- Drowsiness

### **What are rare, but potentially serious side effects seen with Rexulti?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Rexulti is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Rexulti?**

Tell all your doctors, pharmacists, and dentist that you are taking Rexulti. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.

The following drugs might increase the levels of Rexulti in your bloodstream:

- Ketoconazole (antifungal)
- Quinidine
- Bupropion

The following drug might decrease the levels of Rexulti in your bloodstream:

- Rifampin
- Carbamazepine
- St. John's wort

### **The following are other types of medications that may interact with Rexulti:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents (e.g., dopamine agonists)

## **Risperdal (risperidone)**

**Brand name:** Risperdal® and Risperdal® M-Tab®

**Active ingredient name:** Risperidone

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Janssen Inc.

**Form:** Oral tablets, oral solution, orally disintegrating tablets

**Generic:** Yes: Apo-Risperidone (Apotex Inc.); Ava-Risperidone (Avantra Inc.); CO Risperidone (Cobalt Pharmaceuticals Comp.); Dom-Risperidone (Dominion Pharmacal); JAMP-Risperidone (Jamp Pharma Corp.); Mint-Risperidone (Mint Pharmaceuticals Inc.); Mylan-Risperidone (Mylan Pharmaceuticals ULC); Novo-Risperidone (Novopharm Ltd.); PHL-Risperidone (Pharmel Inc.); PMS-Risperidone, PMS-Risperidone ODT (Pharmascience Inc.); Pro-Risperidone (Pro Doc Ltée); RAN-Risperidone (Ranbaxy Pharmaceuticals Canada Inc.); Ratio-Risperidone (Ratiopharm Inc.); Risperidone (Meliapharm Inc.); Riva-Risperidone (Laboratoire Riva Inc.); Sandoz Risperidone (Sandoz Canada Inc.); Risperidone (Sanis Health Inc.)

**Listed on Ontario formulary:** Yes

*Note: Risperdal® is also available as a long-acting injectable called Risperdal® Consta®.*

### **What is Risperdal used for?**

Risperdal is used to treat the symptoms of schizophrenia and related psychotic illnesses in adults. Additionally, Risperdal may be used for the treatment of bipolar disorder. Risperdal can be used to treat other conditions. Talk to your doctor about why you are using Risperdal.

### **How should I take Risperdal?**

Risperdal can be taken with or without food once daily.

Risperdal oral solution can be mixed with water, coffee, orange juice, and low-fat milk. It should not be mixed with tea or cola.

### **How much Risperdal should I take?**

Risperdal is available in 0.25, 0.5, 1, 2, 3, and 4 mg tablets. Risperdal is also available as 1 mg/mL oral solution. Risperdal M-Tab orally disintegrating tablets are available in 0.5, 1, 2, 3, and 4 mg doses.

The usual dosage range of Risperdal is 2-16 mg daily. Your doctor may prescribe doses outside of this range. Discuss your dose with your doctor.

### **What are the common side effects seen with Risperdal?**

The most common side effects of Risperdal include:

- Drowsiness
- Abnormal movements (extrapyramidal side effects)
- Feeling of restlessness (akathisia)
- Dizziness

- Headache
- Constipation
- Weight gain
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females

**What are rare, but potentially serious side effects seen with Risperdal?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Risperdal is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. New safety information indicates that individuals with mixed and vascular dementia are at higher risk of cerebrovascular events when using Risperdal compared to those with Alzheimer’s dementia. Hence, Health Canada has limited the indication for Risperdal to severe dementia of the Alzheimer type only. Discuss this new information with your doctor if you or your loved one is using Risperdal for dementia. Discuss the potential risks and benefits of this medication with your doctor.

**What drugs interact with Risperdal?**

Tell all your doctors, pharmacists, and dentist that you are taking Risperdal. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication’s efficacy and safety.

**The following types of medications may interact with Risperdal:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents (e.g., dopamine agonists)

Avoid drinking alcohol or using illegal drugs while taking Risperdal.

### **Risperdal Consta (risperidone)**

**Brand name:** Risperdal® Consta®

**Active ingredient name:** Risperidone

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Janssen Inc.

**Form:** Injection

**Generic:** No

**Listed on Ontario formulary:** Yes

**Note:** *Risperdal® Consta® is also available as oral tablets, oral solution, and orally disintegrating tablets called Risperdal® or Risperdal® M-Tab®.*

### **What is Risperdal Consta used for?**

Risperdal Consta is used to treat the symptoms of schizophrenia and related psychotic illnesses in adults. Risperdal Consta may also be used for the treatment of bipolar disorder. Risperdal Consta can be used to treat other conditions as well. Discuss with your doctor why you are using Risperdal Consta.

### **How much Risperdal Consta should I take?**

Risperdal Consta is available in vials containing 12.5, 25, 37.5, and 50 mg of the active ingredient.

You will receive an injection every two weeks, so you do not need to take medication every day.

The injection will be given to you by a healthcare provider, usually a nurse. You may receive the injection in a clinic, in your doctor's office or you may have a community nurse who comes to your home.

The usual dose is 25 mg given every two weeks, although your doctor will prescribe a dose that is based on individual response, up to a maximum of 50 mg every two weeks. Your doctor may prescribe doses above 50 mg based on your individual situation.

### **What are the common side effects seen with Risperdal Consta?**

The most common side effects of Risperdal Consta include:

- Drowsiness
- Abnormal movements (extrapyramidal side effects)
- Feeling of Restlessness (akathisia)
- Dizziness
- Headache
- Constipation
- Weight gain
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function

- Swelling of breasts and milk production in males and females

#### **What are rare, but potentially serious side effects seen with Risperdal Consta?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

#### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Risperdal Consta is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. New safety information indicates that individuals with mixed and vascular dementia are at higher risk of cerebrovascular events (strokes) when using Risperdal Consta compared to those with Alzheimer's dementia. Hence, Health Canada has limited the indication for Risperdal Consta to severe dementia of the Alzheimer type only. Discuss this new information with your doctor if you or your loved one is using risperidone for dementia. Discuss the potential risks and benefits of this medication with your doctor.

#### **What medications interact with Risperdal Consta?**

Tell all your doctors, pharmacists, and dentist that you are taking Risperdal Consta. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication's efficacy and safety.

#### **The following types of medications may interact with Risperdal Consta:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Risperdal Consta.

#### **Saphris (asenapine)**

**Brand name:** Saphris®

**Active ingredient name:** Asenapine

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Lundbeck Canada Inc.

**Form:** Oral tablets



**Generic:** No

**Listed on Ontario formulary:** Yes

**What is Saphris used for?**

Saphris is used to treat the symptoms of schizophrenia in adults. It is also used to treat adults with bipolar disorder. Saphris is sometimes used to treat other conditions. Talk to your doctor to understand why you are taking Saphris.

**How should I take Saphris?**

Saphris is a sublingual tablet that must dissolve under your tongue. Place the tablet under your tongue and let it dissolve completely. Do not swallow, crush or chew. Do not eat or drink for at least 10 minutes after taking this medication. This drug is most often taken two times per day.

**How much Saphris should I take?**

Saphris is available in 5 and 10 mg sublingual tablets in Canada.

*Adults:* The dose range for Saphris is 5-10 mg twice daily. The maximum daily dose is 20 mg. Your doctor may prescribe doses that are higher than 20 mg based on your individual situation.

**What are the common side effects seen with Saphris?**

The most common side effects of Saphris include:

- Drowsiness
- Restlessness (akathisia)
- Headache
- Abnormal movements (extrapyramidal side effects)
- Nausea, vomiting, upset stomach
- Insomnia
- Dizziness
- Weight gain

**What are rare, but potentially serious side effects seen with Saphris?**

- A decrease in white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased

risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Saphris is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What drugs interact with Saphris?**

Tell all your doctors, pharmacists, and dentist that you are taking Saphris. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription. At this time there appears to be only a handful of clinically-important drug interactions with Saphris.

### **The following medications and types of medications may interact with Saphris**

- Certain medications for allergies [e.g., Benadryl (diphenhydramine)]
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Fluvoxamine (may increase levels of Saphris)

Avoid drinking alcohol or using illegal drugs while taking Saphris.

### **Seroquel (quetiapine)**

**Brand name:** Seroquel®

**Active ingredient name:** Quetiapine, Quetiapine XR

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** AstraZeneca Canada Inc.

**Form:** Oral tablets

**Generic:** Yes: Apo-Quetiapine (Apotex Inc.); Ava-Quetiapine (Avanstra Inc.); CO Quetiapine (Cobalt Pharmaceuticals Comp.); Dom-Quetiapine (Dominion Pharmacal); JAMP-Quetiapine (JAMP Pharma Corp.); Mylan-Quetiapine (Mylan Pharmaceuticals ULC); PHL-Quetiapine (Pharmel Inc.); PMS-Quetiapine (Pharmascience Inc.); Pro-Quetiapine (Pro Doc Ltée); Quetiapine (Meliapharm Inc.); Quetiapine (Sanis Health Inc.); Ratio-Quetiapine (Ratiopharm Inc.); Riva-Quetiapine (Laboratoire Riva Inc.); Sandoz Quetiapine (Sandoz Canada Inc.); Teva-Quetiapine (Teva Canada Ltd.)

**Listed on Ontario formulary:** Yes

### **What is Seroquel used for?**

Seroquel is used to treat the symptoms of schizophrenia in adults. Seroquel may also be used to treat the symptoms of mania or depression in people with bipolar disorder and it may be also be used to treat major depressive disorder. It may also be used in some treatment centres for managing withdrawal from certain substances. Discuss why you are taking Seroquel with your doctor.

### **How much Seroquel should I take?**

Seroquel is available in 25, 100, 200, and 300 mg tablets.

The usual starting dose is 25 mg twice daily. The recommended dosage range is 50 to 800 mg per day. Doses for the treatment of schizophrenia and other psychotic illnesses tend to be 600-800 mg per day. The usual dose for bipolar depression and major depressive disorder is 300 mg per day. Your doctor may prescribe doses higher than recommended. Discuss your dose with your physician.

### **What are the common side effects seen with Seroquel?**

The most common side effects of Seroquel include:

- Lightheadedness or dizziness
- Drowsiness
- Weight gain
- Headache
- Upset stomach or abdominal pain
- Blurred vision
- Abnormal dreams or nightmares
- Irritability

### **What are rare, but potentially serious interactions with Seroquel?**

- Decrease in white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Sudden Cardiac Death
- Torsades de pointes (serious heart arrhythmia)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Seroquel is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What drugs interact with Seroquel?**

Tell all your doctors, pharmacists, and dentist that you are taking Seroquel. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

**The following medications or types of medications may interact with Seroquel:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Protease Inhibitors (for HIV/AIDS treatment)
- Ketoconazole

Avoid drinking alcohol or using illegal drugs while taking Seroquel.

**Zeldox (ziprasidone)**

**Brand name:** Zeldox®

**Active ingredient name:** Ziprasidone

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Pfizer Canada Inc.

**Form:** Oral capsules

**Generic:** No

**Listed on Ontario formulary:** Yes

**What is Zeldox used for?**

Zeldox is used to treat symptoms of schizophrenia and related psychotic illnesses in adults. It may also be used to treat symptoms of bipolar disorder. Zeldox is sometimes used to treat other conditions. Talk to your doctor to understand why you are taking Zeldox.

**How should I take Zeldox?**

Zeldox should be taken with food to increase the absorption of the medication into the bloodstream. It is best taken after a full meal versus after a small snack. Zeldox is most often taken twice daily, however it can be given once daily in some cases.

**How much Zeldox should I take?**

Zeldox is available in 20, 40, 60, and 80 mg capsules.

The dose range for Zeldox is 20-80 mg twice daily. Your doctor may prescribe doses higher than 160 mg per day based on your clinical situation. If your dose is above this range discuss the reasons with your doctor.

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Zeldox is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

Also, in early studies with Zeldox, it was found to impact conduction of the heart. This may increase the risk of arrhythmia in certain individuals. If you have any of the following heart conditions, you should discuss the risks and benefits of taking Zeldox with your doctor:

- Long QT syndrome (a specific heart rhythm problem)
- A recent heart attack
- Severe heart failure

New safety information in the United States indicates that ziprasidone may be associated with rare but serious skin reactions. If you develop a fever with a rash and/or swollen lymph glands you should seek medical attention. A medical assessment is important to determine if your symptoms may be due to your medication or to another cause.

### **What are the common side effects seen with Zeldox?**

The most common side effects of Zeldox include:

- Feeling unusually tired or sleepy
- Nausea or upset stomach
- Constipation
- Dizziness
- Headache
- Abnormal movements (extrapyramidal side effects)

### **What are rare, but potentially serious side effects seen with Zeldox?**

- Decrease in white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Sudden Cardiac Death
- Torsades de pointes (serious heart arrhythmia)
- Diabetic ketoacidosis (DKA)
- Neuroleptic Malignant Syndrome (NMS)

### **What medications interact with Zeldox?**

Tell all your doctors, pharmacists, and dentist that you are taking Zeldox. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

### **The following types of medication may interact with Zeldox:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Zeldox.

### **Zyprexa (olanzapine)**

**Brand name:** Zyprexa<sup>®</sup> and Zyprexa<sup>®</sup> Zydis<sup>®</sup>

**Active ingredient name:** Olanzapine

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Eli Lilly Canada Inc.

**Form:** Oral tablets, orally disintegrating tablets

**Generic:** Yes: Apo-Olanzapine, Apo-Olanzapine ODT (Apotex Inc.); Ava-Olanzapine (Avanstra Inc.); CO Olanzapine, CO Olanzapine ODT (Cobalt Pharmaceuticals Co.); Mylan-Olanzapine (Mylan Pharmaceuticals ULC); Olanzapine, Olanzapine ODT (Pro Doc Ltée); Olanzapine, Olanzapine ODT (Meliapharm Inc.); Olanzapine (Sanis Health Inc.); PHL-Olanzapine, PHL-Olanzapine ODT (Pharmel Inc.); PMS-Olanzapine, PMS-Olanzapine ODT (Pharmascience Inc.); Riva-Olanzapine, Riva-Olanzapine ODT (Laboratoire Riva Inc.); Sandoz Olanzapine, Sandoz Olanzapine ODT (Sandoz Canada Inc.); Teva-Olanzapine, Teva-Olanzapine ODT (Teva Canada Ltd.)

**Listed on Ontario formulary:** Yes

**Note:** Zyprexa<sup>®</sup> is also available as an injection—Zyprexa<sup>®</sup> IntraMuscular.

### **What is Zyprexa used for?**

Zyprexa is used to treat symptoms of schizophrenia and related psychotic illnesses in adults. It may also be used to treat bipolar disorder. Zyprexa is sometimes used to treat other conditions. Talk to your doctor to understand what you are using Zyprexa for.

### **How should I take Zyprexa?**

Zyprexa can be taken with or without food. It can be taken once daily.

### **How much Zyprexa should I take?**

Zyprexa is available in 2.5, 5, 7.5, 10, 15, and 20 mg tablets. Zyprexa Zydis orally-disintegrating tablets are available in 5, 10, 15, and 20 mg doses.

The usual dose range for Zyprexa is 5-20 mg daily. Your doctor may prescribe doses greater than 20 mg based on your clinical situation. Talk to your doctor about your specific dose.

### **What are the common side effects seen with Zyprexa?**

The most common side effects of Zyprexa include:

- Drowsiness
- Weight gain (can be significant)
- Increased appetite
- Dizziness
- Constipation
- Dry mouth

- Hyperglycemia (high blood sugar)
- Hyperlipidemia (increase in cholesterol and/or triglycerides)

**What are rare, but potentially serious side effects seen with Zyprexa?**

- Decreased white blood cell count (agranulocytosis)
- Cerebrovascular event (stroke)
- Anaphylactic reaction (severe allergy)
- Pancreatitis
- Diabetic Ketoacidosis
- Neuroleptic Malignant Syndrome (NMS)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Zyprexa Intramuscular is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may however be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Zyprexa?**

Tell all your doctors, pharmacists, and dentist that you are taking Zyprexa. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products. When the levels of a medication are increased or decreased in your bloodstream, this can affect the medication’s efficacy and safety.

The following drugs might increase the levels of Zyprexa in the bloodstream

- fluvoxamine (antidepressant)
- ketoconazole (antifungal)
- ciprofloxacin (antibiotic)

The following drugs might decrease the levels of Zyprexa in the bloodstream

- Omeprazole (proton pump inhibitor)
- Cigarettes

Smoking cigarettes interacts with Zyprexa by decreasing the levels in the blood. If you smoke regularly inform your healthcare provider and indicate approximately how many cigarettes you smoke per day. If you decide to quit and/or reduce the number of cigarettes you smoke, it is important to tell your doctor or pharmacist as your Zyprexa dose may need to be adjusted.

**Other types of medications that may interact with Zyprexa:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

It is best to avoid drinking alcohol or using illegal drugs while taking Zyprexa.

**Zyprexa IntraMuscular (olanzapine tartrate)**

**Brand name:** Zyprexa<sup>®</sup> IntraMuscular

**Active ingredient name:** Olanzapine tartrate

**Type of drug:** Atypical antipsychotic

**Available in Canada from:** Eli Lilly Canada Inc.

**Form:** Injection

**Generic:** No

**Listed on Ontario formulary:** No

**Note:** Zyprexa<sup>®</sup> IntraMuscular is also available in tablet form as Zyprexa<sup>®</sup> and Zyprexa<sup>®</sup> Zydys<sup>®</sup>.

**What is Zyprexa IntraMuscular used for?**

Zyprexa intramuscular injection is a short-acting injectable antipsychotic medication. Although it is an injection it is not a depot or long-acting injection. It is used most often in a hospital setting if an individual needs medicine quickly to help them calm down. This medication is not used long-term to control the symptoms of schizophrenia or other psychotic illnesses.

**How much Zyprexa IntraMuscular should I take?**

Zyprexa IntraMuscular is available as a single-use vial containing 10 mg of olanzapine.

Your doctor will decide on the best dose for you based on your needs. Most people need only one dose, but your doctor may give you additional doses as needed. You will receive no more than three injections in a 24-hour period.

**What are the common side effects seen with Zyprexa IntraMuscular?**

The most common side effects of Zyprexa IntraMuscular include:

- Drowsiness
- Dizziness
- Pain at the site of the injection
- A feeling of restlessness (akathisia)

**What are rare, but potentially serious side effects seen with Zyprexa?**

- Anaphylactic reaction (severe allergy)
- Neuroleptic Malignant Syndrome (NMS)



## Warnings/Precautions

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Zyprexa Intramuscular is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

## What medications interact with Zyprexa IntraMuscular?

Zyprexa Intramuscular is for short-term use; hence the risk of drug interactions is reduced. The most clinically-significant interaction with this medication is intramuscular lorazepam. These two medications should not be given at the same time. If a person needs lorazepam in addition to Zyprexa Intramuscular, it should be given as an oral tablet.

## Typical Antipsychotic Medications

### Clopixol (zuclopenthixol)

**Brand name:** Clopixol<sup>®</sup>, Clopixol<sup>®</sup> Acuphase, Clopixol<sup>®</sup> Depot

**Active ingredient name:** Zuclopenthixol

**Type of drug:** Typical antipsychotic

**Available in Canada from:** Lundbeck Canada Inc.

**Form:** Oral tablets, intramuscular injection

**Generic:** No

**Listed on Ontario formulary:** No (however can be approved for coverage under the Exceptional Access Program if the physician submits a request)

### What is Clopixol used for?

Clopixol is used to treat schizophrenia and other psychotic illnesses in adults. Clopixol can be used for other conditions. Ask your doctor why you are being prescribed Clopixol.

### How Should I take Clopixol?

Oral Clopixol can be taken with or without food. It can be taken once per day or multiple times per day depending on individual preference.

The injectable forms of Clopixol must be given by a healthcare provider. The injections may be given in a hospital, a clinic, a doctor's office or even an individual's home in some cases.

### How much Clopixol should I take?

Clopixol is available in 10 and 25 mg tablets. The usual dosage range for oral Clopixol tablets is 20-150 mg per day. The average dose is around 30-75 mg per day. Discuss your individual dose with your doctor.

There are also two forms of Clopixol for intramuscular injection: Clopixol Acuphase is a 50 mg/mL solution and Clopixol Depot is a 200 mg/mL solution.

Clopixol Acuphase is a short-acting injection. It lasts up to 72 hours. It is used most often in hospital settings. It is given in a dose range of 50-150 mg every 48-72 hours. Most individuals will only receive one dose. Clopixol Acuphase is not used long-term to control the symptoms of schizophrenia or other psychotic illnesses.

Clopixol Depot is a long-acting injection that is given every 2-4 weeks to control the symptoms of schizophrenia and other psychotic illnesses. The dose range for Clopixol depot injection is 100-600 mg every 2-4 weeks. The most common dosage range is 200-400 mg every 4 weeks. Discuss your individual dose with your doctor.

### **What are the common side effects seen with Clopixol?**

The most common side effects of Clopixol include:

- Abnormal movements (extrapyramidal side effects)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in both men and women
- Dry mouth
- Blurred or altered vision (difficulty reading small print)
- Constipation

### **What are rare, but potentially serious adverse effects with Clopixol?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Clopixol is not approved for the treatment of dementia-related psychosis. Some patients with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Clopixol?**

Tell all your doctors, pharmacists, and dentist that you are taking Clopixol. You should also tell your doctor or pharmacist if you are taking any other medicines, including those obtained without a prescription and herbal and vitamin products.

**The following types of medications may interact with Clopixol:**

- Certain medications for allergies (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Clopixol.

**Fluanxol (flupentixol)**

**Brand name:** Fluanxol®

**Active ingredient name:** Flupentixol

**Type of drug:** Typical antipsychotic

**Available in Canada from:** Lundbeck Canada Inc.

**Form:** Oral tablets, intramuscular injection

**Generic:** Yes: Flupentixol decanoate injection BP (Sandoz Canada Inc.)

**Listed on Ontario formulary:** Oral: Yes; Injection: Yes (20 and 100 mg)

**What is Fluanxol used for?**

Fluanxol is used to treat schizophrenia and other psychotic illnesses in adults. It may be used for other conditions such as depression. Ask your doctor why you are being prescribed Fluanxol.

**How Should I take Fluanxol?**

Oral Fluanxol can be taken with or without food. It can be taken once per day or multiple times per day depending on individual preference.

The injectable form of Fluanxol must be given by a healthcare provider. The injections may be given in a hospital, a clinic, a doctor's office or even an individual's home in some cases.

**How much Fluanxol should I take?**

Fluanxol is available in 0.5, 3, and 5 mg tablets.

Fluanxol Depot is available in two strengths: a 2% solution and a 10% solution.

The dosage range for oral Fluanxol is 16-224 mg per day. Ask your doctor about your specific dose.

The dosage range for Fluanxol depot is 20-40 mg every 2-4 weeks. In some cases, doses may go above this range. Discuss your individual dose with your doctor.

**What are the common side effects seen with Fluanxol?**

The most common side effects of Fluanxol include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function

- Swelling of breasts and milk production in both men and women
- Muscle spasm (dystonia)

### **What are rare, but potentially serious adverse effects with Fluanxol?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Fluanxol is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Fluanxol?**

Tell all your doctors, pharmacists, and dentist that you are taking Fluanxol. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

### **The following types of medications may interact with Fluanxol:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Fluanxol.

### **Haldol (haloperidol)**

**Brand name:** Haldol®

**Active ingredient name:** Haloperidol

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets, intramuscular injection (short-acting and long-acting depot)

**Brand name available in Canada from:** Not available in Canada

**Generic:** Yes: Apo-Haloperidol Liq, Apo-Haloperidol Tab, Apo-Haloperidol LA Injectable (Apotex Inc.); Haloperidol Inj, Haloperidol LA (Sandoz Canada Inc.); Haloperidol Injection, Haloperidol-LA Omega (Omega Laboratories Ltd.); Novo-Peridol Tab (Novopharm Ltd.); PMS-Haloperidol Soln, Haloperidol-LA (Pharmascience Inc.)

**Listed on Ontario formulary:** Yes

**What is Haldol used for?**

Haldol is used to treat the symptoms of schizophrenia and other psychotic illnesses in adults and sometimes children. Haldol is used to treat other conditions as well. Ask your doctor why you are being prescribed Haldol.

**How should I take Haldol?**

Haldol can be taken with or without food. It can be taken once daily. The liquid form of Haldol should not be mixed with tea or coffee as they are not compatible.

**How much Haldol should I take?**

Haldol is available in 1, 2, 5, 10, and 20 mg tablets. Haldol LA is available in 50 and 100 mg/mL vials. The usual dose of oral Haldol is 4-20 mg daily. Haldol can be taken once daily, however some doctors like to give it 2 to 3 times daily. Your doctor may prescribe doses higher than this range depending on your clinical situation. Discuss your individual dose with your doctor.

If you are receiving long-acting haloperidol injections, you will probably receive injections every 2-4 weeks. Some people may need more frequent injections compared to others. The usual dose range for the depot injection of Haldol is 50-200 mg every 2-4 weeks.

**What are the common side effects seen with Haldol?**

The most common side effects of S Haldol include:

- Abnormal movements (extrapyramidal symptoms)
- Muscle spasms (dystonia)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Dizziness
- Drowsiness
- Nausea
- Loss of appetite
- Headache
- Dry mouth
- Blurred vision
- Insomnia

**What are rare, but potentially serious adverse effects with Haldol?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)

- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)
- Seizures

In addition to the above physical side effects, Haldol has potential mood side effects. In some individuals Haldol may cause low mood or depression. Some individuals may also feel unhappy, dissatisfied, indifferent and restless. Haldol has also caused confusion and symptoms of memory loss in some individuals. Finally, some individuals have developed anxiety symptoms while taking Haldol.

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Haldol is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Haldol?**

Tell all your doctors, pharmacists, and dentist that you are taking Haldol. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

### **The following medications and types of medications might interact with Haldol:**

- Bromocriptine
- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Haldol.

### **Largactil (chlorpromazine)**

**Brand name:** Largactil®

**Active ingredient name:** Chlorpromazine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets

**Brand name available in Canada from:** Not available in Canada

**Generic:** Yes: Teva-Chlorpromazine (Teva Canada Ltd.)

**Listed on Ontario formulary:** Yes

**What is Largactil used for?**

Largactil is used to treat the symptoms of schizophrenia and other psychotic illnesses. It is also used to prevent and treat nausea and vomiting, for relief of restlessness and anxiety before surgery, and to manage symptoms of mania in bipolar disorder. It is used to treat adults and children. In children it is most commonly used for nausea and vomiting, to calm them before surgery and in some cases for behavioral issues.

**How much Largactil should I take?**

Largactil is available as 25, 50, and 100 mg tablets.

*Adults:* The usual dosage range of Largactil for schizophrenia and psychotic illnesses is 50-400 mg per day. Doses above this range can be used for some individuals.

Discuss your individual dose with your doctor.

*Children:* Your child's doctor will decide what is the best dose based on your child's symptoms, age, weight, and response. Discuss the dose with your doctor.

**What are the common side effects seen with Largactil?**

The most common side effects of Largactil include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Sleepiness
- Constipation
- Dry mouth
- Dizziness
- Postural low blood pressure (ongoing from sitting to standing)
- Weight gain
- Increased sensitivity to sun

**What are rare, but potentially serious adverse effects with Largactil?**

- Decrease in white blood cell count (agranulocytosis)
- Liver dysfunction (jaundice)
- Neuroleptic Malignant Syndrome (NMS)
- Torsades de pointes (serious heart arrhythmia)
- Systemic Lupus

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased

risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Largactil is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Largactil?**

Tell all your doctors, pharmacists, and dentist that you are taking Largactil. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products

### **The following types of medications may interact with Largactil**

- Certain antibiotics (e.g., ciprofloxacin, clarithromycin)
- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Largactil.

### **Loxapac (loxapine)**

**Brand name:** Loxapac<sup>®</sup>

**Active ingredient name:** Loxapine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets, oral solution, short-acting injection

**Brand name available in Canada from:** Sandoz Canada Inc.

**Generic:** Yes: Apo-Loxapine (Apotex Inc.); Dom-Loxapine Tablets (Dominion Pharmcal); Nu-Loxapine (Nu-Pharm Inc.); PHL-Loxapine (Pharmel Inc.); Loxapine (MM Therapeutics Inc.)

**Listed on Ontario formulary:** Yes

### **What is Loxapac used for?**

Loxapac is used to treat symptoms of schizophrenia and other psychotic illnesses in adults and adolescents 16 years and older. It can also be used to treat other conditions. Discuss with your doctor the reason you are using Loxapac.

### **How should I take Loxapac?**

Loxapac can be taken with or without food. It is often taken twice daily, but can also be taken once daily. Discuss your dosing schedule with your physician.

### **How much Loxapac should I take?**

Loxapac is available as 2.5, 5, 10, 25, and 50 mg tablets. The oral solution is available in a 25 mg/mL concentration. The injection is available in a 50 mg/mL concentration.



If you are taking an oral form of Loxapac, your initial dose will usually be 10 mg twice daily. Most people need between 60 and 100 mg daily, but your doctor will decide on the ideal dose based on your response, up to a maximum of 250 mg a day. Some individuals may be on higher doses. Discuss your dose with your prescriber.

The injectable form of Loxapac is a short-acting injection most often used in a hospital setting to help calm patients. It is used short-term and not continued into the community.

### **What are the common side effects seen with Loxapac?**

The most common side effects of Loxapac include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Blurred vision
- Dizziness
- Drowsiness
- Dryness of mouth
- Headache
- Increased sensitivity of skin to sun
- Nausea or vomiting
- Weight gain (less compared to atypical antipsychotics)

### **What are rare but potentially serious adverse effects with Loxapac?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Loxapac is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Loxapac?**

Tell all your doctors, pharmacists, and dentist that you are taking Loxapac. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal

and vitamin products

**The following types of medications may interact with Loxapac:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Loxapac.

**Majeptil (thiopropazine)**

**Brand name:** Majeptil®

**Active ingredient name:** Thiopropazine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets

**Brand name available in Canada from:** Erfa Canada Inc.

**Generic:** No

**Listed on Ontario formulary:** No

**Note:** Although this medication is available in Ontario, it is not routinely used and is not covered by the provincial drug plans. It may be used in other countries.

**What is Majeptil used for?**

Majeptil is used to treat schizophrenia and other psychotic illnesses in adults and children over 10 years old, including people who did not respond to the usual antipsychotics. It may also be used to treat manic episodes in bipolar disorder.

**How much Majeptil should I take?**

Majeptil is available in 10 mg tablets.

*Adults:* You will usually start with 5 mg a day in a single dose or divided doses. The usual optimal dose is 30 to 40 mg per day, but your doctor may adjust your dose up or down according to your response.

*Children (over 10 years old):* The starting dose is usually 1 to 3 mg a day in a single dose or divided doses. Your child's doctor will decide what the best dosage is for your child.

**What are the common side effects seen with Majeptil?**

Because studies have shown an increased risk of death in elderly people with dementia, Majeptil should not be used for this group.

The most common side effects of Majeptil include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Difficulty sleeping
- Constipation
- Reduced amount of urine
- Dizziness
- Drowsiness
- Dry mouth
- Nausea
- Headache
- Weight changes
- Blurred vision

**What are rare but potentially serious adverse effects with Majeptil?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Majeptil is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Majeptil?**

Tell all your doctors, pharmacists, and dentist that you are taking Majeptil. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

**The following types of medications might interact with Majeptil:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Majeptil.

### **Modecate (fluphenazine)**

**Brand name:** Modecate®

**Active ingredient name:** Fluphenazine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets, injection

**Brand name available in Canada from:** Bristol-Myers Squibb Canada

**Generic:** Yes: Apo-Fluphenazine Tab, Apo-Fluphenazine Injectable (Apotex Inc.); Fluphenazine Omega (Omega Laboratories Inc.); PMS-Fluphenazine Tab, PMS-Fluphenazine Decanoate (Pharmascience Inc.)

**Listed on Ontario formulary:** Yes

#### **What is Modecate used for?**

Modecate is used to treat symptoms of schizophrenia and other psychotic illnesses. It may be used to treat other illnesses. Discuss with your doctor why you are using Modecate.

#### **How Should I take Modecate?**

Modecate can be taken with or without food. It is most often taken 2-3 times per day but in some cases may be given once daily.

#### **How much Modecate should I take?**

Modecate is available in 1, 2, 2.5, and 5 mg tablets. Long-acting Modecate is available in concentrations of 25 and 100 mg/mL.

The usual dose range for oral modecate is 5-40 mg per day. Discuss your individual dose with your doctor.

If you are taking the long-acting Modecate depot the usual starting dose is 12.5 mg. The usual maintenance dose is 25-50 mg every 2-4 weeks. Some doses may be up to 100 mg every 2-4 weeks. Discuss your individual dose with your doctor.

#### **What are the common side effects seen with Modecate?**

The most common side effects of Modecate include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Sleeplessness/sleepiness
- Dizziness
- Headache

- Constipation
- Dryness of the mouth
- Nausea
- Weight change
- Blurred vision

**What are rare but potentially serious adverse effects with Modecate?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Modecate is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Modecate?**

Tell all your doctors, pharmacists, and dentist that you are taking Modecate. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

**The following types of medications may interact with Modecate:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Certain medications for seizures (e.g., Carbamazepine)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Modecate.

**Navane (thiothixene)**

**Brand name:** Navane®

**Active ingredient name:** Thiothixene

**Type of drug:** Typical antipsychotic

**Form:** Oral capsules

**Brand name available in Canada from:** Erfa Canada Inc.

**Generic:** No

**Listed on Ontario formulary:** Yes

**What is Navane used for?**

Navane is used to treat symptoms of schizophrenia and other psychotic illnesses in adults and children over 12 years of age.

**How should I take Navane?**

Navane can be taken with or without food. It can be taken once daily.

**How much Navane should I take?**

Navane is available in 2, 5, and 10 mg tablets.

The starting dose is usually 5 to 10 mg once a day. The usual dosage range is 15 to 30 mg once a day. Your doctor may adjust your dose up or down depending on your response, up to 60 mg a day. Discuss your individual dose with your doctor.

**What are the common side effects seen with Navane?**

Side effects of Navane may include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Dizziness
- Drowsiness
- Dry mouth
- Nausea
- Headache
- Weight changes
- Blurred vision
- Increased sensitivity to sunburn

**What are rare but potentially serious adverse effects with Navane?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased

risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Navane is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Navane?**

Tell all your doctors, pharmacists, and dentist that you are taking Navane. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription.

**The following types of medications may interact with Navane:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Navane.

**Neuleptil (periciazine)**

**Brand name:** Neuleptil®

**Active ingredient name:** Periciazine

**Type of drug:** Typical antipsychotic

**Form:** Oral capsules, oral drops

**Brand name available in Canada from:** Erfa Canada Inc.

**Generic:** No

**Listed on Ontario formulary:** Yes

**What is Neuleptil used for?**

Neuleptil is used to control symptoms of hostility, impulsiveness, and aggressiveness when used with other medications in adults and children over 5 years old. It is also used to treat schizophrenia and other psychotic illnesses in adults.

**How much Neuleptil should I take?**

Neuleptil is available in 5, 10, and 20 mg tablets.

The starting dose for adults is usually 5 to 20 mg in the morning and 10 to 40 mg in the evening.

Older adults will start at 5 mg a day. Your doctor may increase your dose if needed, but not usually more than 30 mg a day. Some doses may go above 30 mg per day. Discuss your individual dose with your doctor.

Children 5 years and older usually take 2.5 to 10 mg in the morning and 5 to 30 mg in the evening.

### **What are the common side effects seen with Neuleptil?**

The most common side effects of Neuleptil include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Dizziness
- Drowsiness
- Dry mouth
- Nausea
- Headache
- Weight changes
- Blurred vision

### **What are rare but potentially serious adverse effects with Neuleptil?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)
- Seizures

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Neuleptil is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Neuleptil?**

Tell all your doctors, pharmacists, and dentist that you are taking Neuleptil. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription.

### **The following types of medications may interact with Neuleptil:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents



Avoid drinking alcohol or using illegal drugs while taking Neuleptil.

### **Nozinan (methotrimeprazine)**

**Brand name:** Nozinan®

**Active ingredient name:** Methotrimeprazine

**Type of drug:** Typical antipsychotic

**Form:** Injection, oral tablets

**Brand name available in Canada from:** Erfa Canada Inc.

**Generic:** Yes: Apo-Methoprazine (Apotex Inc.); Novo Meprazine Tab (Novopharm Ltd.); PMS-Methotrimeprazine (Pharmascience Inc.)

**Listed on Ontario formulary:** Yes

### **What is Nozinan used for?**

Nozinan is used to treat symptoms of schizophrenia and other psychotic illnesses. It may also be used to treat bipolar disorder, or conditions associated with anxiety. Nozinan may be used to treat other conditions as well. Discuss with your doctor why you are using Nozinan.

### **How should I take Nozinan?**

Nozinan can be taken with or without food. It can be taken once per day, however, it is most often given twice or three times daily.

### **How much Nozinan should I take?**

Nozinan is available in injectable form in a 25 mg/mL concentration. The generic form of Nozinan is also available in 2, 5, 25, and 50 mg tablets.

The oral starting dose of Nozinan for schizophrenia and other psychotic illnesses is 50-75 mg per day. The dose is increased up to a maximum of 1000 mg per day depending on response. Discuss your individual dose with your doctor.

### **What are the common side effects seen with Nozinan?**

The most common side effects of Nozinan include

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Drowsiness
- Dry mouth
- Nausea
- Headache

- Weight changes
- Blurred vision

**What are rare but potentially serious side effects seen with Nozinan?**

- Decreased white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Anaphylactic reaction (severe allergy)
- Torsades de Pointes (a serious heart arrhythmia)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Nozinan is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Nozinan?**

Tell all your doctors, pharmacists, and dentist that you are taking Nozinan. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

**The following types of medication may interact with Nozinan:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)

Avoid drinking alcohol or using illegal drugs while taking Nozinan.

**Orap (pimozide)**

**Brand name:** Orap®

**Active ingredient name:** Pimozide

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets

**Brand name available in Canada from:** MM Therapeutics Inc.

**Generic:** Yes: Apo-Pimozide (Apotex Inc.); PMS-Pimozide (Pharmascience Inc.)

**Listed on Ontario formulary:** Yes

**What is Orap used for?**

Orap is used to treat symptoms of schizophrenia and other psychotic illnesses in adults. Some research suggests individuals with autism and schizophrenia do very well with pimozide treatment. Orap may also be used to treat Tourette's Syndrome in children.

**How much Orap should I take?**

Orap is available in 2 and 4 mg tablets. It is given once daily.

The usual dosage range for Orap for schizophrenia and other psychotic illnesses is 2-12 mg per day. The most common daily dose is 6 mg per day. Doses above 20 mg are not recommended.

**What are the common side effects seen with Orap?**

The most common side effects of Orap include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in menstrual cycle
- Decrease in sexual interest and/or function
- Swelling of the breasts and milk production in both men and women
- Decreased weight
- Dry mouth
- Nausea
- Headache
- Difficulty sleeping (insomnia)

In addition to the above physical side effects, Orap can cause mood side effects. Some individuals may develop low mood or depression while on Orap. In addition, some individuals may also describe feeling a sense of unease, dissatisfaction with life, indifference or unhappiness. If your mood or feelings change while taking Orap inform your doctor. Your doctor will assess you to determine if you are experiencing side effects from the medication or symptoms from your illness.

**What are rare but potentially serious side effects seen with Orap?**

- Decreased white blood cell count (agranulocytosis)
- Drug-induced lupus
- Anaphylactic reaction (severe allergy)
- Torsades de Pointes (a serious heart arrhythmia)
- Neuroleptic Malignant Syndrome (NMS)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either

cardiovascular or infectious. Orap is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Orap?**

Tell all your doctors, pharmacists, and dentist that you are taking Orap. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal or vitamin products.

Orap has the potential for several significant drug interactions. It is very important to be sure to inform your doctor and pharmacist of all medications you are taking if you are on Orap.

### **The following classes and/or individual medications might interact with Orap:**

- Amiodarone (antiarrhythmic)
- Certain medications for HIV infection
- Other antipsychotic medication (typical and atypical)
- Certain antidepressants (amitriptyline, desipramine, citalopram, escitalopram, fluoxetine, paroxetine, nortriptyline, sertraline)
- Certain antibiotics (clarithromycin, ciprofloxacin, erythromycin, levofloxacin)
- Antifungals (fluconazole, ketoconazole)
- Grapefruit juice

Avoid drinking alcohol or using illegal drugs while taking Orap.

### **Stelazine (trifluoperazine)**

**Brand name:** Stelazine®

**Active ingredient name:** Trifluoperazine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets, oral syrup

**Brand name available in Canada from:** Not available in Canada

**Generic:** Yes: Trifluoperazine (AA Pharma Inc.); PMS-Trifluoperazine Tab, PMS-Trifluoperazine HCL Syrup (Pharmascience Inc.); Novo-Trifluzine Tab (Novopharm Ltd.)

**Listed on Ontario formulary:** Yes

### **What is Stelazine used for?**

Stelazine is used to treat the symptoms of schizophrenia and other psychotic illnesses in adults and children over 6 years of age.

**How much Stelazine should I take?**

Stelazine is available in 1, 2, 5, 10, and 20 mg tablets. It is also available as syrup in 1 and 10 mg/mL concentrations.

*Adults:* The usual starting dosage for adults with schizophrenia and other psychotic illnesses is 2 to 5 mg twice a day. Most people will show optimum response on 15 or 20 mg daily, although some may require 40 mg a day or more. Discuss your individual dose with your doctor.

*Children:* The starting dose is 1 mg administered once or twice daily. Your child's dosage may be increased gradually.

**What are the common side effects seen with Stelazine?**

The most common side effects of Stelazine include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Drowsiness
- Dizziness
- Dry mouth
- Insomnia
- Fatigue
- Loss of appetite
- Blurred vision

**What are rare but potentially serious adverse effects with Stelazine?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Stelazine is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What drugs interact with Stelazine?**

Tell all your doctors, pharmacists, and dentist that you are taking Stelazine. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products

### **The following types of medications may interact with Stelazine:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Stelazine.

### **Stemetil (prochlorperazine)**

**Brand name:** Stemetil®

**Active ingredient name:** Prochlorperazine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets, injection, suppositories

**Brand name available in Canada from:** Not available in Canada

**Generic:** Yes: Apo-Prochlorazine (Apotex Inc.); Nu-Prochlor Tab (Nu-Pharm Inc.); PMS-Prochlorperazine Inj, PMS-Prochlorperazine Tab, PMS-Prochlorperazine Suppository (Pharmascience Inc.); Prochlorperazine Mesylate Inj, Sandoz Prochlorperazine (Sandoz Canada Inc.)

**Listed on Ontario formulary:** Yes

### **What is Stemetil used for?**

Stemetil can be used to treat the symptoms of schizophrenia and other psychotic illnesses. However, it is more commonly used to prevent and treat nausea and vomiting associated with chemotherapy and radiation. It is indicated in adults and children over 2 years of age.

### **How much Stemetil should I take?**

Prochlorperazine is available as 5 and 10 mg tablets. The injection is available in a 5 mg/mL concentration. It is also available as 10 mg suppositories.

In higher doses Stemetil is used to treat schizophrenia. In lower doses, it is used to treat and prevent nausea and vomiting associated with chemotherapy and radiation.

Your doctor will determine the right dose and form that best meets your needs.

### **What are the common side effects seen with Stemetil?**

The most common side effects of Stemetil include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Dizziness
- Drowsiness
- Dry mouth
- Insomnia
- Excitement and bizarre dreams
- Decreased appetite
- Headache
- Weight changes
- Blurred vision

**What are rare but potentially serious adverse effects with Stemetil?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)
- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

**Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Stemetil is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

**What medications interact with Stemetil?**

Tell all your doctors, pharmacists, and dentist that you are taking Stemetil. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products

**The following types of medications may interact with Stemetil:**

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Stemetil.

### **Trilafon (perphenazine)**

**Brand name:** Trilafon®

**Active ingredient name:** Perphenazine

**Type of drug:** Typical antipsychotic

**Form:** Oral tablets

**Brand name available in Canada from:** Not available in Canada

**Generic:** Yes: Perphenazine (AA Pharma Inc.); PMS-Perphenazine Concentrate Liq, PMS-Perphenazine (Pharmascience Inc.); Perphenazine (Teva Canada Ltd.)

**Listed on Ontario formulary:** Yes

### **What is Trilafon used for?**

Trilafon is used to manage psychotic illnesses, depression, and schizophrenia. It is also used as a tranquilizer to help reduce agitated and disruptive behaviour and to manage severe nausea and vomiting. It is approved for use in people 12 years of age and older.

### **How much Trilafon should I take?**

Perphenazine is available in 2, 4, 8, and 16 mg tablets.

Your doctor will decide what the best dose is for you.

The recommended dose varies widely. It will depend on your condition and your response, up to a maximum of 24 mg daily.

### **What are the common side effects seen with Trilafon?**

Because studies have shown an increased risk of death in elderly people with dementia, Trilafon should be used with caution in this group.

Side effects of Trilafon may include:

- Abnormal movements (extrapyramidal symptoms)
- Changes in monthly menstrual cycle (amenorrhea)
- Decreased sexual interest and/or function
- Swelling of breasts and milk production in males and females
- Blurred vision
- Constipation
- Drowsiness
- Dry mouth

### **What are rare but potentially serious adverse effects with Trilafon?**

- Decrease in white blood cell count (agranulocytosis)
- Neuroleptic Malignant Syndrome (NMS)



- Sudden cardiac death (heart attack)
- Torsades de pointes (serious heart arrhythmia)

### **Warnings/Precautions**

Elderly individuals with dementia-related psychosis treated with antipsychotic medication are at an increased risk of death compared to individuals not receiving antipsychotics. Most deaths appear to be either cardiovascular or infectious. Trilafon is not approved for the treatment of dementia-related psychosis. Some individuals with dementia may, however, be treated with this medication. Discuss the potential risks and benefits of this medication with your doctor for this indication.

### **What medications interact with Trilafon?**

Tell all your doctors, pharmacists, and dentist that you are taking Trilafon. You should also tell your doctor or pharmacist if you are taking any other medications, including those obtained without a prescription and herbal and vitamin products.

The following types of medications may interact with Trilafon:

- Certain medications for allergies (e.g., Benadryl [diphenhydramine])
- Certain medications for sleep (e.g., lorazepam, zopiclone)
- Certain medications for pain (e.g., fentanyl)
- Antiparkinson agents

Avoid drinking alcohol or using illegal drugs while taking Trilafon.

## **OTHER PSYCHOTROPIC MEDICATIONS OFTEN PRESCRIBED**

In addition to antipsychotic medications your doctor may prescribe other medications to help treat symptoms of your schizophrenia or other psychotic illnesses. Some other commonly-prescribed medications are listed below. If you are receiving one of these medications discuss the reasons for use, dosage, side effects and potential drug interactions with your doctor and pharmacist.

- 1. Mood Stabilizers:** Mood stabilizers are often used to treat bipolar disorder. They may also be used to treat schizophrenia and other psychotic illnesses. They are often added to antipsychotic therapy. The following is a list of most-commonly prescribed mood stabilizers:
  - Lithium
  - Divalproex Sodium
  - Carbamazepine
  - Lamotrigine

**2. Benzodiazepines:** Benzodiazepines can be used to treat many conditions. They can be used to help people sleep, to help with symptoms of anxiety and sometimes to help people feel calm. Discuss with your doctor why you are using benzodiazepines. The following is a list of commonly-prescribed benzodiazepines:

- Lorazepam
- Clonazepam
- Alprazolam
- Diazepam

**3. Antidepressants:** Antidepressants are used to treat low mood. They can be used to treat major depressive disorder on their own. However, they may also be added to antipsychotic therapy to treat low mood in individuals with schizophrenia or other psychotic illnesses. The following is a list of commonly-prescribed antidepressants:

- Citalopram
- Escitalopram
- Paroxetine
- Fluoxetine
- Fluvoxamine
- Sertraline
- Mirtazapine
- Trazadone
- Venlafaxine
- Desvenlafaxine
- Duloxetine
- Vortioxetine
- Amitriptyline
- Nortriptyline
- Clomipramine
- Phenelzine
- Moclobemide
- Levomilnacipran

## MANAGING SIDE EFFECTS

Side effects are the body's reaction (emotional or physical or both) to a medication. Lists of side effects can sound or look alarming. It is a good idea to be prepared by reading about the potential side effects *before* starting treatment. Individuals will experience side effects differently. Some individuals may experience many side effects, while others may experience very few or none. For some individuals, side effects can be very

troubling and may impact adherence to the medication. For others side effects may be very mild and cause no concerns.

Although antipsychotics have many common side effects, some medications may be less likely than others to cause the different side effects listed in this section. Side effects with each medication are different. Just because you experience side effects with one medication does not mean you will experience side effects with another medication.

It is also important to know that many of the side effects that occur with antipsychotic medications can be treated. Some side effects are related to the dose (dose-related side effects), hence sometimes decreasing a dose even slightly can improve side effects. Some side effects commonly occur at the beginning of treatment and with dose increases but improve as you stay on the medication longer. Finally, there are often other medications or non-medication strategies that can be used to manage side effects if necessary.

If you are experiencing side effects, tell your doctor and pharmacist. They can suggest ways to help you manage the side effects.

***The side effect lists stated for individual antipsychotic medications in this online resource are not comprehensive. They contain some of the most common side effects that individuals may experience as well as some very rare side effects that can be very serious if individuals experience them. Discuss with your doctor and pharmacist the full range of side effects that may occur with your prescribed medication.***

## Common Side Effects with Antipsychotics<sup>3</sup>

### Movement Disorders

Because antipsychotic medications interfere with the neurotransmitter dopamine, which is important in controlling movement, many of the side effects involve movement. These are called extrapyramidal symptoms. They can include: movement changes similar to Parkinson's disease (Parkinsonism), loss of movement (akinesia), restlessness (akathisia), and muscle spasms (dystonia). The typical antipsychotics are associated with more movement-related side effects compared to atypical antipsychotics, however, they can occur with both groups. Clozapine is the only antipsychotic thought to NOT cause movement-related side effects in individuals.

Long-term use of antipsychotic medication can cause permanent extrapyramidal symptoms even after the

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<sup>3</sup> Rummel-Kluge, C., Komossa, K., Schwartz, S., Hunger, H., Schmid, F., Kissling, W., et al. (2010). Second-generation antipsychotic drugs and extrapyramidal side effects: A systematic review and meta-analysis of head-to-head comparisons. *Schizophrenia Bulletin*, published online doi:10.1093/schbul/sbq042

Correll, C. U., Manu, P., Olshanskiy, V., Napolitano, B., Kane, J. M., Malhotra, A. K. et al. (2009). Cardiometabolic risk of second-generation antipsychotic medications during first-time use in children and adolescents. *JAMA*, 302(16), 1765-1773.

Lieberman, J. A., Stroup, T. S., McEvoy, J. P., Swartz, M. S., Rosenheck, R. A., Perkins, D. O., et al. (2005). Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *The New England Journal of Medicine*, 353(12), 1209-1223.

medication is stopped. This is called tardive dyskinesia.<sup>4</sup> This most commonly occurs with typical antipsychotic medications.

### **Parkinsonism**

Some side effects resemble Parkinson's disease, which is caused by the loss of dopamine. This can make muscles stiff and weak, reduce the animation in the face, cause the hands to shake, and make fine movement difficult.

### **Loss of Movement (akinesia)**

Akinesia or bradykinesia are terms used to describe a slowing of movement that individuals may experience taking antipsychotic medications. Individuals may lose the ability to move easily and quickly due to blocking of dopamine receptors in the movement area of the brain.

### **Restlessness (akathisia)**

A person on antipsychotic medication may feel intensely restless and unable to sit still. This is more than just a physical restlessness and can result in a feeling of being tense and uneasy. If you experience feelings of inner or outer restlessness it is important to notify your doctor. This is a dose-related side effect and often a small decrease in the dose of the antipsychotic can help you feel much better.

### **Muscle Spasms/Dystonia (dysphonia and oculogyric crisis)**

These are acute muscle contractions that are uncontrolled and may be painful. This side effect most commonly occurs in the neck or shoulder. Sometimes the problem affects the muscles of the larynx (voice box), which makes it difficult to speak normally (dysphonia).

Another form of muscle spasm affects the muscles that control eye movements. This is called oculogyric crisis. This side effect makes the eyes turn suddenly. This is very unpleasant and can make a number of activities quite dangerous, for example, when pouring hot water or crossing a road.

### **Tardive Dyskinesia**

Usually, tardive dyskinesia does not occur until after many months, if not years, of taking antipsychotic medications. Random movements—usually starting in the face and mouth as involuntary tongue movements and slight grimacing—most often characterize this side effect. The problem can spread to

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<sup>4</sup> Leucht S., Corves C., Arbter D., Engel R., Li C., & Davis, J. (2009). Second-generation versus first-generation antipsychotic drugs for schizophrenia: A meta-analysis. *Lancet*, 373(9657), 31-41. doi:10.1016/S0140-6736(08)61764-X

the rest of the body, with writhing movements in the limbs, muscle spasms, tremors, and tics. The movements usually disappear during sleep.

### **Drowsiness**

Some people may also experience drowsiness, especially when first starting the medication. Driving or operating machinery should be avoided until the medication effects are known. Drowsiness is often a side effect that people get used to over time. Also, taking the medications in the evening can help with management of this side effect.

### **Sexual Side Effects**

After the use of some antipsychotics, some people may develop high levels of prolactin. Prolactin is a hormone that is involved in monthly menstrual cycle regulation, sexual desire and functions and breastmilk production after childbirth. The production of this hormone involves dopamine. Therefore, antipsychotic medications can increase the production prolactin because of their effect on dopamine in the brain. This side effect is most significant with the typical antipsychotics. If you have high prolactin from your medication you may find you are not interested in having sex, you may experience premature ejaculation if you are a male and loss of menstrual periods if you are female. Both males and females may experience swelling of the breasts and milk production. Over time, this high level of prolactin may lead to hormone imbalances which can also put both men and women at an increased risk of breaking a bone due to osteoporosis.

### **Heart Rate and Rhythm**

Many antipsychotics can affect the heart's rate and rhythm—especially at high dosages. Antipsychotic medications can increase the risk of arrhythmias in certain individuals. Whatever the dose of your medication, unexplained blackouts or a sudden shortness of breath should be mentioned to your doctor. He or she may order a heart-tracing or a heart-rhythm monitor to be worn for a day or two to determine what is happening with your heart.

### **Eye Problems**

Various antipsychotics may be responsible for different eye disorders. These can include blurred vision, difficulty reading, and glaucoma (increased pressure inside the eye). If you experience any changes in vision or pain in your eyes during treatment with antipsychotic medications, discuss this with your doctor.

### **Metabolic Changes (e.g., weight gain, diabetes, dyslipidemia)**

Antipsychotics have been associated with weight gain, diabetes, and changes in cholesterol levels (dyslipidemia). Before starting antipsychotics, your doctor will consider whether these risks outweigh the benefits of treatment for you.

After starting antipsychotics, you and your doctor should track your weight and your waist circumference. Other tests such as fasting blood glucose, lipid levels, and blood pressure may also be done regularly. You might need to change medications if you gain weight quickly, become pre-diabetic or diabetic, or develop high blood pressure or dyslipidemia.<sup>5</sup> Many individuals who gain weight from antipsychotic medication can successfully lose the weight with support from healthcare providers.

Not all antipsychotic medication is equal when it comes to weight gain. Some medication causes more weight gain than others. Discuss with your doctor which medication is the best for you given your current weight and health status.

### **White Blood Cell Count**

Antipsychotic medications can cause decreases in white blood cell counts. This side effect occurs most commonly with the atypical antipsychotics. This side effect is potentially concerning as people with low white blood cell counts are at a higher risk of serious infections. The overall risk of this side effect is very low. The medication that we are most concerned with is clozapine. The risk of this side effect with clozapine is approximately 1%.

For this reason, individuals who take clozapine must have their white blood cell count monitored to ensure it does not drop too low. Individuals will have their blood monitored once per week for the first 6 months of treatment; every 2 weeks for the next 6 months of treatment; followed by every 4 weeks for the duration of treatment. The risk of this side effect with clozapine is very low, however the blood monitoring ensures patient safety by identifying when a drop occurs.

The drop in white blood cell count usually occurs within the first few months of treatment but can occur at any time. This is not a dose-related side effect therefore lowering the dose and treating with lower doses does not change the risk.

If you are taking clozapine, discuss this side effect with your doctor.

### **Risk of Death in Older Adults with Dementia**

Antipsychotic medications are commonly used to treat schizophrenia and other psychotic illness in older individuals. Older adults with dementia may have an increased risk of death while taking antipsychotics. The risk was originally identified for the atypical antipsychotics. However, the precaution/warning has been extended to all antipsychotic medication in Canada. Individuals with dementia who receive antipsychotic medication to help with behaviour symptoms have an increased chance of dying from infection or stroke. The risk seems to

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<sup>5</sup> [Consensus Development Conference on Antipsychotic Drugs and Obesity and Diabetes]

increase with higher doses.<sup>6</sup> In many cases the benefit of these medications may outweigh these risks. It is important to understand the risks and benefits of these medications in individuals with dementia. Discuss all potential risks of these medications with your doctor.

## Managing Side Effects

Not everyone will have the same reaction to antipsychotic medications, so it is important to keep track of the effects the medication is having on you. Share this list with your doctor and pharmacist so they can help you manage your side effects effectively. Depending on the type and severity of your side effects, your doctor and pharmacist will have an approach that meets your individual needs.

***Your pharmacist can provide a list of your prescribed medications, which should be kept in a safe place, in case you need access to this information during an emergency. Give a copy to a family member or a friend. Your doctor's after-hours emergency telephone number should also be kept handy.***

## WORKING WITH YOUR HEALTHCARE TEAM

You and those who care for you can help with your treatment and how you monitor your reactions and side effects. Your healthcare team needs to collect a lot of information to develop a treatment plan that best addresses your needs. For example: Do you want to have a child now or in the future? Are you working? Do you have any allergies? Do you have a support network?

### Working with Your Doctor

You and your doctor will work *together* as a team to manage your treatment plan, so it is safer and more reassuring to have an open and honest relationship. Your doctor will want to know what works for you and what does not to tailor each plan to fit you best.

Your doctor will ask a number of questions and you, too, may have a lot of questions. Here are a few that will give you an outline of what you might want to know in order to understand your treatment plan and to manage your symptoms.

You will probably not want to ask them all — and probably not all at the same time. However, many of these questions will act as a useful reminder of information you might want to know at some point during your treatment. You may want to print this list of questions and take it with you to your next appointment. Consider taking a pen to your appointment to write notes—it might be a lot of information to remember all at once.

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<sup>6</sup> Huybrechts, K., Gerhard, T., Crystal, S., Olfson, M., Avorn, J., Lucas, J., & Schneeweiss, S. (2012). Differential risk of death in older residents in nursing homes prescribed specific antipsychotic drugs: Population based cohort study. *BMJ*, 344, e977. doi: 10.1136/bmj.e977

## Questions to Ask Your Doctor

1. What does my diagnosis mean?
2. Can you explain it in a way that I will understand?
3. What is the name of the medication and what is it supposed to do (what symptoms will it help with)?
4. How and when do I take this medication, and when do I stop taking it?
5. Should the medication be taken with food or on an empty stomach?
6. Are there any other types of treatment?
7. What are the side effects and what should I do if they occur?
8. Where can I get more information about the medication and possible side effects?
9. Is it safe to drink alcohol when I am on this medication?
10. Are there any foods or medications I should avoid while taking the prescribed medication?
11. Are there other specialists I could contact who might be able to help me manage/alleviate symptoms?
12. What can I expect in the near future and over time?
13. Can I get help with the cost of my medication?
14. Should I tell people at school?
15. Do I have to tell people at work?
16. Is it safe to drive while taking this medication?
17. Can you give me an out-of-hours emergency telephone number?
18. Is there anything I can do at home to make things easier or safer?
19. Are there organizations or support groups I can contact?
20. Can I have children?
21. What should I do if I am pregnant or want to have children?

In addition, Health Quality Ontario (HQO), the province's advisor on health care quality, has developed a Schizophrenia Quality Standard for Care for Adults in Hospitals (<http://www.hqontario.ca/Evidence-to-Improve-Care/Quality-Standards/View-all-Quality-Standards/Schizophrenia/Resources>) which provides a comprehensive standard of care for the treatment of schizophrenia in the hospital setting. The Standard is a guide to help to help you understand the care you should expect in a hospital setting and to develop your care plan with your doctor.

HQO is currently developing a Schizophrenia Quality Standard for Care in the Community. Information about the draft Standard can be found on HQO's website (<http://www.hqontario.ca/Evidence-to-Improve-Care/Quality-Standards/View-all-Quality-Standards>).

## Working with Your Pharmacist



Your pharmacist is an important part of your healthcare team. Pharmacists are highly trained in the area of medication management. Pharmacists can work with you to help monitor your medications. Pharmacists can also play a big role in helping you manage or reduce side effects if they occur.

Your pharmacist will always dispense the lowest-priced medication to you. This is a requirement for pharmacists according to the law of dispensing medications. The lowest-priced medication is usually a generic brand of the medication. If you would like the brand name you may request it. However, your drug plan may not cover the whole cost and if you would like this option you will be asked to pay the difference in cost.

Your pharmacist may ask you a number of questions to help determine the risk for side effects and drug interactions. You, too, may have a lot of questions for the pharmacist about your medication. Ask them as many questions as you can to be sure you understand your medications. Most pharmacies have a private counselling room to discuss your medicine. Ask your pharmacist if you can review your questions in a private space.

Here are a few that will help you learn the most you can about your medications.

### **Questions to Ask Your Pharmacist**

1. What is the name of the medication and what is it supposed to do?
2. How and when do I take this medication, and when do I stop taking it?
3. Are there any foods or medications I should avoid while taking the prescribed medication?
4. Should the medication be taken with food or on an empty stomach?
5. What are the side effects and what should I do if they occur?
6. Where can I get more information about the medication and possible side effects?
7. Is it safe to drink alcohol when I am on this medication?
8. Can I get help with the cost of my medication?
9. Why do you always give me the generic medication? Can I have the brand name?
10. Is it safe to drive while taking this medication?
11. What should I do if I miss a dose of this medication?
12. I get medications from more than one doctor. Will the medications interact?

## **GLOSSARY OF TERMS**

### **Agranulocytosis**

A rare, but serious side effect that can occur with some antipsychotic medication. It involves a large drop in white blood cells and puts an individual at increased risk of infection. The drop in white blood cells cannot be felt by the individual and this is the reason blood may be checked closely in individuals taking antipsychotic medications. By checking blood often, healthcare providers can see if an individual has had a drop in white blood cell counts and inform them before the individual develops infection.

### Akathisia

A potential side effect of many antipsychotic medications. Individuals with akathisia feel an unpleasant sensation of inner restlessness. It is often visible in individuals as frequent moving, inability to sit still, crossing and uncrossing legs, pacing and feelings of anxiety or panic.

### Arrhythmia

An arrhythmia is a condition in which the heart beats with an irregular or abnormal rhythm. Some antipsychotic medications can increase the risk of arrhythmia. This side effect can be very serious so your doctor will review your heart health with you and may do tests to look at your heart rhythm in some cases.

### Brand-Name Medication

A medication that is discovered and sold by a pharmaceutical company under a patent for many years. Brand-name medication is more expensive than generic medication because the pharmaceutical company who discovered it has many costs with the drug research and marketing. A brand-name medication is given a brand/trade name by the pharmaceutical company, which can only be used by the original company.

### Constipation

This is a potential side effect with many antipsychotic medications. It is a side effect that decreases the number of bowel movements an individual has to less than 3 per week or results in bowel movements that are very hard, dry and difficult to pass. If you notice any change to your bowel routine on antipsychotic medication it is really important to tell your doctor and pharmacist.

### Depot Injection

This is a type of long-acting intramuscular injection. Some antipsychotic medications are formulated into depot injections so that individuals can take medication less often. Most depot injections need to be given every 2-4 weeks.

### Drowsiness/Sedation

Some antipsychotic medications can cause individuals to feel drowsy or very sleepy. Often this side effect improves the longer you are on the medication.

### Extrapyramidal Symptoms

A potential side effect of antipsychotic medication due to blocking of dopamine in different parts of the brain. These side effects impact movement. They include things like muscle stiffness, restlessness, tremors, involuntary movements of tongue, fingers, feet and stiffness or rigidity.

### Generic Medication

A copy of a brand-name medication. It is equivalent to the brand-name medication in terms of safety and efficacy but may be a different shape or a different colour. It is sold for less money, after the patent on the original brand-name medication expires.

#### Hyperprolactinemia

This is a potential side effect associated with antipsychotic medication. It is more common with typical antipsychotics but it can occur with some of the atypical medications. It means that individuals get an increased level of prolactin in their body because the medication blocks dopamine receptors. Prolactin is a hormone involved in things like menstrual cycles, sexual desire and function and production of breast milk. Individuals who have this side effect may experience loss of interest in sex, change in menstrual cycle (including no longer experiencing a monthly period), premature ejaculation and swelling of breasts and production of breast milk in males and females (who are not pregnant and/or have not given birth recently).

#### Insomnia

Some individuals may experience insomnia with antipsychotic medication. This means that individuals may have trouble falling asleep and/or staying asleep. The medication may make them feel very awake. If this happens to you it is best to try taking the medication in the morning to help prevent sleeping difficulties at bed time.

#### Neuroleptic Malignant Syndrome

This is a very rare side effect that may occur with antipsychotic therapy. This side effect can be life-threatening. It usually consists of fever, confusion, stiffness of the muscles and changes to the nervous system leading to wide swings of blood pressure, excessive sweating and excessive secretion of saliva.

#### Orthostatic Hypotension

This is a side effect that can occur with many antipsychotic medications. It is when an individual experiences a drop in their blood pressure reading when they stand up. In order to decrease the risk of this side effect it is important to stand up slowly from sitting positions or when you are lying down. If a person has this side effect they may feel dizzy or they may faint when they stand up quickly.

#### Parkinsonism

A type of extrapyramidal side effect or movement side effect that may occur with antipsychotic medication. It is called Parkinsonism because it looks similar to symptoms that individuals with Parkinson's disease may have. The common things you will see in individuals who get this side effect from antipsychotic medication are hand tremor/shaking, slow movement, slow speech/talking and muscle stiffness.

#### Sublingual Tablet

A sublingual tablet is one that must be dissolved in the mouth instead of swallowed. These medications dissolve easily in saliva under your tongue.

#### Tardive Dyskinesia

This is a potential side effect of antipsychotic treatment. It occurs most often with typical antipsychotic medications. It usually occurs after being treated for long periods of time and/or being treated with high doses of the medication. It involves involuntary, repetitive movements of the body. It often involves things like lip smacking, tongue movements, a lot of eye blinking, tongue movements and lip pursing/puckering. You can sometimes also see involuntary movements in the arms and legs, fingers and in the chest area.

### USEFUL LINKS

#### Ontario Ministry of Health and Long-term Care

[www.health.gov.on.ca](http://www.health.gov.on.ca)

#### Health Canada

[www.hc-sc.gc.ca/index-eng.php](http://www.hc-sc.gc.ca/index-eng.php)

#### Ontario Drug Benefit Formulary

[www.healthinfo.moh.gov.on.ca/formulary](http://www.healthinfo.moh.gov.on.ca/formulary)

#### Centre for Addiction and Mental Health (CAMH)

[www.camh.net](http://www.camh.net)

#### National Institute of Mental Health (NIMH)

[www.nimh.nih.gov/health/topics/schizophrenia](http://www.nimh.nih.gov/health/topics/schizophrenia)

#### Drug Coverage Information

[www.drugcoverage.ca](http://www.drugcoverage.ca)

#### MedicineNet (Doctor-produced health and medicinal information)

[www.medicinenet.com](http://www.medicinenet.com)

#### Motherisk

<http://www.motherisk.org/women/index.jsp>