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ABCs *of* Psychiatric Medication



 **INSTITUTE
of MENTAL
HEALTH**

Loving Hearts, Beautiful Minds





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1. Introduction

Psychiatric medicines have changed the lives of people with mental illnesses for the better and many people have gone on to live fulfilling lives with the help of these medicines. Today, there is a wide range of safe and effective medicines available to treat these illnesses and it is important to know the medicines that your doctor prescribes to you.

Besides knowing what they are and what symptoms they treat, it is good to be aware of some of the side effects so that you would be able to talk to your doctor about them. Adhering to medication dosages and schedules is important. If you wish to adjust the medication routine, please consult your doctor as abruptly stopping some of these medicines may cause a Discontinuation Syndrome, with either a worsening of earlier symptoms or the appearance of other physical or psychological symptoms.

This booklet does not provide information about diagnosing mental illnesses. Your medicines, dosages and treatment plan are based on the doctor's review, which considers your individual needs and medical condition. You will learn from this booklet, the available psychiatric medicines at IMH for specific illnesses, their usage and common side effects.



Other Important Considerations:

- Let your doctor/pharmacist know what other medicines you are on. Some medicines have drug-drug interactions and may need to be avoided. This also includes informing your doctor about herbal preparations, dietary supplements and other over-the-counter remedies you may be taking.
- Ensure you provide information about any medical/surgical problems such as Diabetes, Hypertension, renal or cardiac problems.
- Pregnancy is important as some medicines may have effects on pregnancy and the fetal development, and may be secreted in the breast milk.
- Always know what medicines you are taking and keep in mind or keep a record of the dosages you have been given and the frequency of dosing. If you are on depot injections, know the frequency of injections and maintain a record.
- You must be responsible for your medicines. Keep them safe, out of reach of children and in a cool and dry place.
- Note expiry dates of medicines you are prescribed.
- Inform your doctor/pharmacist if you have leftover medicines.



2. Antipsychotics

Introduction

Antipsychotics are used to treat and prevent the recurrence of symptoms of psychosis in schizophrenia. These include hearing or seeing things which are actually not present, disorganised or unreal thoughts, suspiciousness, uncontrollable anger or social isolation.

They can be divided into two groups, namely the typical and atypical antipsychotics.

TYPICAL (or First Generation)	ATYPICAL (or Second Generation)
Chlorpromazine	Clozapine
Haloperidol	Amisulpiride
Sulpiride	Olanzapine
Trifluoperazine	Risperidone
	Quetiapine
	Paliperidone
	Aripiprazole
	Ziprasidone

Antipsychotics have other uses in addition to their role in treating schizophrenia. Typical or first generation antipsychotics can be used in Tourette's syndrome or to control severe behavioural problems in children and other indicated conditions. Some atypical antipsychotics can be used to treat bipolar mood disorder too.

Antipsychotics correct the abnormal concentrations of neurotransmitter in the brain.



How to Use These Medicines

Take your medicine as prescribed. Do not take more or less of it. It must be taken regularly for a few weeks before its full effect is felt.

Antipsychotic drugs available in the market come in different forms, such as tablets (immediate and extended-release), oral solutions and injections. The type of formulation chosen for each patient is dependent on his needs and preferences. Oral solutions can be mixed in drinking water, fruit juice or low-fat milk. They cannot be mixed with tea, cola or alcoholic drinks. Extended-release tablets need to be swallowed whole with water or other liquids and should not be split, crushed or chewed.

In some circumstances, you may find the tablet shell of some medicines in your stools. This occurs because the empty tablet shell cannot be dissolved completely after the medicine has been absorbed into the body. One example of such a drug is Paliperidone.

For patients who have difficulty taking oral medicines or who tend not to take their medicines regularly, the option of depot injections can be considered. Antipsychotic depot injections are typically administered once every two to four weeks and can stay in the body throughout that length of time. In addition to the side effects experienced with the oral forms of medicines, depot injections can also cause redness at the injection site.

Precautions

Most of the antipsychotics can interfere with your body's ability to cool down and make you sweat less. This might cause your body temperature to rise. Take extra care not to overheat your body, especially during strenuous exercise. Atypical antipsychotics may sometimes worsen your blood glucose control and cholesterol levels. You may need to have periodic blood tests while on medication. Typical antipsychotics may make your skin become more sensitive to sunlight. Avoid prolonged exposure by wearing protective clothing or using sunscreen. If you are a smoker, the amount of Olanzapine or Clozapine that stays in your body may be decreased due to your smoking habit. Clozapine may cause seizures (fits).

Side Effects

Common

The following side effects may lessen or go away with time.

Let your doctor know if any of these persists or affects you significantly.

Typical antipsychotics	Atypical antipsychotics
Drowsiness & dizziness	Drowsiness & dizziness
Dry mouth	Dry mouth
Constipation	Constipation
Changes in menstrual cycle	Changes in menstrual cycle
Tremor or shaking	
	Increase in appetite and weight gain
Increased salivation or drooling	
	Headache
	Nausea or vomiting
	Stomach discomfort or indigestion
	Difficulty in sleeping
	Anxiety
	Stuffy or runny nose

Rare but Serious

These are some rare but serious side effects of antipsychotic drugs. If you experience any of these adverse effects, stop the medicine immediately and see your doctor as soon as possible. These include:

- Allergic reactions: skin rash or itching, difficulty in breathing, swelling in the face, lips or other parts of the body or chest pain.
- Severe muscle stiffness
- Muscle spasm (such as in the neck, back or eyelids), twitching or uncontrolled face, tongue or jaw movements.
- High fever and confusion

- Restlessness or the need to keep moving constantly.
- Difficulty in speaking or swallowing.
- Irregular heartbeat
- Seizures (fits)
- Problems with eyesight or blurred vision

Clozapine

Clozapine is a very unique and effective antipsychotic but it can cause a serious and potentially fatal blood condition called agranulocytosis – a decrease in white blood cell count in the body. However, it can be detected with regular blood monitoring. If the condition occurs, see your doctor immediately to stop the medicine and you should not take Clozapine again.

You must also comply with all appointments with your doctor. The doctor will order certain blood tests before starting your treatment, weekly for the first 18 weeks and at least monthly thereafter. These blood tests are extremely important to detect the condition. It is dangerous to take Clozapine without regular blood tests.

While you are taking Clozapine, seek immediate medical attention if you have high fever, sore throat and feel very tired.

If you happen to stop taking Clozapine for any reason for more than two days, do not resume the same dose of medicine. Consult your doctor regarding the dose you should start on.

Pregnancy and Breastfeeding

Pregnancy is possible for patients who suffer from schizophrenia or who need to be on long-term medication. Studies show that there is a slight increase in the risk of birth defects with some first generation antipsychotics. Haloperidol is one of the typical antipsychotics which can be used by pregnant women as there is no relationship between its use and the risk of birth defects. There are some concerns over the use of atypical antipsychotics and the potential risk of developing gestational diabetes.



Antipsychotics may appear in breast milk at low amounts. However, the use of Clozapine during breastfeeding is not recommended because its amount in breast milk was found to be three times higher than that in blood concentration.

Stopping Medication

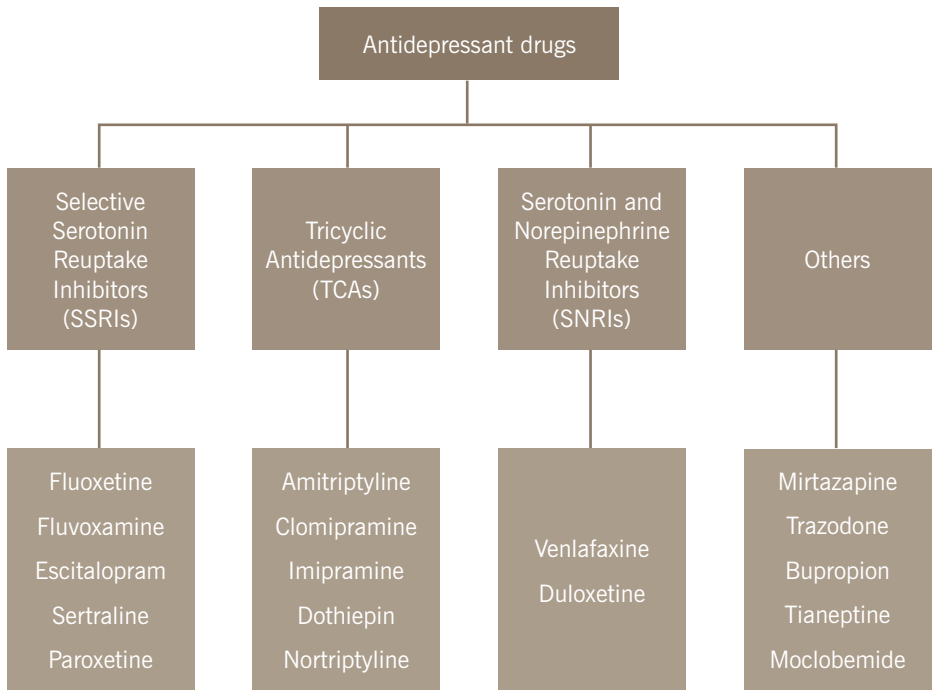
Do not stop taking your medicines without telling your doctor, especially if you have taken large doses for a long time. Otherwise, your condition may worsen very quickly.



3. Antidepressants

Introduction

There are many different types of antidepressants which are available in the market today. The following antidepressants are currently available at IMH, grouped under their respective classes:





Antidepressants are primarily used to treat symptoms of depression like persistent feelings of sadness, significant loss of interest in daily activities, appetite and weight changes, disruptions to sleep pattern and thoughts of self-harm or suicide. They act by regulating the neurotransmitter levels in the brain.

They are also used to treat other conditions, like anxiety disorders and eating disorders.

How to Use These Medicines

Take the medicine as prescribed by the doctor. Do not take more or less of it.

It will take a few weeks for the full effect of antidepressant medicine to be felt. They should be taken with or after food. Do avoid alcohol while on treatment. Consult the doctor immediately if you experience new or worsening thoughts of harming or killing yourself, increase in symptoms such as anxiety, restlessness, violent behaviour, or other changes in mood and behaviour. Your caregiver should know which symptoms require immediate attention so that they can call the doctor in the event that you are unable to seek treatment on your own.

Different types of drugs are formulated differently.

Fluoxetine, Dothiepin, Nortriptyline, and Duloxetine come in capsule form and should be swallowed whole. Venlafaxine and Bupropion are extended-release tablets and should not be crushed or chewed. Mirtazapine can dissolve rapidly once it is placed on the tongue. Do not handle the tablets with wet hands and do not break, split or crush them.

Stopping Medication

Continue to take your medicines regularly even if you feel well. Do not stop taking it without first discussing with your doctor. Doing so especially after taking it for a long time may lead to unwanted effects. It may also cause your condition to worsen quickly.



The following table describes characteristics which are specific to each class of antidepressant medicines:

	SSRIs	TCA's	SNRIs
Common Side Effects	<ul style="list-style-type: none"> • Difficulty sleeping • Drowsiness • Sexual dysfunction • Diarrhoea • Increased nervousness 	<ul style="list-style-type: none"> • Drowsiness • Tiredness • Sexual dysfunction • Constipation • Dryness of mouth • Weight gain 	<ul style="list-style-type: none"> • Difficulty sleeping • Decreased appetite • Constipation • Dryness of mouth • Increased nervousness • Sexual dysfunction
Rare but Serious Side Effects	<ul style="list-style-type: none"> • Fever, severe weakness, muscle twitching • Intense agitation or anxiety • Manic symptoms² 	<ul style="list-style-type: none"> • Blurred vision • Problems urinating • Hallucinations • Fast or irregular heartbeat • Stiffness of arms and legs 	<ul style="list-style-type: none"> • Intense agitation • Fast or irregular heartbeat

¹ Allergic reactions include Skin rash, itch, swelling or difficulty breathing

² Manic symptoms: Talking, feeling and acting with sudden uncontrollable excitement



	Mirtazapine	Trazodone	Bupropion	Tianeptine	Moclobemide
	<ul style="list-style-type: none"> • Nausea • Headache • Dizziness 				
n	<ul style="list-style-type: none"> • Drowsiness • Increased appetite – may lead to weight gain 	<ul style="list-style-type: none"> • Drowsiness • Tiredness • Dryness of mouth • Diarrhoea or constipation • Sexual dysfunction 	<ul style="list-style-type: none"> • Difficulty sleeping • Dryness of mouth • Weight loss 	<ul style="list-style-type: none"> • Difficulty sleeping • Drowsiness • Stomach discomfort • Loss of appetite • Constipation • Dryness of mouth 	<ul style="list-style-type: none"> • Drowsiness • Dryness of mouth • Stomach discomfort • Increased nervousness
s	<ul style="list-style-type: none"> • Allergic reactions¹ • Seizures (fits) • Confusion 				
	<ul style="list-style-type: none"> • Swelling in hands, ankles or feet • Severe vomiting or diarrhoea • Flu-like symptoms • Muscle twitching 	<ul style="list-style-type: none"> • Priapism • Blurred vision • Water retention (in the limbs) 	<ul style="list-style-type: none"> • Fast or irregular heartbeat • Intense agitation or anxiety 	<ul style="list-style-type: none"> • Fast heartbeat • Muscle or joint pain • Yellow skin or eyes • Dark-coloured urine • Pain in the upper abdomen 	<ul style="list-style-type: none"> • Fast or irregular heartbeat • Severe throbbing headache which starts at the back of the head and radiates forward





	SSRIs	TCA's	SNRIs
Pregnancy	To be used with caution in most cases. Not recommended for Paroxetine.	To be used with caution – discuss with your physician	To be used with caution – discuss with your physician
Usage in Breastfeeding	Excreted in breast milk – to use with caution	Excreted in breast milk – to use with caution. Not recommended for Dothiepin.	Excreted in breast milk – to use with caution
Precautions Specific to the Drug	Any signs and symptoms of abnormal bleeding should be reported to the doctor immediately.		
<p><i>Note: Common side effects of the respective drugs may lessen or go away with time. Let your doctor know if any of these persist or affect you significantly. Talk to your pharmacist about how to manage these side effects. All serious side effects should be reported immediately. The side effects listed above are not exhaustive. Talk to your doctor if you experience any other side effects that you think may be medication-related.</i></p>			





	Mirtazapine	Trazodone	Bupropion	Tianeptine	Moclobemide
γ n	To be used with caution – discuss with your physician	To be used with caution – discuss with your physician	To be used with caution – discuss with your physician	Not to be used	Use in pregnancy is not recommended
	Excreted in breast milk – to use with caution	Enters breast milk – to use with caution	Enters breast milk – not recommended	Not to be used	Enters breast milk – to be used with caution
		Seek medical attention immediately if you experience priapism: Painful, persistent and abnormal penile erection, unaccompanied by sexual desire or excitation.		This drug should not be used in children under the age of 15.	Moclobemide may cause dangerous reactions such as a sudden rise in blood pressure when taken with certain substances. Let your doctor or pharmacist know if you are on any other medications or herbal remedies. Do not take any other medicines without consulting the doctor or pharmacist first. Avoid consuming excessive amounts of tyramine-rich food (cheese, fermented soya bean products, avocados, etc).

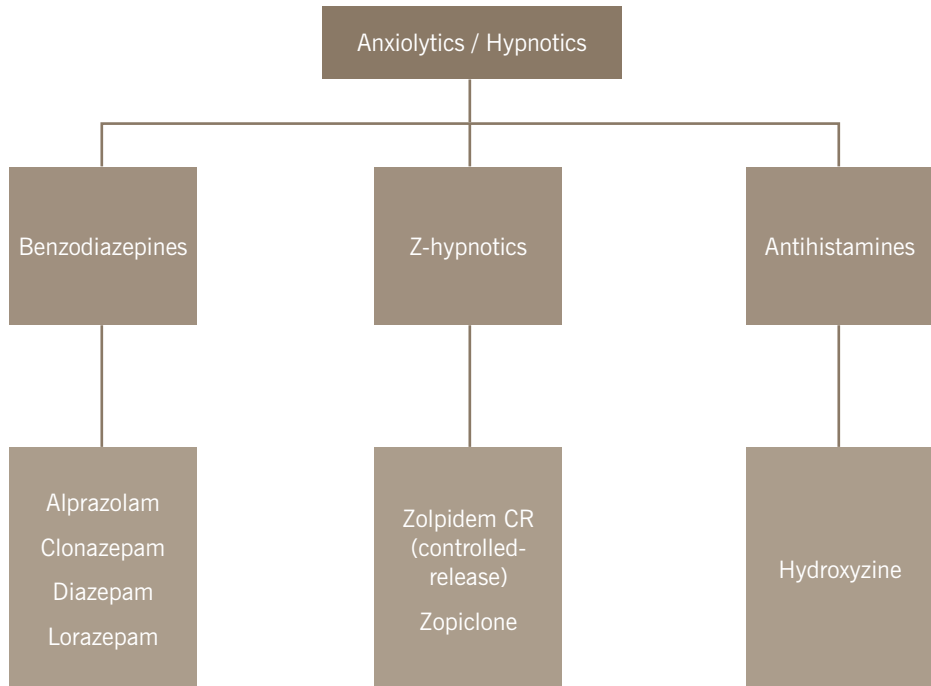


4. Anxiolytics / Hypnotics

Introduction

Benzodiazepines, Z-hypnotics and Antihistamines are some classes of drugs that are used in the acute treatment of anxiety and insomnia.

The following diagram shows some of the anxiolytic and hypnotic drugs available at IMH:





Some of the medicines listed in the diagram may have other uses. For example, Hydroxyzine may be used to relieve skin itch. Some Benzodiazepines can also be used to prevent or control seizures. Be very clear what you are taking the medication for.

There are other drugs that can be used in the long-term treatment of anxiety disorders (e.g. certain antidepressants). This chapter elaborates on drugs that can only be used in the short-term.

How to Use These Medicines

Take the medicine as directed by your doctor. Do not take more or less of it or for a longer time than prescribed by your doctor. Avoid alcohol while on medication. To be able to fall asleep more quickly, do not take the medicine with or immediately after food.

Excessive or prolonged use of these medicines can cause mental or physical dependence, and the medicines may lose their effectiveness.

Dependence on this medicine can be prevented when it is taken short-term at the lowest effective dose and intermittently for the relief of anxiety or insomnia.

Stopping Medication

Anxiolytic and hypnotic medicines should ideally be used on a short-term basis. However, if you have been taking the specific drug on a long-term basis or at high doses, do not stop the medicine abruptly. Discuss with your doctor to come up with a discontinuation plan to cut down the dose slowly over a few weeks.



The following table describes characteristics which are specific to each type of anxiolytic or hypnotic medicines:

	Benzodiazepines
Indication	Can be used for short-term anxiety and insomnia
Common Side Effects	
Rare but Serious Side Effects	
Pregnancy	Not to be used
Usage in Breastfeeding	Not recommended

Note: Common side effects of the respective drugs may lessen or go away with time. Let your doctor know if any of these persist or affect you significantly. Talk to your pharmacist about how to manage these side effects. All serious side effects should be reported immediately. The side effects listed above are not exhaustive. Talk to your doctor if you experience any other side effects that you think may be medication-related.



	Zolpidem (CR)	Zopiclone	Hydroxyzine
1	Used for insomnia only	Used for insomnia only	Can be used for short-term anxiety and insomnia
	<ul style="list-style-type: none"> • Stomach discomfort • Drowsiness or daytime sleepiness • Dizziness • Headache 		
		<ul style="list-style-type: none"> • Dry mouth and taste alteration 	<ul style="list-style-type: none"> • Dry mouth
	<ul style="list-style-type: none"> • Allergic reactions • Memory impairment • Unusual behaviour or activities while partially asleep • Abnormal thinking or changes in behaviour such as unusual excitement, nervousness, irritability or agitation • Confusion 		
	To be used with caution – discuss with your physician	Insufficient data on safety in pregnancy	To be used with caution – discuss with your physician
	To be used with caution – discuss with your physician	Not recommended	Excretion in breast milk unknown – not recommended



5. Drugs Used for Dementia

Introduction

Dementia medicines are used to treat the symptoms of dementia in Alzheimer's disease. These include difficulty remembering recent events, activities, or the names of familiar people or things, problems with thinking, speaking, understanding, reading or writing, poor concentration or judgment. It will not cure or stop the disease from getting worse but can help improve the patient's ability to think and perform daily activities.

The drugs that are available in IMH include Donepezil, Rivastigmine, Galantamine and Memantine.

The initial medicine prescribed is usually continued throughout the course of the patient's illness, unless there is a decline in cognitive function after one year. In such cases, an alternative drug will be considered.

How to Use These Medicines

Take the medicine as prescribed by the doctor. Do not take more or less of it. Take with food. You have to take it regularly for a few weeks before its full effect is felt. Continue to take the medicine regularly every day even if you feel well. You should never stop your medication abruptly without talking to your doctor as this can cause worsening of cognition and behaviour. Some other medicines may affect how they work. Tell your doctors, pharmacists, dentists and other health care providers who treat you about all medicines and natural remedies that you are taking.

If you are taking Galantamine, ensure you drink enough water every day. Do not make big changes in your diet, such as switching from vegetarian to non-vegetarian diet when you are taking Memantine. Smoking may change the concentration of drug in your body.

Side Effects

Common

The following side effects may lessen or go away with time.

Let your doctor know if any of these persists or affects you significantly.

Donepezil	Rivastigmine	Memantine	Galatamine
Drowsiness	Drowsiness	Drowsiness	Drowsiness
Dizziness	Dizziness	Dizziness	Dizziness
Nausea & vomiting	Nausea & vomiting	Nausea & vomiting	
Loss of appetite or weight	Loss of appetite or weight	Loss of appetite or weight	
Diarrhoea	Diarrhoea	Diarrhoea	
Muscle cramps	Stomach pain or indigestion		Stomach pain or indigestion

Rare but Serious

These are some rare but serious side effects of drugs used for dementia. If you experience any of these adverse effects, stop the medication immediately and see your doctor as soon as possible. These include:

- Allergic reaction: skin rash or itch, swelling in the face or hands, chest tightness, or difficulty in breathing
- Seizures (fits)
- Difficulty or pain in passing urine
- Muscle weakness or tightness
- Fainting
- Vomiting of blood or material that looks like coffee grounds
- Bloody or black tarry stools
- Slow or irregular heartbeat



Other Significant Side Effects Specific to Individual Drugs

Memantine	Galantamine	Rivastigmine	Donepezil
<ul style="list-style-type: none"> • Hallucinations (seeing or hearing things that are not present) • Sudden severe headache • Confusion 	<ul style="list-style-type: none"> • Confusion • Tremors or shaking 	<ul style="list-style-type: none"> • Hallucinations (seeing or hearing things that are not present) • Tremors or shaking 	<ul style="list-style-type: none"> • Severe stomach discomfort

As with all other medicines, the side effects listed in the above categories are not exhaustive.

Talk to your doctor if you experience any other side effects that you think may be related to the medicine.

Stopping Medication

If you have missed your medication for several days in a row, do not restart it on the same dose. Consult your doctor on what dose you should take.

Do not stop your medicines suddenly without first checking with your doctor as this can worsen cognition and behaviour, especially if you have been taking the medicine in high doses and/or for a long period of time.



6. Drugs Used to Stabilise Moods

Introduction

Mood stabilisers are used primarily to reduce the severity of mood swings in bipolar disorders, depression and other mood disorders. Besides Lithium, the other mood stabilisers can be used to control some types of seizures (fits) in the treatment of epilepsy. Sodium Valproate can also be used to prevent migraine headaches, while Carbamazepine is used to relieve symptoms of facial nerve pain.

How to Use These Medicines

Mood stabilisers come in forms such as tablets (ordinary, enteric-coated, controlled-release or extended-release) and liquids. Liquids can be mixed in drinking water, fruit juice or low-fat milk. They cannot be mixed into any carbonated drink. Extended-release, enteric-coated or controlled-released tablets need to be swallowed whole with water or other liquids and should not be split, crushed or chewed. You are advised to avoid grapefruit juice while on Sodium Valproate, Lamotrigine and Carbamazepine.

Take the medicine as prescribed by the doctor. Do not take more or less of it. Continue to take this medicine regularly even if you feel well. Some other medicines may affect how they work. Tell your doctors, pharmacists, dentists and other health care providers who treat you about all medicines and natural remedies that you are taking.

Side Effects

Common

The following side effects may lessen or go away with time.

Let your doctor know if any of these persists or affects you significantly.

Carbamazapine	Lamotrigine	Lithium	Sodium valproate
Dizziness	Dizziness		
Drowsiness	Drowsiness		
Headach	Headache	Headache	
Nausea or vomiting	Nausea or vomiting	Nausea or vomiting	Nausea or vomiting
Stomach discomfort	Stomach discomfort	Stomach discomfort	Stomach discomfort
Diarrhoea or constipation	Diarrhoea or constipation	Diarrhoea	Diarrhoea
Dry mouth		Dry mouth	
Clumsiness or unsteadiness			
		Fine tremor	
			Trembling of hands and arms
			Increase in appetite or weight gain
			Slight initial and temporary hair loss

Rare but Serious Side Effects

These are some rare but serious side effects of mood stabiliser medicines. If you experience any of these adverse effects, stop the medication immediately and see your doctor as soon as possible. These include:

- Allergic reaction: skin rash or itch, difficulty breathing, swelling in the face, lips or other parts of the body
- Confusion, clumsiness and unsteadiness, severe weakness
- Seizures (fits)
- Blurred or double vision
- Unusual bruising or bleeding

Other Significant Side Effects Specific to Individual Drugs

Carbamazepine	Lamotrigine	Sodium valproate	Lithium
Fever, chills, sore throat, mouth ulcers or sores	Fever or chills, flu-like symptoms, sore throat		
Yellowing of eyes or skin		Yellowing of eyes or skin	
Thoughts about harming or killing yourself		Thoughts about harming or killing yourself	
Chest pain, fast, pounding or irregular heartbeat			Irregular heart beat
Blistering, peeling, red skin rash			
Change in how much or how often you urinate			
Dark coloured urine or pale stools			
		Severe loss of appetite, stomach pain and vomiting that does not go away	Severe vomiting, nausea or diarrhoea that does not go away
			Severe shaking / tremor

Lamotrigine

Check with your doctor immediately if you develop a skin rash.

Lithium

Its effectiveness is affected by its concentration in your blood. Therefore, it is important to comply with all appointments with your doctor. Your doctor may order blood tests to monitor your response to lithium. The amount of salt in the diet can also affect the level of lithium in the blood. Do not change your diet from a high to low salt diet or vice versa. Drink plenty of fluids (at



least 8 – 12 glasses of water or other beverage per day) when you exercise or during hot weather as you may lose large amounts of water and salt from your body under such conditions. Excessive loss of water can cause serious side effects. Avoid drinking too much caffeinated beverages, such as tea, coffee, cola or chocolate milk. If you have an infection or illness that causes heavy sweating, vomiting or diarrhoea, consult the doctor immediately.

Pregnancy and Breastfeeding

Some mood stabilisers (Carbamazepine, Sodium Valproate and Lamotrigine) may decrease the efficacy of hormonal contraceptives (e.g. birth control pills, patches, rings, injections, implants or intrauterine devices). Therefore, it is advisable to use other forms of birth control (such as condoms, diaphragms or coils) while on medication.

Mood stabilisers should be used in pregnancy only when the benefits outweigh the risks. As such, discuss with your doctor prior to starting treatment if you plan to get pregnant. Drugs such as Carbamazepine and Sodium Valproate may appear in breast milk in low amounts.

The use of Lithium during breastfeeding is not recommended because its amount in breast milk is significant enough to increase the risk of toxicity in infants. Lamotrigine may appear in breast milk but there is limited data to suggest that the drug exerts no harmful effects in infants.

Stopping Medication

Do not stop taking your medicines suddenly without talking to your doctor, especially if you have been taking them in high doses and/or for a long period of time. Otherwise, your condition may worsen.



7. Drugs Used for Substance Dependence

Introduction

Opioid Dependence – Naltrexone

Naltrexone is used as an adjunct in the treatment of opioid dependence. It blocks the action of opioids and causes withdrawal symptoms in opioid-dependent individuals.

Nicotine Dependence – Bupropion

Bupropion is used as an antidepressant and an adjunct in the treatment of nicotine dependence. It is unclear how it helps in smoking cessation but it is believed to involve neurotransmitters called Dopamine and Noradrenaline.

How to Use These Medicines

Take the medicine as prescribed by the doctor. Do not take more or less of it.

Side Effects

Common

Naltrexone	Bupropion
Diarrhoea or constipation	Diarrhoea or constipation
Nausea & vomiting	Nausea & vomiting
Headache	Headache
Stomach cramp	
Difficulty sleeping	Difficulty sleeping

Rare but Serious

Naltrexone	Bupropion
Allergic reaction: skin rash or itch, difficulty in breathing, swelling in the face, lips or other parts of the body	Allergic reaction: skin rash or itch, difficulty in breathing, swelling in the face, lips or other parts of the body
	Visual disturbances
Suicidal ideation	
	Confusion, clumsiness and unsteadiness
	Loss of seizure (fits) control
Uncontrolled restlessness	Uncontrolled agitation or nervousness
Sudden change of mental state	
	Severe muscle pain or neck pain

Pregnancy and Breastfeeding

Naltrexone and bupropion should only be used during pregnancy if the potential benefits outweigh the potential risk to the fetus. Breastfeeding is not recommended when using this medicine.

Stopping Medication

Do not stop taking either medicine without first checking with your doctor, especially if you have been taking the medicine in high doses and/or for a long period of time.

8. Drugs Used for Attention-Deficit Hyperactivity Disorder

Introduction

Methylphenidate and Atomoxetine are drugs used alongside other educational, social and psychological methods to treat Attention-Deficit Hyperactivity Disorder (ADHD).

Methylphenidate, a common preferred treatment option, is a central nervous system (CNS) stimulant that increases dopamine amounts in the brain. Dopamine is naturally released when feelings of pleasure are experienced.

An alternative treatment option to Methylphenidate is Atomoxetine, which increases Norepinephrine amounts in the brain. The increased amounts of this neurotransmitter help in improving attention and decreasing restlessness in individuals who tend to be hyperactive, easily distracted and impulsive.

How to Use These Medicines

Methylphenidate

Take the medicine as prescribed by the doctor. Do not take more or less of it. Also, it is best not to take the last dose of the day too late in the day as its stimulant properties can cause insomnia. You should be able to see the effects of the medicine shortly after starting the course.

If you are taking the long-acting form of Methylphenidate, swallow the medicine whole with water or other liquids. Do not break, cut, crush or chew the tablet before swallowing. Ask the pharmacist for advice on different ways to consume the different formulations of long-acting Methylphenidate.

Atomoxetine

Take the medicine as prescribed by the doctor. Atomoxetine is usually prescribed once or twice a day. If the drug causes insomnia, it would be more



suitable for you to take it in the morning. However, if it causes dizziness, it would be more ideal for you to take it at night or take it in smaller doses twice a day. Talk to your doctor or pharmacist if you experience any of these effects.

As Atomoxetine works differently from Methylphenidate, it may take up to a month before you are able to observe the full benefits of the medicine. Thus, it might be helpful to identify two to three behaviours to monitor on a daily basis to evaluate the benefits of the medicine.

Side Effects

Common

The following side effects may lessen or go away with time. Let your doctor know if any of these persists or affects you significantly.

Methylphenidate	Atomoxetine
Decreased appetite	Decreased appetite
Stomach discomfort	Stomach discomfort
Insomnia	Insomnia
Headache	Headache
Nervousness	Dizziness
	Tiredness
	Nausea and Vomiting
	Dry mouth
	Loss of interest in sex, or sexual side effects

Rare but Serious

Let your doctor know immediately if you experience any of the following side effects after starting these medicines.





Methylphenidate	Atomoxetine
Fast or irregular heartbeat	Fast or irregular heartbeat
Chest pain or increased blood pressure	Chest pain or increased blood pressure
Allergic reaction: Itching, rash, hives	Allergic reaction: Itching, rash, hives
Joint pain	Tremors
Uncontrolled vocal outbursts and/or tics (Uncontrolled and repetitive body movements)	Change in how much and how often you urinate
Seizures (fits)	Seizures (fits)
Confusion	Confusion
Delusions (abnormal thinking) or hallucinations	Delusions (abnormal thinking) or hallucinations
Extreme mood changes	Extreme mood changes and self-harm behaviour
	Dark coloured urine or pale coloured stools
	Yellowing of skin or whites of eyes

As with all other medicines, the side effects listed in the above categories are not exhaustive.

Talk to your doctor if you experience any other side effects that you think may be related to the medicine.

Pregnancy and Breastfeeding

Methylphenidate and Atomoxetine should be used in pregnancy only when the benefits outweigh the risks. As such, discuss with your doctor prior to starting treatment if you plan to get pregnant. Methylphenidate is also excreted in breast milk. Refrain from breastfeeding if you are on the medication. Atomoxetine should be used with caution in breastfeeding mothers.

Stopping Medication

Do not stop taking either medicine without first checking with your doctor, especially if you have been taking the medicine in high doses and/or for a long period of time. Doing so may result in unwanted effects.



9. Anticholinergic Medicines

Introduction

Anticholinergic drugs are often used to help control some of the side effects that can occur from taking antipsychotic medicines. These side effects include tremors, stiffness and movement difficulties. They may also be used to control the symptoms of Parkinson's disease.

Benzhexol and Benztropine are two types of anticholinergic drugs used to control side effects a patient may experience. Benzhexol acts by slowing down the parasympathetic nervous system of the body and relaxing its muscles. Benztropine prolongs the action of the neurotransmitter, Dopamine, in some parts of the brain.

How to Use These Medicines

Take the medicine as prescribed by the doctor. Do not take more or less of it. Avoid alcoholic drinks.

The length of time needed for you to be on these drugs should be discussed with the doctor. As the side effects from your antipsychotic medicine tend to wear off with time, you may not need to take Benzhexol or Benztropine all the time. As your body gets used to the antipsychotic medicine that you are taking, you may only need to take the anticholinergic medicine when necessary.

Side Effects

Common

The following side effects may lessen or go away with time.

Let your doctor know if any of these persists or affects you significantly.

- Dryness of mouth
- Nausea

- Constipation
- Blurred vision

Rare but Serious

Let your doctor know immediately if you experience any of the following side effects after starting these medicines.

- Allergic reaction: Skin rash or itch, difficulty breathing, swelling on the ankles or other parts of the body.
- Confusion or agitation
- Hearing or seeing things that are not actually present
- Difficulty or pain when passing urine, or a decrease in the amount of urine
- Fast or irregular heartbeat

Benzhexol may also cause a euphoric effect in some people and a sense of well-being. Therefore, there is an increased possibility of dependence on the drug for some patients. Please be aware of the effect Benzhexol may have on you and take necessary precautions not to take more than what you need.

Pregnancy and Breastfeeding

Anticholinergic drugs should be used with caution during pregnancy and breastfeeding. As such, discuss with your doctor before starting treatment if you plan to get pregnant. It is not known if both drugs are excreted into breast milk. However, as they have anticholinergic properties, there is a chance that they may suppress lactation.

Stopping Medication

If you have been taking Benzhexol or Benzotropine regularly, do not stop taking it abruptly. It is best to gradually reduce the dosage with advice from your doctor or pharmacist. However, if you have been taking either drug only “when necessary”, the above would not apply.



10. Contributors

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