

making sense



antipsychotics

Making sense of antipsychotics

This booklet is for anyone who has been prescribed antipsychotic drugs, or who thinks they may be offered them, and also for their friends and family. It explains why these drugs may be prescribed, what their effects are, and when to avoid them.

Note:

Antipsychotics are sometimes called 'neuroleptics' or 'major tranquillisers'.

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Information about all antipsychotics

What should I know before taking any drugs?

Informed consent

The law says that you have the right to make an informed decision about which treatment(s) to have. To consent properly, you need to have enough information to understand what the treatment is, what its benefits should be, possible harms it might cause, its chance of success, and available alternative treatments.

Even after you have given your consent you can change your mind at any time. Consent is fundamental to treatment, and treatment given without consent can amount to assault and negligence.

However, if you are in hospital as an involuntary patient under the Mental Health Act (sectioned), you can be treated without your consent. For more information on this, see *Mind rights guide: consent to medical treatment*.

If you have taken medication before, you may know which drugs work best for you. You might want to write a statement saying which drugs have and haven't helped you in the past, to help make the right choice in the future; especially if you are not able to make your wishes known clearly at the time.

You can do this by:

- making a note on your care plan
- using a crisis card
- making an advance statement (see *Mind legal briefing 4: MCA 2005 – Healthcare and welfare/personal care decisions under the Mental Capacity Act 2005*).

If you are worried about your diagnosis and treatment, and unsure about the advice you have been given, you could ask either your GP or psychiatrist to refer you for a second opinion.

Patient information leaflets

If you are prescribed medication as an outpatient, it should come with a patient information leaflet (PIL – usually folded up small to fit in the packet); as an inpatient, you may have to ask for it specifically. If you do not receive the PIL, you should ask for it from the person who makes up your prescription.

The PIL contains information such as:

- the trade and generic names of the drug
- the dosage and form it takes, e.g. tablets or liquid
- who should take it
- what conditions the drug is licensed to treat
- cautions about any conditions that mean you should take a reduced dose or not take it at all
- how and when to take it
- possible side effects
- the expiry date
- how to store it safely.

It should also contain a full list of all the ingredients, including the extra contents that hold it together as a tablet or capsule, such as maize starch, gelatin, cellulose, and colourings. This information is important because some people may be allergic to one or other of the ingredients, such as lactose or gluten or a colouring. Gelatin is unacceptable to some people because it is an animal product.

Getting more information from your doctor or pharmacist

The PIL contains only the most important information you need to know about the medicine and if you need to know more, you should ask your doctor or your pharmacist.

Many people would like to have the information about their medicine before they start taking it. You might like to make a list of questions to ask your doctor, when your prescription is written, such as will the medication make you sleepy, should you take it with meals, or are you likely to have problems coming off it.

You can also talk to your pharmacist, either at your local hospital or your chemist. Pharmacists are drug specialists, and may be more knowledgeable about your drugs than the doctor who prescribes them. They may be more aware of possible side effects, and also possible interactions with other drugs (this is when a drug changes the effect of other drugs you are taking). Many high-street chemists have space set aside where you can talk privately.

There is more information on medicines and their use available from two eMC (Electronic Medicines Compendium) websites. (See 'Useful contacts' on p.50 for details.)

Medicines Use Reviews

If you regularly take more than one prescription medicine, or take medicines for a long-term illness, you can go to your local pharmacist for a Medicines Use Review, in which you can talk about your medicines, what they're all for, and any problems you may have with them. A guide to this scheme is available on the Department of Health website. (See 'Useful contacts'.)

Drug names

Drugs can have two types of names: their generic name and the trade names given by the drug companies (starting with a capital letter). If a drug is made by more than one company, it can have several trade names, but it always has the same generic name. In this booklet, drugs are listed using their generic name, with the trade name(s) after it in brackets, e.g. olanzapine (Zyprexa).

What are antipsychotic drugs used for?

You are most likely to be given antipsychotic drugs if you are experiencing psychosis, either as a one-off episode or as part of an ongoing illness. You may also be given an antipsychotic for other mental health problems.

Psychosis

If you are having a psychotic episode, you may perceive things and interpret events differently from those around you. You may hear voices, see things other people can't see (hallucinations) or have ideas that are not shared by those around you (delusions). You might believe, for example, that you are under the control of an outside force.

Psychotic illnesses include schizophrenia and mania, but you may also experience brief episodes during severe depression or a physical illness, or sometimes because of taking street drugs, such as amphetamines, cocaine or cannabis.

(For more information, see Mind's booklets, *Understanding psychotic experiences*, *How to cope with the early signs of mental health problems*, *Understanding the mental health effects of street drugs*, *Understanding bipolar disorder* and *Understanding schizophrenia*.)

Antipsychotics are not a cure for psychosis, but are often effective in controlling its symptoms, and may help you to return to normal life. You may find that rather than stopping your psychotic experiences, e.g. hearing voices, the drugs just stop you feeling so bothered by them.

They may:

- control anxiety and serious agitation, so that you feel less threatened
- reduce incoherent speech and muddled thinking
- reduce confusion
- lessen delusions and hallucinations
- reduce violent, disruptive behaviour
- reduce mania.

Other conditions

Antipsychotics are also sometimes prescribed for anxiety, in very low doses, and to supplement antidepressants if you are severely depressed. They are also sometimes used to control agitation and psychotic experiences in dementia.

Occasionally they are used for treating physical problems, such as persistent hiccups, problems with balance, and nausea.

●● *The antipsychotic that worked gave me a break from symptoms that were very difficult to live with. Once my depression had lifted I was able to stop taking it.* ●●

What types of antipsychotic are there?

The first generation (older) antipsychotics, developed in the 1950s, divide into various chemical groups which act in a very similar way and have very similar side effects, but vary slightly in how likely you are to get the different types of side effects: for example, some cause more movement disorders and some are less sedating than others. See pp.28-33 for more details on the individual drugs and their side effects.

The second generation (newer) antipsychotics. Most of the newer antipsychotics were first licensed in the 1990s, developed with the aim of reducing the severe movement disturbances associated with the older drugs. Some of them also have fewer of the side effects associated with raised prolactin levels (see 'Sexual side-effects' on pp.18-19). However they do cause serious metabolic side effects including gross weight gain. See pages pp.33-47 for more details on the individual drugs and their side effects.

Which type of antipsychotic should I be taking ?

Not everybody finds antipsychotics helpful and they can have a large number of side effects which affect a lot of people who take them, to some extent. If you find the medication helps with your symptoms, you may feel it worth putting up with a few side effects, but if the drugs don't seem to be helping much, the side effects may be difficult to tolerate. You may need to try one or two different drugs before you find the one that suits you best.

Schizophrenia

Antipsychotic drugs treat the 'positive' symptoms of schizophrenia, which include delusions and hearing voices. The 'negative' symptoms include feeling apathetic, not looking after yourself, and being unable to concentrate.

Older antipsychotics usually have no effect on the negative symptoms, and some of the side effects may make them worse.

Newer antipsychotics often help with both types of symptoms. You should be given a choice about which type of antipsychotic to take, but if you are unable to make a choice, then you should be given a newer drug. NICE (The National Institute for Health and Clinical Excellence) recommends that newer antipsychotics should be used:

- as a first-line treatment, if you are newly diagnosed with schizophrenia. The starting dose should be at the lower end of the standard range
- if you have an acute episode of schizophrenia, and you are not able to discuss the choice of drug with the doctor
- if you have had unacceptable side effects on older antipsychotics
- if you have had a relapse, and your symptoms did not respond well to the older drugs.

If you are already on an older antipsychotic, and your symptoms are responding well, without causing you unacceptable side effects, there's no need to change to a newer drug. If neither an older nor a newer antipsychotic has controlled your symptoms after you have taken them for six to eight weeks, your doctor should suggest you try clozapine (see p.37).

Other conditions

If you are taking an antipsychotic for bipolar disorder or depression, you are most likely to be prescribed one of the newer drugs. For anxiety, either type might be used, at very low doses.

Who shouldn't take antipsychotics?

It is important that your doctor knows about any medical conditions you have and any treatment you are already receiving when they are prescribing an antipsychotic and deciding which one may be most suitable for you.

If you have any of the following, you should use these drugs with caution:

- liver or kidney disease
- cardiovascular (heart and circulation) disease – or a family history of this (see p.19)
- family history of diabetes (see p.21)
- Parkinson's disease
- epilepsy
- depression
- myasthenia gravis (a rare disease affecting nerves and muscles)
- an enlarged prostate
- a history of glaucoma, an eye disease (see p.20)
- lung disease with breathing problems
- some blood disorders.

Antipsychotics should not be given to people with phaeochromocytoma (a type of tumour causing very high blood pressure) or anyone who is semi-conscious, unconscious or in a coma.

Older people

Doctors should also prescribe them with caution to older people. This is because they may be prone to drops in blood pressure when standing up, leading to falls, and also to both high and low body temperature.

Expectant and new mothers

As a general rule, you should avoid taking any drugs during pregnancy and while breastfeeding, unless the benefits to you are likely to outweigh the risk to the baby. If possible, avoid all drugs at least during the first three months. Prochlorperazine (Stemetil), in particular, is associated with malformations in the developing baby during this period.

There have also been reports of temporary muscle disorders in newborn babies, if antipsychotics are used in the last three months of pregnancy. Because long-acting drugs take time to clear from the body, it's important to take your final dose six to eight weeks before the baby's expected delivery date. It's very important to discuss any concerns with your doctor, midwife and other professionals responsible for your health during pregnancy and delivery.

The manufacturers advise women against taking the newer antipsychotics if you are breastfeeding. It's best to avoid antipsychotics altogether, if possible. Ask your doctor and your pharmacist about the safety of any drug you are advised to take.

How do the drugs work?

Most antipsychotics block the effects of dopamine, one of the brain chemicals that carry messages between cells in different areas of the brain. Blocking dopamine reduces the flow of messages, which may be too frequent in psychotic states. Many of the drugs make you feel very slowed down and sleepy, and some people have suggested that they work by causing Parkinsonism – not just the physical symptoms, which are well recognised as side effects (see p.17), but also the psychological symptoms of this disease such as not feeling your emotions and losing interest in doing your usual activities.

Most antipsychotics affect other brain chemicals too, such as serotonin and noradrenaline, and this causes additional side effects.

How quickly do they act?

This depends partly on how you take them:

- **By mouth.** If you take them by mouth, in tablet or in syrup form, the sedative effect usually takes a few hours; the liquid form may act more quickly than the tablets.
- **Emergency injection.** In an emergency you may be given an injection into a muscle, and then the sedative effect is rapid and reaches a peak within an hour.
- **Depot injection.** Some drugs are available in a slow-release form given by deep injection, known as a 'depot', into a muscle. Depot injections do not have a fast action, and are given every two to six weeks. You would not normally be given a depot unless you had taken the drug in tablet form already and it was helpful.

However you take the drugs, they may calm you down quite quickly, but the psychotic symptoms, such as voices, may take days or weeks to suppress.

What dosage should I be on?

You have a right to know what dosage you have been prescribed, and these vary widely. For example, chlorpromazine (Largactil) can be prescribed in tablet form to physically healthy adults in doses ranging from 75mg up to 1,000mg daily.

Because antipsychotics can have very serious side effects, the NICE guidelines on the treatment of schizophrenia suggest that doctors prescribe antipsychotics at the lowest effective dose to reduce your symptoms, and increase gradually if necessary. The aim should be to find the dose that lets you lead as normal a life as possible. You should not be given a high starting dose.

High doses of the older drugs can make you feel like a zombie, with little expression on your face and strange movements, and a loss of interest in life. They can make it very difficult for you to move normally, to get up and get going in the morning, and to take part in normal activities.

Moderate to high doses increase the risk of tardive dyskinesia, which is a serious problem causing spontaneous movements (see p.23).

For many people, low maintenance doses are as effective as higher doses. As you get older, your body gets less efficient at dealing with drugs generally, so older people need smaller doses of drugs, and their health is at risk if they are given too high a dose.

If the medication is not working, it's important for doctors to think about trying a different drug rather than automatically putting up the dose of the one you started with.

Maximum dosage

The British National Formulary (BNF – the main drug reference book for prescribers) gives maximum doses for some, but not all, of the antipsychotics (see individual drugs in this booklet). Generally, the drugs aren't licensed for use above these dosages, but doctors can give you a higher dose, at their discretion. If you are in hospital, they may also prescribe medication to be given 'as necessary' (usually referred to as p.r.n.) which can mean in addition to your regular dose. As a result, your total dose could be above the BNF maximum. In this case, your psychiatrist has a duty to review your total dosage daily.

If you are taking more than one antipsychotic drug, you can work out the dose of each (including p.r.n. prescribing, as long as you know each dose) as a percentage of the maximum recommended in the BNF. Add the percentages together to see if you are taking more than 100 per cent in total. You can also ask your doctor or a pharmacist to help you work this out. If you think you are taking too much medication, you can ask your doctor to review it.

Why do people take more than one antipsychotic?

Your doctor may want to prescribe more than one antipsychotic at a time. This is known as polypharmacy. This could mean that a doctor prescribes an oral drug as well as a depot injection, or an older drug as well as a newer one.

This may happen:

- if the drug you are currently taking doesn't seem to be working well enough
- when a careful combination of two drugs controls your symptoms best; the decision has to be made for each person on an individual basis
- you are detained in hospital under the Mental Health Act 1983. (You are far more likely to be taking more than one antipsychotic, or to be on a high dose, than someone who is a voluntary patient.)

However, in most cases, doctors should avoid combining the different types of antipsychotics.

- The newer drugs cause fewer movement disorders (see pp.17-18) and antimuscarinic effects (see p.20) than the older ones, and this benefit is lost if you are taking both at the same time.
- The BNF does not recommend polypharmacy, because even though the individual drugs may be within the recommended dose range (see opposite), patients may end up having a high total dose.
- The NICE guidelines say that it's best to use a single drug, and that two or more antipsychotics should not be given at the same time, except for short periods when you are switching from one to another.
- Research has shown that adding a second drug doesn't usually improve the outcome very much, but does increase the side effects, which can diminish your quality of life, and may even be life-threatening.

Will I get side effects from the drugs?

People vary enormously in how they respond to medication. One person may be able to tolerate standard doses and find them helpful with no significant side effects, while someone else may find the same dose is unhelpful and gives them horrible side effects.

Antipsychotic drugs have a lot of side effects, many of which can be quite unpleasant. Whether you get them or not, and how much they bother you, depends on which drug you are on and your individual response.

Frequency of side effects

Patient Information Leaflets (PILs – see p.5) define the frequency of possible side effects as:

Very common – affects more than 1 person in 10

Common – affects 1 to 10 people in 100

Uncommon – affects 1 to 10 people in 1,000

Rare – affects 1 to 10 people in 10,000

Very rare – affects less than 1 person in 10,000

Frequency not known.

Making sense of antipsychotics

This data is given in the PILs for all of the newer drugs, but for only two of the older antipsychotics: pimozide (Orap) and haloperidol (Dozic, Haldol, Serenace). Frequency data is generally not repeated in this booklet, except for some of the newer drugs, so, for most drugs, you will need to refer to your PIL.

Reporting adverse effects

The side effects listed in PILs are those reported during research when the drug was being developed, and those reported by people taking it since. It is important to report side effects to the Medicines and Healthcare products Regulatory Agency (who license the drugs), especially if the effects are troublesome and are not already listed in the PIL. A health professional can do this for you, or you can use the Yellow Card scheme, either online (www.mhra.gov.uk) or on cards available at most pharmacies.

What are the side effects?

This section lists the side effects which may be caused by antipsychotics in general. Additional side effects are listed under individual drugs. It is important to read both sections.

Neuromuscular side effects

Antipsychotics interfere with the brain chemical dopamine, which is important in controlling movement. This is more common with older antipsychotics, and much less likely with the newer drugs. Some of the side effects include:

- Parkinsonism
- loss of movement
- restlessness
- muscle spasms.

Parkinsonism

Some side effects resemble Parkinson's disease, which is caused by the loss of dopamine:

- Muscles become stiff and weak, so that your face may lose its animation, and you find fine movement difficult.
- You may develop a slow tremor (shaking), especially in your hands.
- Your fingers may move as if you were rolling a pill.
- When walking, you may lean forward, take small steps, and find it difficult to start and stop.
- Your mouth may hang open and you may find you are dribbling.

You may be prescribed an additional, anti-Parkinson's drug to help with these symptoms (see p.46).

Loss of movement

You may find it difficult to move, and your muscles may feel very weak. This may make people think you are depressed.

Restlessness

You may feel intensely restless and unable to sit still. This is more than just a physical restlessness and can make you feel emotionally tense and uneasy, as well. You may rock from foot to foot, shuffle your legs, cross or swing your legs repeatedly, or continuously pace up and down. Nursing staff sometimes think this means you are agitated or very anxious, and think you need a higher dose of antipsychotics to calm you down. Your doctor may be able to prescribe something to reduce it.

Muscle spasms

These are acute muscle contractions that are uncontrolled and may be painful. They particularly affect young men. If the problem affects the muscles of your voice box (larynx), you may find it difficult to speak normally (dysphonia). This can make you very self-conscious and may make it hard for people to understand you.

If the muscle spasms affect the muscles that control your eye movements (oculogyric crisis), it makes the eyes turn suddenly, so that you can't control where you look. This is both very unpleasant and may be dangerous e.g. if it happens while you are crossing the road, or pouring hot water. It can also be very disconcerting for people around you.

Some of these symptoms can be reduced with the sorts of drugs that are prescribed to treat Parkinson's disease (see p.46). These symptoms reduce while you are asleep, so if you take the antipsychotics as a single daily dose in the evening, you could avoid the worst of them (as well as feeling less sleepy during the day). You may want to discuss this with your doctor to find out whether it would be an option for you.

Fits

Many antipsychotics cause fits in some people, and should be used with caution if you have had fits before.

Sexual side effects

Prolactin is the hormone which causes the breasts to produce milk, so levels of prolactin are normally low, except in women who are pregnant or breast-feeding. However, many antipsychotic drugs cause levels of prolactin to rise. Abnormally high levels are related to some very common sexual side effects for both women and men:

- Breast development and the production of breast milk. This can affect men as well as women.
- A drop in sexual desire can make both men and women less easily aroused. Some drugs can interfere with erection and affect ejaculation.
- A persistent erection of the penis without sexual arousal (priapism). This is rare, but if it occurs you should treat it as an emergency and seek medical advice, because it may cause serious harm to the penis.
- Spontaneous ejaculation.
- Loss of menstrual cycle, vaginal dryness, unwanted hair and acne may occur in women.
- The changes to your sex hormones may cause osteoporosis, which means your bones become weaker and more likely to break. This is a serious risk for both men and women.

Some of the newer antipsychotics have less effect on prolactin and produce fewer of these problems. Women who change from an older to a newer antipsychotic should bear in mind that this may cause prolactin levels to drop back down. This may cause your periods to return and you might need to think about contraception.

Effects on the heart

Many antipsychotics have effects on the heart rhythm, which in some cases, linked to high doses and to people being on more than one antipsychotic at the same time, have caused sudden death. People on high doses of antipsychotics should be given an ECG before treatment starts and every one to three months, while the dose remains high. Whatever your dose, if you have unexplained blackouts, you should have your heart rhythm monitored. Some antipsychotics also cause your heart to beat faster than usual, and palpitations.

Antimuscarinic (also called anticholinergic) side effects

This is a medical name for a set of side effects caused by changes in the levels of the chemical messenger acetylcholine, which has important effects all over the body. These effects are more common with the older drugs. They include:

- drowsiness
- dry mouth which can cause tooth decay
- blurred vision
- dizziness
- feeling sick
- difficulty passing water
- rapid heartbeat
- constipation which may be severe enough to be life-threatening if not treated
- low blood pressure. This is especially risky in older and frail people, when it may contribute to falls; hot baths increase the risk.

Sedation

Sleepiness is a common side effect with antipsychotics, but some, such as chlorpromazine and olanzapine, are more sedating than others.

Eye problems

Various antipsychotics may be responsible for different eye disorders. These include blurred vision and difficulty reading; a build up of granular deposits in the cornea and lens (which doesn't usually affect sight); degeneration of the retina (the light-sensitive part of the eye) that restricts vision and may be serious; an oculogyric crisis (see p.18) and glaucoma (increased pressure inside the eye). Any antipsychotic can cause narrow-angle glaucoma, which is a medical emergency. You should not take some of the older antipsychotics if you have had glaucoma (see individual drugs).

Weight gain

Weight gain is a very common side effect with many antipsychotics, including most of the newer ones, and causes a lot of distress. It is linked to increased appetite and decreased activity, but is mainly caused by changes in metabolism – the way your body uses food and converts it to energy or stores it as fat. This means that dieting may not make much difference, although it will certainly help if you eat healthily. You may put on a lot of weight, and this may increase your risk of developing diabetes, and other physical health problems.

Metabolic syndrome

Some side effects, associated especially, but not exclusively, with newer antipsychotics, are linked, and may be referred to as 'metabolic syndrome'. The main symptoms are:

- weight gain and obesity
- high blood sugar and diabetes
- high blood pressure
- high cholesterol.

These put people at risk of heart disease, stroke and diabetes. The risk is increased if you drink sugary fizzy drinks and eat a lot of fatty, sugary foods. Everyone, especially those with a family history of diabetes, should have their blood glucose monitored while they are taking these drugs. You should also tell your doctor if you have a family history of cardiovascular disease such as high blood pressure or heart attack. Metabolic syndrome is thought to cause a two- to three-fold increase in the risk of death from cardiovascular disease.

Your GP should offer you regular appointments for monitoring your physical health, checking your weight, blood pressure, blood sugar, and cholesterol, at least once a year. If you have not been offered this, you can ask your GP or your care co-ordinator about it. You may be able to get a personal record card, so that you can keep track of these measurements yourself.

Blood disorders

A number of blood disorders are linked to antipsychotics. The most serious is agranulocytosis, a serious blood disorder, which involves the loss of one type of white blood cell. It means that you are more likely to catch infections and less able to fight them, and some people have died because of this. It's very rare with the older antipsychotics, and is mainly associated with clozapine (see pp.37-38). If you are getting sore throats, or mouth ulcers, a fever or chills, these may be signs that your immune system is not working as well as it should, and you should see your doctor.

Blood clotting disorders also occur with many antipsychotics. These include deep vein thrombosis and pulmonary thrombosis (blood clot in the lung) which may be life-threatening.

Skin problems

There are various skin problems that may occur. If you get a rash, you should go to the doctor straight away.

- Any allergic rashes usually occur within the first two months of starting treatment and disappear when the drug is stopped.
- Some types of skin may develop a blue-grey discoloration.
- Your skin may become more sensitive to sunlight, especially at high doses, so you should protect yourself from the sun.

Neuroleptic malignant syndrome (NMS)

This is a neurological complication that is thought to occur in about 1 in 100 of hospital patients taking antipsychotic drugs. It can be very dangerous if it's not detected and treated, but the symptoms can also cause it to be mistaken for an infection. Although the criteria for making the diagnosis are not clear, in 11 per cent of those with NMS it may be fatal.

The condition mostly affects people under forty, and is twice as common in men. It can occur if you are taking standard doses of antipsychotics, and if you have been taking the drugs for many years. The main trigger seems to be a change of dose within the last 4 to 11 days. The risk may

be higher with some of the older antipsychotics (such as haloperidol), but it can happen with all of these drugs, including the newer ones.

The symptoms are:

- sweating or fever, with a high temperature
- tremor, rigidity or loss of movement
- difficulty speaking and swallowing
- changes in consciousness, from lethargy and confusion to stupor or coma
- rapid heartbeat, very rapid breathing and changes in blood pressure.

Blood tests show abnormal results. NMS develops rapidly over 24 to 72 hours, and rigidity and a high temperature are usually the first symptoms to appear.

Treatment may include reducing the fever, giving drugs to relax the muscles, and drugs to counter the chemical imbalance that is thought to cause NMS. Electroconvulsive therapy has also been used effectively.

The symptoms may last for days, or even weeks, after stopping the drugs.

Many people who have had NMS once go on to get it again, so you should only take antipsychotics afterwards if they are absolutely essential, and then only at very low doses.

Tardive dyskinesia (TD)

TD is a disorder which causes abnormal, uncontrollable, disfiguring, and embarrassing movements. These usually start in the face and mouth, as involuntary tongue movements, twitching in your face, and slight grimacing. The problem can spread to the rest of the body, with writhing movements in the limbs, muscle spasms, tremors and tics. For more information about TD, see Mind's online booklet *Understanding tardive dyskinesia*.

Other physical effects

Liver disorders and jaundice are sometimes linked to using these drugs (see chlorpromazine, on p.29).

You may have problems with regulating body temperature. It may be too high or too low, both of which may make you feel a little unwell.

Bed-wetting may occur, especially with newer antipsychotics.

Emotional effects

Antipsychotics can sometimes make you more excited, agitated and aggressive. They can also make you feel depressed. Some may have an antidepressant effect, although the available information about this is contradictory. Some drugs make you feel emotionally uneasy and restless, or give you bizarre dreams and disturb your sleep. They can make you feel out of touch with reality and more withdrawn socially, like being in a very familiar environment like a group of friends or family but feeling very detached from them, and 'alone in a crowd'.

Tardive psychosis

Sometimes, you get new psychotic symptoms while you are taking antipsychotics or after you have taken them for long periods of time. The drugs act by blocking dopamine receptors in the brain, and if you have taken the drugs for a long time, the brain responds by creating new receptors to replace those that are blocked. Existing receptors may also become super-sensitive to dopamine. This is called tardive psychosis, meaning psychosis that is a delayed effect. This means that you need to take higher doses to maintain the antipsychotic effects.

The possibility of tardive psychosis is one reason why antipsychotics should be withdrawn gradually – especially if you have been taking them for a long time – giving the brain time to readjust (also see pp.26-27).

What happens if I am taking other medication?

If you are taking **any** other medicines (on prescription, over-the-counter or from an alternative health practitioner) tell your doctor. Combining other medicines with antipsychotics can sometimes cause an increase in side effects or be dangerous.

The following information only relates to combinations of psychiatric drugs.

- Combining antipsychotics with other drugs that have antimuscarinic properties is likely to increase these effects (see p.20). This applies particularly in the case of tricyclic antidepressants (such as amitriptyline) and older antipsychotics such as chlorpromazine (Largactil). Anti-Parkinson's drugs are also antimuscarinic, and combining with these can cause you to become delirious, which may be confused with your psychotic symptoms.
- If you are taking tricyclic antidepressants and antipsychotics, it can affect your heart rhythm.
- If you take the antidepressant trazodone with drugs such as chlorpromazine (Largactil), it can lower your blood pressure.
- Taking lithium (Camcolit, Liskonum, Priadel and Litarex), together with the older antipsychotics, increases the chances of Parkinson's effects, muscle spasms and neuromuscular restlessness, as well as possibly being toxic. The antipsychotics should be started at a lower dose than usual.
- The anticonvulsant carbamazepine, which some people take for bipolar disorder, makes the body process some drugs faster, which will lower the level of those drugs in your blood.
- If you are taking anti-epileptic drugs, the antipsychotics increase your chance of having a fit.
- Taking drugs for anxiety, or to help you sleep, increases the sedative action of the antipsychotics.

Note: Drinking alcohol also increases the sedative action of antipsychotics. You might want to ask your doctor or pharmacist whether it's safe to drink when you are on these drugs.

What is rapid tranquillisation?

In an emergency situation, if you are behaving in a way that might be putting yourself or other people at risk, doctors may decide you need something to calm you down as quickly as possible. This means you may be given drugs by injection.

The drugs most likely to be used are the older antipsychotics Clopixol Acuphase or haloperidol, or the newer drug olanzapine. The antipsychotic may be combined with a benzodiazepine tranquilliser (see *Making sense of sleeping pills and minor tranquillisers*).

The NICE guidelines recommend lorazepam (a benzodiazepine), with haloperidol or olanzapine. If you are given haloperidol at a high dose, you may need an anti-Parkinson's drug to minimise the side effects.

The NICE guidelines also say that rapid tranquillisation may be traumatic, and afterwards you should be given the opportunity to discuss it with hospital staff, and to write your own record of the experience if you wish, to be kept in your hospital notes.

How easy is it to come off these drugs?

Doctors may suggest that once you're on these drugs, you need to stay on them for some time. Most people tend to remain on them. However, if you have been taking antipsychotics for some time, and have been well, you may want to stop and see if you can cope successfully in other ways, without medication.

To increase your chances of success, you need plenty of support, and this should ideally include your GP or your psychiatrist. Unfortunately, a lot of people find that their doctors are not very helpful when it comes to withdrawing. Some psychiatrists believe that people with a diagnosis of schizophrenia who remain on antipsychotics for a number of years have fewer relapses than those who are not on antipsychotics.

But there are other factors that influence relapses, besides taking medication. While you have been stabilised by the medication, you may have been able to make changes in your life that mean you are very unlikely to relapse and have a further episode of illness. Professional support for your friends and family, to help them to help you, also reduces the risk of your becoming ill again.

The best time to try to withdraw may be when you are not currently under stress from other life problems, such as moving house, financial worries, or concerns about your family, for example. It may be a good idea to postpone withdrawal until you are more relaxed, and can pay attention to how you are feeling. On the other hand, some people have found that they can withdraw most easily when their mind is taken up with other things that are going on in their life.

Whenever you decide to try, it is important to reduce slowly and gradually over a period of weeks or months. While some people may be able to stop without problems, you are much more likely to have a recurrence of psychosis if you stop suddenly.

For information about withdrawal from antipsychotics, see Mind's booklet *Making sense of coming off psychiatric drugs*.

The different types of antipsychotics

Side effects common to all the drugs listed in this section are covered earlier (see pp.17-24). It is essential that you read those pages as well as the section on the particular drug you are taking, in order to get full information about possible harmful effects.

All drugs are listed under their generic names, with the trade names in brackets afterwards.

Dosages of antipsychotics can vary considerably and details are not given here, except when the BNF specifies a maximum daily dose (see p.14). Maximum doses are based on what is dangerous, rather than what is most effective. The most effective dose may be considerably lower than the maximum safe dose, in some cases.

Where a drug is not recommended for children, this is shown by the symbol * next to the drug name. For the index of drug names, turn to pp.48-49.

Older antipsychotics

Very often these drugs are compared to chlorpromazine (Largactil – see opposite), which was the first antipsychotic to be discovered.

Benperidol (Anquil)*

Licensed for the control of deviant antisocial sexual behaviour.

Form: tablets

Dose: maximum 1.5mg per day.

Chlorpromazine (Largactil)

Form: tablets, oral solution, intramuscular injection, suppositories.

Dose: maximum not specified, but 1g (1,000mg) per day is the highest dose mentioned in the BNF. This drug may be given to children for childhood schizophrenia and autism, and for intractable hiccups. The maximum dose for a child aged 1 to 5 years is 40mg per day, and for a child aged 6 to 12 years, 75mg per day.

Side effects: this is one of the most sedating of the older antipsychotics and also causes antimuscarinic effects, in particular (see p.20). It can make your skin very sensitive to sunlight so that you burn more easily. It may cause low blood pressure. Around 20 to 30 per cent of long-term users have a build up of granular deposits in the cornea and lens of the eye. This is partly dose-related; it does not usually affect sight. It has been linked with blood clots. Chlorpromazine can cause liver poisoning and you might need regular tests of liver function before you start on it, and during the first six months of treatment. Jaundice may occur in the first two months. It should disappear in the month after stopping. It sometimes causes emotional unease, but may have an antidepressant effect.

Caution: chlorpromazine is irritant to the skin: tablets should not be crushed, and solutions should be handled with care. Tablets contain lactose. You should not take chlorpromazine if you have glaucoma.

Flupentixol (Depixol, Fluanxol, Flupenthixol)*

Form: tablets.

Dose: maximum 18mg per day. (See also flupentixol decanoate, on p.43.)

Side effects: less sedating than chlorpromazine, but with more Parkinson's effects. It may have an antidepressant effect, but has also been associated with suicidal thoughts. Sweating, itching and rashes.

Haloperidol (Dozic, Haldol, Serenace)

Form: tablets, oral liquid, injection. (See also haloperidol decanoate, on p.43.)

Dose: no maximum dose is specified in the BNF, but the highest dose mentioned is 30mg per day. This drug may be given to children to treat schizophrenia or dangerously violent or impulsive behaviour, at a maximum dose of 10mg per day.

Side effects: less sedating and fewer antimuscarinic effects than chlorpromazine, but more neuromuscular effects, especially muscle spasms and restlessness. Rare side effects include altered liver function, gastrointestinal disturbance and weight loss, and very severe skin rashes which can develop into a life-threatening illness (Stevens-Johnson syndrome).

Caution: fluoxetine increases levels of this drug in the blood, and carbamazepine lowers them. There is an increased risk of toxic effects if haloperidol is taken with lithium.

Levomepromazine (Nozinan)

Form: tablets.

Dose: highest mentioned in BNF is 1g (1,000mg) per day. No clear advice about children.

Side effects: more sedating than chlorpromazine, and with a risk of lowered blood pressure, particularly in people over 50. Severe gut disorders have occurred very rarely.

Pericyazine (Neulactil)

Form: tablets, oral syrup.

Dose: usual maximum 300mg per day. May be given to children for severe mental or behavioural disorders only, at a maximum dose of 10mg per day.

Side effects: more sedating than chlorpromazine, and lowered blood pressure when treatment starts. Contact skin rashes from handling the tablets may occur.

Perphenazine (Fentazin)*

Form: tablets.

Dose: maximum 24mg per day.

Side effects: less sedating than chlorpromazine, but more neuromuscular reactions, especially muscle spasms, particularly at high doses. It may cause blurred vision.

Pimozide (Orap)*

Form: tablets.

Dose: up to 20mg per day.

Side effects: less sedating than chlorpromazine. It may cause depression. Needing to pass water at night is common.

Caution: serious disturbances in heart rhythm reported, especially with high doses. The Committee on Human Medicines recommends ECG before treatment starts and periodically thereafter on doses over 16mg daily. Avoid taking it with other antipsychotics, with tricyclic antidepressants, and other drugs which affect the heart (see p.19). Use it with caution if you have thyroid problems. You should not drink grapefruit juice while taking it.

Prochlorperazine (Stemetil)*

Form: tablets, syrup, injection.

Side effects: less sedating than chlorpromazine, but more neuromuscular reactions, particularly muscle spasms. Contact skin rash may occur from handling tablets.

Promazine*

Form: tablets, oral solution.

Side effects: Similar to chlorpromazine and one of the most sedating of the older antipsychotics. Contact skin rash may occur from handling tablets.

Sulpiride (Dolmatil, Sulpitol, Sulpor)*

Form: tablets, oral solution.

Dose: maximum 2.4g per day (2,400mg per day).

Side effects: less sedating than chlorpromazine and a different chemical group. Skin pigmentation, sensitivity to sun. Contact skin rash may occur from handling tablets.

Trifluoperazine (Stelazine)

Form: tablets, spansules (a sustained-release capsule), syrup, oral solution.

Side effects: less sedating, less likely to lower body temperature or blood pressure, and causes fewer antimuscarinic effects than chlorpromazine. Produces neuromuscular reactions, and restlessness, especially when the dose is over 6mg daily, and it may cause agitation. It may cause spontaneous ejaculation.

Zuclopenthixol (Clopixol Acuphase)*

Form: injection

Dose: maximum 400mg per course and four injections.

Side effects: Similar to chlorpromazine. Has a rapid sedative action shortly after injection and an antipsychotic action persisting for two to three days, and is for up to two weeks' treatment only. Spontaneous ejaculation may occur.

Zuclopenthixol dihydrochloride (Clopixol)*

Form: tablets (see also zuclopenthixol decanoate, p.43).

Dose: maximum 150mg per day.

Side effects: Similar to chlorpromazine. May cause ringing in the ears (tinnitus) and vertigo, drooling, thirst.

Newer antipsychotics

Most of these drugs are licensed for the treatment of schizophrenia, and some of them are also licensed for mania. They may also be used for psychotic episodes in severe depression.

Cautions

They should be used with caution in people with cardiovascular (heart and circulation) disease, those with a history of epilepsy, or Parkinson's disease. They may affect your ability to perform skilled tasks, including driving, and may increase the effects of alcohol. Risperidone and olanzapine in particular should not be used to treat behavioural problems in older people with dementia. This is because there is evidence that these drugs significantly increase the risk of stroke in these patients. These drugs should also be used with caution in all older patients at risk of stroke.

Side effects

The most significant side effects are weight gain and associated metabolic effects, (see p.21). Other important side effects include: extreme sleepiness (somnolence), dizziness, neuromuscular symptoms, low blood pressure on standing upright, which may be associated with fainting or rapid heartbeat in some people. Occasionally, tardive dyskinesia may occur after long-term use (see p.23); rarely, neuroleptic malignant syndrome (see p.22). Other side effects are listed under the individual drugs.

The drugs

Amisulpride (Solian)*

This is given for both positive and negative symptoms of schizophrenia.

Form: tablets, oral solution.

Dose: maximum 1.2g per day (1,200mg per day).

Side effects: Parkinsonism is very common. Insomnia, anxiety, agitation, raised prolactin levels causing milk production, and associated sexual problems (see p.19). Occasionally: slow heartbeat; fits; changes in heart rhythm may occur.

Caution: it should be used with caution in people with kidney problems and in older people. It should not be used in pregnancy or while breastfeeding.

Aripiprazole (Abilify)

This drug does not cause as much weight gain as some of the other atypical antipsychotic drugs.

Form: tablets, dissolving tablets, oral solution.

Dose: the recommended starting dose is 15mg per day; maximum: 30mg. It has not been studied either in children under 18 or in people aged 65 or older. If it is used in older people, a lower dose should be given.

Side effects: Parkinsonism and drooling are common. Light-headedness, trouble sleeping, feeling and being sick, indigestion, headache, lack of energy. *Less common:* fast heart beat. *Rare:* neuroleptic malignant syndrome, tardive dyskinesia and fits. It has also been associated with pathological gambling in some people, suggesting that it may make it harder for you to control impulsive behaviour.

Caution: It should also be used with caution in people with a history of fits. It should not be used during pregnancy or while breastfeeding. Aripiprazole may take days or weeks to have its full antipsychotic effect. The tablets contain lactose. You should not have grapefruit juice while you are taking it.

Interactions: Aripiprazole interacts with carbamazepine in such a way that the dose of aripiprazole should be doubled if they are given together.

Asenapine (Sycrest)

Asenapine is a new antipsychotic for manic episodes. It was first licensed in 2011, for moderate to severe manic episodes in bipolar disorder, and not for other psychoses.

Form: It comes as a rapidly dissolving tablet which you put under your tongue. You should not take it out of its foil until you are ready to take it, and you should handle it gently, with dry hands.

Dose: The usual starting dose of asenapine is 10mg twice a day if you are taking asenapine on its own, which may be reduced to 5mg; and 5mg if you are taking something else as well.

Side effects: *Very common:* anxiety, feeling very sleepy. *Common:* weight gain and increased appetite; muscle spasms, extreme restlessness, Parkinsonism, and involuntary movements; feeling showed down; dizziness; unusual taste sensations; numb lips and mouth; raised liver enzymes; stiff muscles; feeling tired. *Uncommon:* raised blood sugar; fainting; fits; abnormal muscle movements, including tics, shaking, spasms of eye muscles, slowed movements; difficulty speaking; slow heart beat, changes to heart rhythm; low blood pressure; swollen tongue, difficulty swallowing, burning or tingling sensations in your tongue and mouth; sexual problems (in men and women) and loss of menstrual periods. *Rare:* changes in level of white blood cells; neuroleptic malignant syndrome (confusion, loss of consciousness, high temperature and severe muscle stiffness); blurred vision; blood clot on the lung; muscle damage with aches and pains; breast development and milk production (this can affect men as well as women). *Frequency unknown:* allergic reactions (anaphylactic shock) with difficulty breathing, swollen tongue or throat, skin rash, itching and increased heart rate. This is a medical emergency.

Cautions: You should not take asenapine if you have severe liver problems, and it is not suitable for people with dementia. It may cause low blood pressure, so may not be suitable if you have heart disease or already have low blood pressure. It also may not be suitable if you have diabetes, Parkinson's disease, epilepsy (fits), difficulty swallowing, poor temperature regulation, or you sometimes have thoughts about suicide.

Withdrawal: There is no published information on withdrawal of asenapine. As with other antipsychotics, it is advisable to withdraw gradually if you have been taking it for more than two weeks.

As asenapine is a new drug, it is especially important to report any side effects you experience, especially if they are not listed above, to the MHRA (see p.16 and 'Useful contacts').

Clozapine (Clozaril, Denzapine, Zaponex)*

Clozapine is licensed for treatment of schizophrenia when other antipsychotics are ineffective or unsuitable. Because of the severity of the possible side effects, the prescribing psychiatrist, the patient and the supplying pharmacist must all be registered with either the Clozaril or Denzapine Patient Monitoring Service, or the Zaponex Treatment Access System (depending which brand they are using). This takes several days.

Form: tablets.

Dose: maximum 900mg per day.

Side effects: sedation, drooling saliva, rapid heartbeat, blood pressure changes (high or low), dizziness, headache, and dry mouth. Some of these improve, although rapid heartbeat, drooling and sedation may persist. *Less common side effects:* fits occur occasionally (dose-related), constipation, nausea or vomiting, high body temperature, weight gain, drowsiness, fever and headache. Movement disorders and tardive dyskinesia are rare, but neuromuscular restlessness, sluggish movements and tremor can occur. Toxic delirium and sedation, requiring withdrawal in a small percentage of people. Stuttering is an uncommon side effect, and bed-wetting has been reported more than with other antipsychotics. Very rarely sudden unexplained death has occurred.

Caution: Blood: Clozapine carries a three per cent risk of causing agranulocytosis (see p.22), and this is why you must have regular blood tests, every week for the first 18 weeks of treatment, and fortnightly after that. Blood counts must be satisfactory before the drug is started. If blood problems are detected, the drug must be stopped. The problem is not dose-related, and the risk of developing it decreases after the first year. It is almost always reversible by stopping the drug. The greatest risk of developing serious blood disorders appears to be between the 6th and 18th weeks of treatment, and is more common in women. As the main effect of this is to decrease your immunity, you should tell your doctor if you get an infection. You should not take clozapine at the same

time as other drugs that cause agranulocytosis, including carbamazepine. Clozapine has also been linked with blood clots. *Heart:* Clozapine is also associated with myocarditis and cardiomyopathy (serious heart disorders), and the psychiatrist should ask you about possible problems with your heart and whether anyone in your family has heart problems, and look out for symptoms of these especially in the first two months of treatment. There is a high risk of metabolic syndrome. *Gut:* some people have had blocked bowels; you should let your doctor know if you are having a problem with constipation and be cautious with taking clozapine with other drugs which cause constipation.

It has caused bed-wetting in some people. There is a higher risk of diabetes with clozapine and olanzapine than with other antipsychotics.

Withdrawal: rebound psychosis has been reported, and other antipsychotic drugs may not be effective afterwards. Clozapine should not be stopped abruptly.

Interactions: SSRI antidepressants may increase its levels in the blood. It should not be combined with long-acting depot antipsychotics. Smoking may decrease its blood levels, while caffeine may increase them, so the dose you are on should take this into account.

Olanzapine (Zyprexa)

This drug is licensed for schizophrenia, mania (in combination with mood stabilisers) and preventing recurrence in bipolar disorder.

Form: tablets, dissolving tablets (Velotab), injection (for rapid control of agitation or disturbed behaviour – this form should be discontinued and replaced with tablets or Velotab as soon as possible).

Dose: maximum daily dose, including the injectable version, is 20mg.

Side effects: Parkinsonism and metabolic syndrome are common, and weight gain is often very marked. Mild, short-lived antimuscarinic effects,

drowsiness, increased appetite, peripheral oedema (puffy feet and hands), raised prolactin (but rarely high enough to cause symptoms), occasional blood problems, and sensitivity to sunlight. There is a higher risk of diabetes with olanzapine than with other antipsychotics.

Caution: It should not be used for older people with dementia. It should be used with caution in pregnancy, in men with prostate problems, and in people with paralytic ileus, or liver or kidney problems, or those taking certain types of heart drugs. Anyone with closed-angle glaucoma (an eye disease) should not take it. It should not be used while breastfeeding. Carbamazepine lowers the level of this drug in the blood.

Paliperidone (Invega)*

This is an active metabolite of risperidone (see p.41). It therefore shares most of risperidone's characteristics. The main difference from risperidone and other antipsychotics is that paliperidone is produced in a 'prolonged-release' formulation which means that after the drug is taken it is released steadily over a 24-hour period, stabilising the level of the drug in the blood.

Form: prolonged release tablets. You must swallow the tablet whole with a drink, and must not chew it or divide it or crush it, because it is in a special shell designed to release the drug steadily through the day. The tablet shell is expelled from the body largely unchanged, and you need not worry if you see something that looks like a tablet when you have been to the toilet. You can take it either before food or with food, but you must be consistent – either always take it before, or always take it with food.

Dose: range 3mg to 12mg. There is no need to start with a low dose and increase gradually when you start taking it.

Side effects: The commonest reported side effect is headache. The usual side effects of antipsychotics may occur, including Parkinsonism, and other neuromuscular effects; raised prolactin with sexual effects; effects on heart rhythm. Uncommon side effects include fainting. Rare side effects

include mini stroke, pancreatitis and swollen tongue, and breakdown of muscle which can cause kidney damage. As paliperidone is an active metabolite of risperidone, any of the side effects of risperidone may occur.

Caution: Because of the structure of the tablet shell, it should not be given to people who have difficulty with swallowing. The 3mg tablet contains lactose; the higher dose tablets do not. *Liver:* the drug is not changed very much by the liver and is excreted by the kidney, so it can be taken by people with mild or moderate liver disease. It should be used with caution in those with severe liver disease. *Kidney:* people with mild kidney disease should start on the lowest dose (3mg/day) which may be increased if it is well tolerated. People with moderate kidney disease should remain on 3mg/day, and those with severe kidney problems may be able to take 3mg on alternate days. *Older people:* older people with normal kidney function can take a standard dose. *Heart:* It may cause changes in heart rhythm and should be used with caution in people with a family history of heart disease, stroke or related problems. It should be used with caution in people with a history of fits. *Pregnancy and breastfeeding:* It should not be used during pregnancy or while breastfeeding.

Withdrawal: There are no guidelines on withdrawal of paliperidone in relation to its gradual-release formulation.

Quetiapine (Seroquel)*

Licensed for schizophrenia and for manic episodes, either alone or with mood stabilisers. Used especially in people with intolerable Parkinson's symptoms, or symptoms of raised prolactin levels caused by other drugs. Similar to clozapine, but not associated with serious blood disorders. Causes fewer neuromuscular effects than the older antipsychotics.

Form: tablets.

Dose: maximum 750mg per day.

Side effects: drowsiness, indigestion, mild loss of strength and energy, stuffy nose, fast heartbeat, anxiety, fever, muscle pain, rash. Common effects include abnormal dreams and nightmares. Rare effects: blood disorders, low thyroid hormone and possible changes in heart rhythm.

Caution: it should be used with caution in pregnancy, in people with liver or kidney problems, in older people, and in people who are taking some types of heart drugs, or who are at risk of stroke. It should not be used while breastfeeding. You should not have grapefruit juice while you are taking it.

Risperidone (Risperdal)*

Licensed for psychotic illnesses and for mania. Thought to improve both positive and negative symptoms of schizophrenia. It has effects similar to chlorpromazine, but neuromuscular effects are usually less marked. However, it is more likely to cause Parkinsonism than most other newer antipsychotics.

Form: tablets and dissolving tablets (Quicklet).

Dose: maximum 16mg per day.

Side effects: insomnia, agitation, anxiety, headache, weight gain. Bedwetting is common. *Less common side effects:* drowsiness, fatigue, dizziness, difficulty concentrating, indigestion, feeling sick, stomach pain, sore nose, and rash. Eye problems include swelling and discharge from the eyes, watery eyes and sensitivity to light. *Uncommon side effects:* ringing in the ears, low blood pressure, dizziness, nose bleeds and increased heart rate, particularly if high doses are given at the start of treatment. *Rare:* neuroleptic malignant syndrome, low blood sodium, fits, sore lips, incontinence.

Caution: It should not be used for older people with dementia. It should be used with caution in people with liver or kidney disease, epilepsy or heart disease, as low blood pressure can occur. It may aggravate

Parkinson's disease. It can interfere with the ability to drive and operate machinery. It should not be used while breastfeeding. Caution is advised if other drugs with similar actions are given.

Interactions: Carbamazepine lowers its blood levels.

Antipsychotics through depot injection

Some antipsychotics can be given in a slow-release formulation by deep injection into a muscle. The drug then goes into your blood very slowly over the next few weeks. When you are starting on a depot, you should start with a small test dose, and your tablets should be reduced gradually. You will get your injection from a health professional at regular intervals of one to four weeks.

These drugs are injected into a large muscle, which is either the shoulder or, more commonly, the buttock. You may get pain at the site of the injection and, occasionally, swelling and small lumps. Many people remain on a high depot dose for many years, because their dose has not been changed since they were discharged from hospital after an acute episode of illness. You should have a continuous assessment of the risk of harm to you, versus the benefits, and to find out whether you could have a lower dose.

The depot versions of the older antipsychotics are based on nut oils, which are sometimes referred to as 'vegetable oil' in the patient information leaflet (PIL) which you should be given when you get your injection. They are either sesame or coconut oil which are unlikely to cause nut allergy, but some people may be sensitive to them. If you and your doctor are considering depot drugs, and you have a nut allergy, you might want to mention this.

Older depots

Depot injections of older antipsychotics may cause more neuromuscular reactions than oral drugs.

Flupentixol/flupenthixol decanoate (Depixol, Depixol Concentrate, Depixol Low Volume)*

Dose: maximum 400mg per week.

Side effects: more neuromuscular reactions than chlorpromazine (see p.29).

Caution: Can cause over-excitement if given to people who are agitated or aggressive. Contains coconut oil.

Fluphenazine decanoate (Modecate, Modecate Concentrate)*

Side effects: any neuromuscular reactions usually appear a few hours after the dose is given and continue for about two days, but may be delayed.

Caution: should not be given to people who are severely depressed. Contains sesame oil.

Haloperidol decanoate (Haldol Decanoate)*

See haloperidol (p. 19).

Caution: contains sesame oil.

Pipothiazine palmitate (Piportil Depot)*

Dose: maximum 200mg every four weeks.

Side effects: Similar to chlorpromazine (see p.29). It may cause depression.

Caution: contains sesame oil.

Zuclopentixol decanoate (Clopixol, Clopixol Concentrate)*

Dose: maximum 600mg per week.

Side effects: similar to chlorpromazine but less sedating.

Caution: contains coconut oil.

Newer depots

If you are given a newer antipsychotic as a depot, it should normally be the depot version of a drug you have already been taking as tablets or liquid. None of these contains nut oil.

Olanzapine embonate (ZypAdhera)

Form: This comes as a powder and liquid which have to be mixed together by the person who is giving you the injection. You should be asked to wait for at least 3 hours after the injection so that the staff can make sure you are ok.

Dose: maximum 300mg every 2 weeks.

Side effects: see olanzapine (p.38)

Caution: doses should be lower if you have liver or kidney problems.

Paliperidone palmitate (Xeplion)*

You may be given paliperidone by injection if you have already got on well with paliperidone or risperidone tablets.

Form: It comes in a prefilled syringe. The first doses are normally given in a shoulder muscle, but regular doses may be given in your buttock.

Dose: 150mg on day 1, then 100mg on day 8, then adjusted at monthly intervals according to response; the usual regular dose 75mg (range 25–150mg) monthly.

Side effects: see paliperidone (p.39) and risperidone.

Caution: The dose should be lower if you have kidney problems.

Risperidone (Risperdal Consta)

Form: This comes as a powder and liquid which have to be mixed together by the person who is giving you the injection. Once mixed, it should normally be used immediately, but has a shelf-life of six hours.

Dose: for people currently taking risperidone tablets of up to 4mg daily, initially 25mg every two weeks. For people currently taking oral risperidone of over 4mg daily, initially 37.5mg every two weeks. The dose should then be adjusted at intervals of at least four weeks, in steps of 12.5mg, to a maximum of 50mg (25mg for those over 65 years), every two weeks. Dosage adjustments will take at least three weeks to have an effect. During initiation, risperidone by mouth may be continued, if necessary, for a maximum of three weeks. Maximum dose: 50mg every two weeks. For older people (over 65 years), the maximum dose is 25mg every two weeks.

Side effects: the side effects are very similar to those associated with oral risperidone (see p.41). The most common side effects include weight gain, depression, fatigue and symptoms mimicking Parkinson's disease, such as slowed movement and tremor, disturbed sleep, constipation, and nausea. Uncommon side effects include weight loss, nervousness, loss of concentration, low blood pressure, fainting and visual problems.

Caution: This drug should be used with caution in people who have liver or kidney disease, heart disease, Parkinson's disease, or epilepsy.

Anti-Parkinson's drugs

These drugs are given to lessen the neuromuscular effects of antipsychotics, which resemble the symptoms of Parkinson's disease. They are also called antimuscarinics. They should not be given routinely to people on antipsychotics, but only if you have actually developed Parkinsonism, and then only when there is either some reason not to change the antipsychotic or reduce the dose, or where this has not worked.

These drugs can cause confusion and memory problems and, occasionally, make the psychosis worse. Due to their stimulant effect, they have the potential for abuse and can occasionally be habit forming. When withdrawing, you should do so gradually and not stop suddenly. There are no important differences between these drugs, but some people tolerate one better than another. Trihexyphenidyl hydrochloride is the standard to which the others are compared.

Orphenadrine hydrochloride (Biorphen, Disipal)

Form: tablets, oral solution.

Dose: maximum 400mg per day.

Side effects: Similar to trihexyphenidyl hydrochloride. It can make you feel excited and may cause insomnia.

Procyclidine hydrochloride (Arpicolin, Kemadrin)

Form: tablets, syrup, injection.

Dose: maximum 30mg per day (60mg per day in exceptional circumstances).

Side effects: Similar to trihexyphenidyl hydrochloride. Causes sedation rather than stimulation; also sore gums.

**Trihexyphenidyl hydrochloride/benzhexol hydrochloride
(Broflex)***

Form: tablets, syrup.

Dose: maximum 20mg per day.

Side effects: dry mouth, gastrointestinal disturbances, dizziness, and blurred vision. *Less common side effects:* difficulty urinating, rapid heartbeat, hypersensitivity, nervousness and, with high doses, confusion, excitement and psychiatric disturbances. If this happens the drug should be withdrawn. This drug has a stimulant effect.

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Useful contacts

Mind

Mind Infoline: 0300 123 3393
(Monday to Friday 9am to 6pm)
email: info@mind.org.uk
web: www.mind.org.uk
Details of local Minds and other local services, and Mind's Legal Advice Line. Language Line is available for talking in a language other than English.

Bipolar UK

tel. 020 7931 6480
web: bipolaruk.org.uk
Supports people affected by bipolar disorder.

Department of Health

web: dh.gov.uk
For leaflet on Medicines Use Reviews.

eMC

web: medicines.org.uk/emc
and medicines.org.uk/Guides
Access to patient information leaflets (PILs) for most medicines licensed in the UK, and Medicines Guides.

Hearing Voices Network

tel: 0114 271 8210
web: hearing-voices.org
National network and local groups for people who hear voices.

The Medicines and Healthcare products Regulatory Agency

web: mhra.gov.uk
For reporting side effects of any medicine – Yellow Card Scheme

The National Institute for Health and Clinical Excellence

web: nice.org.uk
For national guidance on evidence-based treatment of many conditions, including schizophrenia, bipolar disorder and depression.

Rethink Mental Illness

tel: 0300 5000 927
web: rethink.org
For everyone affected by severe mental illness. Includes information about medication and looking after your physical health.

Further information

Mind offers a range of mental health information on:

- diagnoses
- treatments
- practical help for wellbeing
- mental health legislation
- where to get help

To read or print Mind's information booklets for free, visit mind.org.uk or contact Mind infoline on 0300 123 3393 or at info@mind.org.uk

To buy copies of Mind's information booklets, visit mind.org.uk/shop phone 0844 448 4448 or email publications@mind.org.uk

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Mind

We're Mind, the mental health charity for England and Wales. We believe no one should have to face a mental health problem alone. We're here for you. Today. Now. We're on your doorstep, on the end of a phone or online. Whether you're stressed, depressed or in crisis. We'll listen, give you advice, support and fight your corner. And we'll push for a better deal and respect for everyone experiencing a mental health problem.

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