mind

For better
mental health

Making sense of antipsychotics (major tranquillisers)

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This booklet is for people who are prescribed antipsychotic drugs, and for their friends, relatives and carers, or anyone else who has an interest in this type of medication.

What should I know before taking these drugs?

The law says that people have the right to make an informed decision about which treatment to have, and whether or not to accept the treatment a doctor suggests. In order to consent properly, a person needs to have enough information to understand the nature, likely effects and risks of the treatment, including its chance of success, and any alternatives to it.

Generally, someone can only receive treatment that they have specifically agreed to. Once you have given your consent, it isn't final and you can always change your mind. This consent to treatment is fundamental, and treatment given without it can amount to assault and negligence. To find out more about when treatment can be given without consent, see *Mind Rights Guide 3: Consent to Medical Treatment*. (Details of this and other publications mentioned here may be found under *Further reading,* on p. 46.)

Patient Information Leaflets

People who are prescribed medication as outpatients, or from their GP, should find with it an information sheet called a Patient Information Leaflet (PIL), in accordance with a European Union directive. Inpatients may have to ask for it, specifically.

The EU directive sets out what information should be included in the leaflet, and in what order. It starts with the precise ingredients of the medicine, including the active ingredient, the drug, and the extra contents that hold it together as a tablet or capsule, such as maize starch, gelatine, cellulose and colourings.

This information is important because some people may be allergic to one of the ingredients, such as lactose. The leaflet gives the name of the pharmaceutical company that made the drug. It explains what the drugs are prescribed for, any conditions which mean you should avoid them, and anything else you should know before taking them. It states whether they are dangerous with other medicines, and, if so, which types. There are details about how to take them: by mouth or other means, at what time of day, when to take them in relation to meals (if necessary), the usual dose levels, and what to do if you take too many or forget to take them. Next, comes the list of possible side effects, and then the storage instructions.

The final item on the leaflet tells you that it contains only the most important information you need to know about the medicine, and that if you need to know more, you should ask your doctor or your pharmacist. 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 interacts with other drugs and changes their effects, makes them less effective, or causes additional side effects. Pharmacists are usually very willing to discuss drugs with patients, and some high-street chemists have space set aside where you can talk privately.

This is a lot of information to include in the PIL, so it's often printed in very small type, on a piece of paper that is folded many times, which may get thrown away with the packaging, by mistake. If you do not receive this information with your medicine, you should ask for it from the person who makes up your prescription.

Many people would like to have the information about their proposed treatment before they are given the prescription for it, and not after they have obtained the drugs. The following are questions you might like to discuss with your doctor when she or he gives you a prescription for a drug:

- What is the name of the drug, and what is it for?
- How often do you have to take it?
- If you are taking any other drugs, will it be all right to take them together?
- Will you still be able to drive?
- What are the most likely side effects, and what should you do if you get them?
- Do you have to take it at any particular time of day? For example, if it is likely to make you sleepy, can you take it at night rather than in the morning? If it is likely to make you feel sick, can you take it with or after food?
- When you want to stop taking it, are you likely to have any problems with withdrawal?

You may well think of other questions you wish to ask.

What are antipsychotic drugs?

These drugs can help people who are experiencing psychosis, either as a one-off episode or as part of an ongoing illness. Psychosis is a broad term, which covers schizophrenia and manic behaviour, but people may also experience brief episodes during severe depression, or a physical illness, or sometimes because of taking street drugs.

Someone who is psychotic perceives things and interprets events differently from those around him. This may include hearing things, such as voices, seeing something other people don't see (a hallucination) or thinking things that are not based on reality (a delusion). A person may believe, for example, that he or she is under the control of an outside force.

Antipsychotics are often effective in controlling the symptoms of psychosis, and enable many people to return to normal life. They may lessen delusions, hallucinations, incoherent speech and thinking, and reduce confusion. The drugs can control anxiety and serious agitation, make the person feel less threatened, and also reduce violent, disruptive and manic behaviour. However, not everybody finds antipsychotics helpful, and they can't cure the problem. They can also have very serious side effects, which cause major concern to users (see p. 11 for more information).

Antipsychotics are also known as major tranquillisers or neuroleptics. Neuroleptic means taking control of the nerves, and refers to the effects these drugs have on thought, behaviour and physical movement. Calling them major tranquillisers is misleading, because these drugs don't make people feel tranquil. Although they can cause drowsiness through their sedative action, they may also cause intense restlessness.

Chlorpromazine was the first antipsychotic used in psychiatry, in the 1950s. Since then, many similar drugs have been developed for treating schizophrenia and other psychotic illnesses and, less commonly, for dementia. They may also be prescribed for anxiety, in very low doses, and possibly for treating physical problems, such as persistent hiccups, problems with balance, and nausea in terminal illnesses.

There are two main types of antipsychotics: the older, conventional antipsychotics and the newer atypical drugs.

The conventional antipsychotics divide, generally, into two chemical groups:

- Low-potency drugs, such as chlorpromazine (Largactil), which are taken in relatively large doses, tend to be very sedating and cause more 'antimuscarinic' side effects (see p. 14).
- High-potency drugs, such as haloperidol (Dozic, Serenace, Haldol), which require lower doses and tend to cause more 'neuromuscular' side effects (see p. 11).

The atypical antipsychotics, such as risperidone, don't produce the most disturbing neuromuscular side effects that characterised the older drugs. For a listing of common antipsychotics, turn to p. 30.

What should my doctor take into account?

Medical history

People respond differently to medication. When a drug is prescribed, your doctor should take into account any medical conditions you are suffering from. It may mean that a particular drug is not suitable for you, or only in low doses.

Severity of symptoms

Psychosis can be extremely distressing, and some people cope better than others. If you have had frequent psychotic episodes, you may have developed your own coping strategies, which could mean you need to rely less on medication than other people.

The impact on friends and family

Acute psychosis is often linked with disturbed and disruptive behaviour that may place great strain on carers and the people you live with.

What would happen if the drugs were not prescribed?

A person with psychotic symptoms may show dangerous behaviour, or such disturbed ideas, that they put their own or other people's lives in danger.

The risk of relapse

Some research suggests that someone with schizophrenia, who remains on antipsychotics for a number of years, may be less likely to relapse than someone who is not taking them.

The pros and cons

Your doctor has to balance the advantages and disadvantages of treatment. The benefits to you, your family and friends have to be weighed against the disadvantage of unpleasant side effects.

How do the drugs work?

No-one knows precisely how they work. Most of them have a sedative action, and most of them block the effects of dopamine, a chemical neurotransmitter that carries signals between brain cells. This interrupts the flow of messages, which may be too frequent in psychotic states.

The new atypical drugs are more focused in their action. Clozapine, in particular, may be successful in suppressing psychosis in some people who have not responded to older drugs (see p. 35).

How quickly do they act?

This depends partly on how you take them, whether orally or by injection. When they are injected into a muscle, the sedative effect is rapid and reaches a peak within an hour. If you take them by mouth, in tablet or in syrup form, the sedative effect usually takes a few hours longer. However, the psychotic symptoms, such as voices, may take days or weeks to suppress. Nobody knows why.

Depot injections

Some drugs are available in an oil-based, 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 (see p. 39).

What dosage should I be on?

The average dose has tended to rise over the years. This is despite the facts that the most effective dose may be quite low, that increasing the dose will probably not make it more effective and that it may make the side effects worse. There are now signs that the trend is being reversed, especially since the introduction of the newer, atypical drugs. A recent scientific paper suggests that the most effective doses of the older, conventional antipsychotics are substantially lower than has previously been thought necessary.

Dosages of antipsychotics should be kept as low as possible. The higher the dose, the greater the unwanted side effects, and some of these can be very distressing. High doses can have a zombie-like effect, giving you a mask-like expression and strange movements. It 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 and social events. Moderate to high doses increase the risk of tardive dyskinesia, which is a serious problem causing involuntary movements (see p. 17). Research suggests that low, maintenance doses are as effective in preventing relapse as higher doses. Elderly people need smaller doses of drugs, and their health is at risk if they are given too high a dose. For information about side effects, see the page opposite.

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 1g (1000mg) daily. The aim should be to find the dose that lets you lead as normal a life as possible. If the medication is not working, it's important for doctors to reconsider the treatment rather than automatically putting up the dose.

The National Institute for Clinical Excellence (NICE) has issued guidelines on the treatment of schizophrenia and suggests doctors prescribe antipsychotics at the lowest effective dose, introducing the drugs gradually. They suggest that people should not be given a high starting dose.

Regular drug reviews

Your doctor should review your treatment regularly, as a matter of good practice, to make sure you still need the drugs, that the dose is still appropriate, and that side effects aren't troubling you.

Maximum dosage

Among other information, the British National Formulary (BNF) gives maximum doses for some, but not all of the antipsychotics. A copy of the BNF should be available in good libraries. A list of common drugs appears on p. 30 of this booklet, and provides this information, whenever possible. Your doctor or pharmacist can also tell you.

Generally, the drugs aren't licensed for use above these dosages, but hospital doctors do exceed them, at their discretion. They may also prescribe medication to be given 'as necessary', which can mean in addition to your regular dose. As a result, your total dose could be above the BNF maximum, although your psychiatrist has a duty to review the total dosage, daily.

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 your current psychiatrist to refer you to another doctor for a second opinion.

What are the side effects?

People's sensitivity and response to drugs varies enormously. One person may be able to tolerate standard doses with no significant side effects, while someone else may find the same dose has intolerable results.

Neuromuscular effects

Antipsychotics, as a group, have a large number of side effects in common. Because they interfere with dopamine, which is important in controlling movement, the side effects are largely to do with the neuromuscular system. These neuromuscular effects include: Parkinsonism, akinesia, akathisia, distonia, dysphonia and oculogyric crisis.

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 between them.
- When walking, you may lean forward, take small steps, and find it difficult to start and stop.
- Your mouth may hang open and produce excessive saliva.

Loss of movement (akinesia)
You may find it difficult to move, and your muscles may feel very weak. This may be mistaken for a symptom of depression.

Restlessness (akathisia)
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. The compulsion to move may be overwhelming. You may rock from foot to foot, shuffle your legs, cross or swing your legs repeatedly, or continuously pace up and down.

Nursing staff may misread this as a sign of agitation or anxiety, and may wish to treat it by increasing your dose of antipsychotics. If you are very troubled by akathisia, your doctor may be able to prescribe something to reduce it.

Muscle spasms (dystonia, dysphonia and oculogyric crisis)
These are acute muscle contractions that are uncontrolled and may be painful. They particularly affect young men. Sometimes the problem affects the muscles of the larynx (voice box), which makes it difficult to speak normally (dysphonia). It can be socially disabling, but is treatable.

Another form of muscle spasm affects the muscles that control eye movements. Called 'oculogyric crisis', it makes the eyes turn suddenly, so that you can't control where you look. This is very unpleasant and can make it dangerous crossing the road, or pouring hot water. It's also very disconcerting for people around you.

Such neuromuscular symptoms can be reduced with the sorts of drugs that are prescribed to treat Parkinson's disease (see p. 40 for more information on these drugs). These symptoms die down 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 avoiding daytime sedation). You may want to discuss this with your doctor to find out whether it would be an option for you.

Sexual side effects

Many antipsychotic drugs cause levels of the hormone prolactin to rise, which has some very common sexual side effects for both women and men, who may feel too embarrassed to talk about them:

- Breast development and the production of breast milk can affect men as well as women.
- A drop in sexual desire can make men and women less easily aroused, and cause impotence and sterility in men. Some drugs can interfere with erection and affect ejaculation.
- Priapism, a persistent erection of the penis without sexual arousal, sometimes results. 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 is sometimes a problem.
- Loss of periods, vaginal dryness, unwanted hair and acne may occur in women.
- Loss of bone density (osteoporosis) can affect both women and men.

Some of the atypical antipsychotics have less effect on prolactin and produce fewer of these problems. Women who change to an atypical antipsychotic should bear in mind that when prolactin levels drop back down, their periods may return and that they may need to think about contraception.

Antimuscarinic or anticholinergic effects
The drugs affect acetylcholine (another chemical messenger) and this may cause drowsiness, dry mouth, blurred vision, dizziness, constipation, feeling sick, difficulty passing water and rapid heartbeat. Constipation may be severe, and should be taken seriously. Low blood pressure can be a problem, especially in older and frail people, and it may contribute to falls.

Other effects on the heart
Several antipsychotics have been implicated in sudden deaths. Although these have been investigated, with no clear conclusion, sudden deaths have been linked to high doses of antipsychotics (above the BNF maximum) and to people being on several different antipsychotics at the same time (see p. 20).

Many of these drugs affect the heart rhythm. The Royal College of Psychiatrists' guidelines suggest that 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 are on these drugs and have unexplained blackouts, you should have your heart rhythm monitored. It might also be advisable to avoid drinking grapefruit juice, because it's thought to increase the impact on heart rhythm.

Sedation
Sleepiness is a common side effect with antipsychotics, but some, such as chlorpromazine, are more sedating than others (see the list of drugs on p. 30).

Eye problems

Various antipsychotics may be responsible for different eye disorders, such as: 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. 15) and glaucoma (increased pressure inside the eye). Any antipsychotic can cause narrow-angle glaucoma, a medical emergency. You should not take the low-potency antipsychotics if you have had glaucoma.

Other adverse effects

- 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.
- 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 reduces resistance to infection and has led to deaths in the past. It's very rare with the older antipsychotics.
- Weight gain is a very common side effect with a number of antipsychotics and causes a lot of distress. It's linked to increased appetite and decreased activity, as well as to changes in metabolic rate (the way in which your body uses food and converts it to energy). You may put on a lot of weight, and this may increase the risk of diabetes and other physical health problems.
- Difficulty urinating.
- Problems with regulating body temperature. Your temperature may be high or low, both of which may make you feel a little unwell.
- Your skin may burn more easily.
- Blood clots in the veins (thromboembolism) are linked largely to low-potency drugs (but see also clozapine, on p. 35).
- Some types of skin may develop a blue-grey discoloration.
- Antipsychotics can sometimes make people more excited, agitated and aggressive instead of less so.
- Liver disorders and jaundice (see chlorpromazine, on p. 30).

- Antipsychotics can cause emotional changes, such as depression. Others may have an antidepressant effect, although the available information about this is contradictory. Some drugs cause an emotional unease, making people restless, giving them bizarre dreams and disturbing their sleep. They can make people feel strange in familiar surroundings or out of touch with reality (depersonalisation and derealisation). It may also cause them to become more withdrawn, socially.

Neuroleptic malignant syndrome (NMS)
This neurological complication is thought to occur in about one per cent of hospital patients taking antipsychotic drugs. It can be very dangerous if it's not detected and treated, but the symptoms can be mistaken for an infection.

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
- abnormal results from blood tests.

NMS develops rapidly over 24 to 72 hours, and rigidity and a high temperature are usually the first symptoms to appear. The condition affects mostly people under 40, 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 four to 11 days. High-potency antipsychotics may produce greater risk, but it can happen with all of these drugs, including the atypical group. Treatment varies and can 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. Although the criteria for making the diagnosis are not clear, it seems that only about one per cent of people on antipsychotics are likely to get NMS. Out of these, only 11 per cent may be fatal. 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 the low-potency drugs at the lowest doses.

Tardive dyskinesia (TD)

TD is a disorder of the central nervous system, which causes abnormal, uncontrollable, disfiguring, and embarrassing movements. These usually start in the face and mouth, as involuntary tongue movements and slight grimacing. The problem can spread to the rest of the body, with writhing movements in the limbs, muscle spasms, tremors and tics.

Most psychiatrists agree that TD is caused by antipsychotics, mainly affecting people who have been taking moderate to high doses for long periods of time, and who have had quite severe Parkinson's symptoms. It's rare in someone who has been taking antipsychotics for less than six months, if the doses have been small.

It seems that if you get bad Parkinson's effects, you are more likely to get TD. Women, children and older people may be more vulnerable, and possibly those with a mood disorder, such as bipolar disorder (manic depression).

The problem may not be discovered until after you stop taking the antipsychotics, because they mask the symptoms of TD. But unfortunately, stopping and starting them may make TD more persistent, once it has developed. Some people remain on the drugs as a way of dealing with the symptoms, although this may result in further damage.

Sometimes when drugs are withdrawn, withdrawal dyskinesias may occur, but this is not necessarily the same as TD (see p. 24).

There's disagreement about how common TD is, and about the number of people who are permanently affected. Estimates of the risks of developing TD, after long-term use, range from five to 56 per cent, but 20 per cent is a widely accepted estimate for those treated for four years, or longer. The risk is higher for people on depot preparations (see p. 9). There is believed to be much less risk of TD with the atypical drugs.

Dealing with TD

If you stop taking the drugs, TD may disappear of its own accord. In about half of patients, the symptoms will improve, spontaneously, although this may take up to five years after stopping the drugs. However for a lot of people, TD is permanent. Although it's incurable, some possible treatments may help, if it's identified early.

Some people can't stop taking the drugs, because of the risk of relapse. This risk must be weighed in the balance against the risk of TD. If you have been taking one of the old antipsychotics, you might be able to switch to an atypical such as clozapine, risperidone, olanzapine, or quetiapine, which have been found to help TD.

There is evidence that clonazepam (a benzodiazepine used in epilepsy) may be useful, and that vitamin E and also vitamin B6 are helpful in some cases. If you are taking anti-Parkinson drugs, it may be a good idea to stop. TD doesn't necessarily develop or get progressively worse in all cases, and using the lowest possible dose of antipsychotic minimises the risk.

Tardive psychosis

Sometimes, psychotic symptoms develop during or after using antipsychotics for long periods of time. Dopamine receptors may become super-sensitive after long-term use, which means that higher doses are needed to maintain the antipsychotic effects.

Some people who withdraw from these drugs find that their psychotic symptoms have become worse. This is another reason for using no more of the drug than is absolutely necessary.

Which type of antipsychotic should I take?

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 even make them worse. Atypical antipsychotics usually 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 an atypical. In its guidelines for using antipsychotic drugs, NICE recommends atypical antipsychotics:

- as a first-line treatment, if you are newly diagnosed with schizophrenia. The initial dosage 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 drugs
- if you have had a relapse, and your symptoms did not respond well to the older drugs.

If you are already on a conventional antipsychotic, and your symptoms are responding well, without causing you unacceptable side effects, there's no need to change to an atypical antipsychotic. If neither conventional nor atypical antipsychotics are controlling your symptoms, after an adequate trial period of six to eight weeks, you should try clozapine (see p. 35).

Why do people take more than one antipsychotic?

Your doctor may want to prescribe more than one antipsychotic at a time, if the drug you are currently taking doesn't seem to be working well enough. This is known as polypharmacy.

Sometimes a doctor may prescribe an oral drug as well as a depot, sometimes a conventional drug as well as an atypical antipsychotic. In most cases, doctors should avoid combining conventional with atypical antipsychotics. The atypical have fewer side effects than the standard antipsychotics, but this benefit is undermined if you are taking both at the same time. In some cases, however, doctors may legitimately augment clozapine with sulpiride, for example, (see p. 33).

Polypharmacy is not recommended in the BNF. Patients may end up having a high total dose, even though each individual drug is within the recommended dose range. If you are detained in hospital under the Mental Health Act, 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.

Research has shown that adding a second drug doesn't usually improve the outcome very much, but does increase the side effects, can diminish your quality of life, and may even be life-threatening. The NICE guidelines also say that it's best to use a single drug. They say 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.

If you are taking more than one antipsychotic drug, try working out the dose of each 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.

What happens if I am taking other drugs?

If you are taking any other drugs as well as the antipsychotic (whether these are on prescription, or bought over the counter from a pharmacist or alternative health practitioner) discuss with your doctor any possible interactions, which could increase adverse effects or be dangerous. The following information only relates to combinations of psychiatric drugs.

Drugs with antimuscarinic effects

If certain antipsychotics are combined with other dugs that have antimuscarinic properties, the antimuscarinic effects are likely to increase (see p. 16). This applies particularly to tricyclic antidepressants and to antipsychotics, such as chlorpromazine (Largactil), and other low-potency antipsychotics. The anti-Parkinson's drugs are also, rather confusingly, antimuscarinics (see p. 40). These combinations can also induce delirium, which may be hard to detect in psychosis.

Antidepressants

The antidepressant trazodone, taken with drugs such as chlorpromazine (Largactil), can cause lowered blood pressure. There is an increased risk of disturbances of heart rhythm if antipsychotics are taken with tricyclic antidepressants.

Antiepileptic drugs

Fits are more likely to happen if you are taking antiepileptic drugs.

Minor tranquillisers

Taking drugs for anxiety, or to help you sleep, increases the sedative action of the antipsychotics.

Lithium
If lithium (Camcolit, Liskonum, Priadel, Litarex) is taken with the older antipsychotics, it increases the chances of Parkinson's effects, muscle spasms and neuromuscular restlessness, as well as possible toxic effects. The antipsychotics should be started at a lower dose than usual.

Carbamazepine
Carbamazepine makes the body process some drugs faster. This lowers the level of the drug in the blood.

Alcohol
Drinking alcohol increases sedation. You should ask your doctor whether it's safe to drink when you are on these drugs.

What about rapid tranquillisation?

In an emergency situation, when you are considered to need rapid tranquillisation (if you are endangering yourself or others), you may be given drugs by injection. Clopixol Acuphase is one of the drugs used for this purpose (see p. 34).

The Royal College of Psychiatrists suggests that high doses of such antipsychotic drugs can be avoided by using a combination of moderate doses of benzodiazepine and of an antipsychotic. The NICE guidelines recommend that the preferred drugs are lorazepam (a benzodiazepine tranquilliser), haloperidol, or olanzapine. If haloperidol is used, then an anti-Parkinson's drug should be given, as well, to minimise the side effects.

The 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, which should be kept in your hospital notes.

How easy is it to come off these drugs?

Once prescribed antipsychotic drugs, you may need to stay on them for some time. The substantial majority of 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 really need them, or if you can cope successfully in other ways, without needing medication.

Getting enough support

To increase your chances of success, you need plenty of support, which should ideally include your doctor. 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 the drugs 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. Giving families and carers supportive services is also helpful and reduces the risk of relapse.

The best time to try is when you are not currently under stress (from problems to do with housing, finance, a job or your family, for example). It may be a good idea to postpone withdrawal until you can be more relaxed, and pay attention to how you are feeling. The BNF says, 'Withdrawal of antipsychotic drugs after long-term therapy should always be gradual and closely monitored, to avoid the risk of acute withdrawal symptoms or rapid relapse.'.

Reducing your tablets

If you are taking tablets, then one suggested way of cutting down is to reduce your dose by up to one fifth, at monthly intervals. However, this may be too fast for some people. If you have been taking the drug for some years, then the gradual reduction may take at least a year.

Reducing depot injections

If you are on depot injections, it can take two years to reduce the dose and cut them out completely, depending on the starting dose. One psychiatrist advises that the dose should only be reduced once every three months, by no more than one third of the current dose. Others suggest that because these drugs are designed to stay in the body for a long time, it will naturally take a long time to clear them, so withdrawal will automatically be gradual. If you are on oral medication as well as depot, reduce and stop the oral medication first. In all cases, coming off the last quarter of the original dose is often the most difficult, and you may need to reduce it extremely slowly.

If you are taking anti-Parkinson's drugs for the unpleasant side effects, you should continue until you have substantially reduced the dose of antipsychotic.

Withdrawal effects

You are more likely to get withdrawal effects if you stop taking the drugs suddenly. Rarely, you may find the following effects within a few days of stopping:

- You may experience nausea, vomiting, diarrhoea, high blood pressure, sweating, restlessness, disturbed sleep, runny nose and excessive saliva. This happens, especially, after stopping drugs with antimuscarinic side effects, such as thioridazine (Melleril) and chlorpromazine (Largactil).
- If you have tardive dyskinesia, it may get worse, or signs of it may appear for the first time.
- You may temporarily experience involuntary movements, which will disappear within a few days.
- Psychotic symptoms, such as delusions and hallucinations, may emerge as a result of the withdrawal. This may make you or your doctors think that you are relapsing.

You may find withdrawal stressful and difficult, but still feel able to persist if it means that you will be able to cope, successfully, without the drugs in the end.

What are the chances of relapsing?

Some people find that their psychotic symptoms return if they stop taking the drugs, but it's not possible to know this in advance, especially the first time you try. It's important to go at your own pace, watching out for signs of relapse, such as sleeplessness, or feeling tense and irritable. Once you have come off the drugs, the average time for relapse, if it happens, is about four to five months afterwards. You may find it helpful to involve your family or friends and ask them to tell you if they think you are becoming unwell. Self-help groups may also be helpful. People who have had symptoms on and off for years, or who have previously relapsed after stopping, may be at a higher risk of relapse.

If you show signs of relapse while you are withdrawing, you should delay any further reduction, or possibly go back on the drug for a while. Your psychiatrist may be prepared to give you or your relatives an emergency supply of oral medication to use, if you need to. Or you may decide to try and do without, depending on your previous experience, as long as you have other forms of support.

If you have tried to withdraw in the past, but had a relapse and had to go back on medication, there may have been a number of reasons:

- You tried to withdraw too quickly.
- There were other things happening in your life at the time that were too stressful.
- The drugs have made the dopamine receptors in your brain super-sensitive, so it's much harder for you to withdraw (see tardive psychosis, on p. 21).
- You found the stress of withdrawal too difficult to cope with.
- You need to go on taking the drugs (many doctors would suggest this).

You may want to discuss these issues with someone you trust, such as a doctor, psychiatric pharmacist, other mental health professionals, or a local drug withdrawal support group.

Who should avoid taking antipsychotic drugs?

Anyone with the following should use these drugs with caution:

- liver or kidney disease
- heart disease
- Parkinson's disease
- epilepsy
- depression
- myasthenia gravis (a disease affecting nerves and muscles)
- an enlarged prostate
- a history of glaucoma, an eye disease (see p. 17)
- 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 in a state of impaired consciousness, such as a coma.

The elderly

Doctors should also prescribe them with caution to elderly 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.

Sunbathing

Antipsychotics may make the skin more sensitive to sunlight, especially at high doses, so you should protect your skin from direct sunlight.

Pregnancy and breastfeeding

As a general rule, you should avoid taking any drugs during pregnancy and while breastfeeding, to avoid any possible risk to the developing and newborn infant. Taking drugs is only a good idea if 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.

The manufacturers advise women not to take the atypical drugs when breastfeeding. It's best to avoid antipsychotics altogether, if possible, at this time.

Ask your doctor and your pharmacist about the safety of any drug you are advised to take. It's very important to discuss any concerns with your doctor and other professionals responsible for your health during pregnancy and delivery.

What are the alternatives to drugs?

Most doctors feel that antipsychotic drugs are essential, and that you will need to take them in order to be able to benefit from any other sorts of treatment, such as cognitive behaviour therapy, that may be available. If you have had episodes in the past and know what is helpful to you and what is not, you may disagree and prefer to use alternatives to drugs.

Crisis centres

Crisis centres are alternatives to hospital, planned as places of asylum and refuge. Staff can support people through their experience, together with others who have been through a similar crisis themselves. Such services are still too rare in this country.

Cognitive behaviour therapy (CBT)
CBT can help you to cope with psychotic experiences and the disruption to everyday life that this may bring. Because thoughts have a powerful impact on feelings and behaviour, it's possible for people to think themselves into a state of extreme distress. But it's also possible to bring about a state of wellbeing through changing the negative thought patterns that feed psychotic or paranoid feelings. You may be offered CBT as part of your care plan. If not, you could ask your care coordinator or your GP for a referral to see a clinical psychologist, or you could contact a professional body (see *Useful organisations*, on p. 45, and *Further reading*, on p. 46).

Counselling and psychotherapy
You may find it helpful to talk to a counsellor or a psychotherapist about your experiences, to try and make sense of them, or to relate them to events in your life. More and more GPs are employing counsellors in their practices. If not, your GP or your psychiatrist may be able to refer you to a psychotherapist or counsellor. (See *Useful organisations*, on p. 45, for more information, and see *Further reading*, on p. 46, for details of Mind's booklet *Understanding Talking Treatments*.)

Arts therapies
Therapies using art, music, drama, dance or creative writing may be very powerful aids to recovery, helping you to make sense of your symptoms and work your way through them. If you have difficulty putting your feelings into words, they are a means of expressing yourself. These therapies are available in some psychiatric units and community mental health facilities, and it's worth asking local information providers what is happening in your area.

Complementary therapies

Complementary and alternative therapies may be very helpful when you are recovering from an episode of distress. They can be a useful tool for promoting relaxation and inducing a state of wellbeing. Complementary therapists emphasise the connections between mind and body and are not concerned with merely treating symptoms.

Self-help groups

Many people experiencing emotional distress find it helpful to share their feelings with others going through similar difficulties. There are self-help organisations for people suffering from various forms of mental distress, including those who hear voices (see *Useful organisations,* on p. 45).

Older antipsychotics

All these drugs are listed under their general names, with the manufacturers' names in brackets afterwards. They are all high-potency drugs, unless otherwise indicated. The drug chlorpromazine is the standard by which all the others are measured.

Side effects common to all the drugs are covered elsewhere (see p. 11). Dosages of antipsychotics can vary considerably and details are not given here, except when the BNF specifies a maximum daily dose. 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 p. 44.

Benperidol (Anquil) ☹
Similar to haloperidol. *Dose:* maximum 1.5mg per day.

Chlorpromazine (Largactil)
A low-potency drug, and the one with which all the others are compared. *Side effects:* one of the most sedating of the older antipsychotics and causes antimuscarinic effects, in particular. Can make skin very sensitive to sunlight. It may cause low blood pressure, especially in the old and frail, blurred vision and weight gain. Around 20 to 30 per cent of long-term users have a build up of granular deposits in the cornea and lens. This is partly dose-related. It does not usually affect sight. Avoid it if you have glaucoma. It sometimes causes emotional unease (see p. 14), but may have an antidepressant effect. It has been linked with blood clots (thromboembolism). Chlorpromazine can cause liver toxicity (poisoning) and regular tests of liver function are sometimes advised before starting, and during the first six months of treatment. Jaundice may occur in the first two months. It should disappear in the month after stopping.

Dose: maximum not specified, but 1g (1000mg) 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 one to five is 40mg per day, and for a child aged six to 12 years, 75mg per day.

Droperidol (Droleptan)
Withdrawn.

Flupentixol (Flupenthixol, Depixol, Fluanxol) ☹
Side effects: less sedating than chlorpromazine, but with more neuromuscular (Parkinson's) effects. It may have an antidepressant effect. *Dose:* maximum 18mg per day. (See also flupentixol decanoate, on p. 39.)

Fluphenazine (Moditen) ☹
Side effects: less sedating and fewer antimuscarinic effects than chlorpromazine, but more neuromuscular reactions, especially muscle spasms and restlessness. It may cause depression. *Dose:* anything over 20mg per day to be used only with special caution.

Haloperidol (Dozic, Haldol, Serenace)
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. *Caution:* fluoxetine increases levels of this drug in the blood, and carbamazepine lowers them. There are increased risks if haloperidol is taken with lithium (see p. 23). *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.

Loxapine (Loxapac) ☹
Low potency. Similar to chlorpromazine, but less sedating. *Side effects:* nausea and vomiting, weight changes (gain or loss), shortness of breath, drooping eyelids, high temperature, flushing, headache, tingling, numbness and excessive thirst. *Dose:* maximum 250mg per day.

Levomepromazine/methotrimeprazine (Nozinan)
Low potency. *Side effects:* more sedating than chlorpromazine, and with a risk of lowered blood pressure, particularly in people over 50. *Dose:* highest mentioned in BNF is 1g (1000mg) per day. No clear advice about children.

Oxypertine
Withdrawn.

Pericyazine (Neulactil)
Side effects: more sedating than chlorpromazine, and lowered blood pressure when treatment starts. *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.

Perphenazine (Fentazin) ☹
Side effects: less sedating than chlorpromazine, but more neuromuscular reactions, especially muscle spasms, particularly at high doses. It may cause blurred vision. *Dose:* maximum 24mg per day.

Pimozide (Orap) ☹
Side effects: less sedating than chlorpromazine. It may cause depression. *Caution:* serious disturbances in heart rhythm reported, especially when doses are high dose. The Committee on Safety of Medicines recommends ECG before treatment starts and periodically thereafter on doses over 16mg daily. If other antipsychotic drugs are taken at the same time, there may be a greater risk of toxic effects on the heart (see p. 16). Avoid taking it with tricyclic antidepressants.

Prochlorperazine (Stemetil) ☹
Side effects: less sedating than chlorpromazine, but more neuromuscular reactions, particularly muscle spasms.

Promazine (Sparine) ☹
Low potency. Similar to chlorpromazine and one of the most sedating of the older antipsychotics.

Sulpiride (Dolmatil, Sulpitil) ☹
Low potency. *Side effects:* less sedating than chlorpromazine and a different chemical group. Not associated with jaundice or skin reactions. *Dose:* maximum 2.4g per day (2400mg per day).

Thioridazine (Melleril) ☹
Low potency. *Side effects:* strong antimuscarinic effects (see p. 14) and may cause weight gain, blurred vision, and blood clots (thromboembolism). It may have an antidepressant effect. It is less sedating than chlorpromazine and lowered body temperature occurs rarely. There are fewer neuromuscular reactions. Lowered blood pressure is more common (especially in the old and frail). Degeneration of the retina of the eye, with restricted vision occurs, rarely, with high doses. It can interfere with erection, and affect ejaculation, causing, in particular, retrograde ejaculation (in which seminal fluid goes back into the bladder). *Caution:* the licence now restricts it to the treatment of schizophrenia only, under the supervision of a consultant psychiatrist, because, in rare cases, thioridazine may disturb the heart rhythm, and could put vulnerable people at risk of sudden death. These effects occur only while taking thioridazine, and do not continue after it is stopped. People who are taking thioridazine for the first time should have an ECG and basic blood tests before starting treatment, and these should be repeated after any increase in dose, or every six months. *Dose:* maximum 600mg per day (hospital patients only).

Trifluoperazine (Stelazine)

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. It may cause spontaneous ejaculation. May be given to children.

Zuclopenthixol (Clopixol Acuphase) ☹

Similar to chlorpromazine. This drug is given by injection and is for up to two weeks' treatment only. It may cause spontaneous ejaculation. *Dose:* maximum 400mg per course and four injections.

Zuclopenthixol dihydrochloride (Clopixol) ☹

Similar to chlorpromazine. *Dose:* maximum 150mg per day.

Atypical antipsychotics

The atypical antipsychotics were mostly first licensed in the 1990s, having been developed with the aim of reducing the neuromuscular side effects associated with the older drugs. Some of them also have fewer of the side effects associated with raised prolactin levels. All of these drugs are licensed for the treatment of schizophrenia.

Caution

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.

Side effects

Main side effects include: weight gain, dizziness, mild and short-lived neuromuscular symptoms, low blood pressure on standing upright, which may be associated with fainting or rapid heart beat in some people. Occasionally, tardive dyskinesia may occur after long-term use; rarely, neuroleptic malignant syndrome. Other side effects are listed under the individual drugs.

Amisulpride (Solian) ☹

This is given for both positive and negative symptoms of schizophrenia. *Caution:* it should be used with caution in people with kidney problems and in elderly people. It should not be used in pregnancy or while breastfeeding. *Side effects:* insomnia, anxiety, agitation, raised prolactin levels causing milk production, loss of menstrual periods, breast development, breast pain and sexual problems. Occasionally: slow heart beat and fits; changes in heart rhythm may occur. Dose: maximum 1.2g per day (1200mg per day).

Clozapine (Clozaril) ☹

Clozapine is licensed for treatment of schizophrenia when other antipsychotics are unsuitable. *Caution:* it carries a three per cent risk of causing agranulocytosis (see p. 17). It can only be prescribed by psychiatrists. Patients have to be registered with the Clozaril Patient Monitoring Service, and must have regular blood tests, every week, for the first 18 weeks of treatment, and fortnightly thereafter. 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 sixth and 18th weeks of treatment, and is more common in women. Any infections that develop should be reported to the doctor. It should not be used at the same time as other drugs that cause agranulocytosis, including carbamazepine. Clozapine has also been linked with blood clots (thromboembolism). 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 dosage should be monitored accordingly.

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. *Withdrawal:* rebound psychosis has been reported, and other antipsychotic drugs may not be effective afterwards. Clozapine should not be stopped abruptly. *Dose:* maximum 900mg per day.

Olanzapine (Zyprexa)

The BNF suggests that this drug is effective in maintaining improvements in people who have responded to initial treatment. It may also be used to treat moderate to severe mania. *Caution:* 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) or who is breastfeeding should not take it. Carbamazepine lowers the level of this drug in the blood. *Side effects:* 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 evidence that olanzapine may cause, or increase, the risk of diabetes in some people. Recent research suggests that it may cause an increase in blood fats, such as cholesterol, in elderly people. Olanzapine comes in tablets and also as Velotab, a tablet that dissolves on the tongue or that can be added to drinks, such as water, milk or juice. *Dose:* maximum usually 20mg per day. BNF gives no guidance on use in children.

Quetiapine (Seroquel) ☹

Used especially in people with intolerable Parkinson's symptoms, or symptoms of raised prolactin levels caused by other drugs. Similar to clozapine, and causes fewer neuromuscular effects than the older antipsychotics. Not associated with serious blood disorders. *Caution:* it should be used with caution in pregnancy, in people with liver or kidney problems, in elderly people, and in people who are taking some types of heart drugs, or who have cerebrovascular disease. It should not be used while breastfeeding. *Side effects:* drowsiness, indigestion, mild loss of strength and energy, stuffy nose, fast heartbeat, anxiety, fever, muscle pain, rash. Rare effects: blood disorders, low thyroid hormone and possible changes in heart rhythm. *Dose:* maximum 750mg per day.

Risperidone (Risperdal) ☹

Thought to improve both positive and negative symptoms of schizophrenia. It has effects similar to chlorpromazine, but neuromuscular effects are usually less marked. *Caution:* 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 impair alertness and can therefore interfere with the ability to drive and operate machinery. Caution is advised if other drugs with similar actions are given. Carbamazepine lowers its blood levels. *Side effects:* insomnia, agitation, anxiety, and headache, weight gain. Less common side effects: drowsiness, fatigue, dizziness, difficulty concentrating, constipation, indigestion, nausea, abdominal pain, blurred vision, problems with erection and ejaculation, nasal inflammation, and rash. Occasional side effects: low blood pressure, dizziness, and increased heart rate, particularly if high doses are given at the start of treatment. There are rare reports of neuroleptic malignant syndrome, water intoxication and fits. *Dose:* maximum 16mg per day.

Sertindole (Serdolect)

Caution: this drug was suspended following reports of serious effects on heart rhythm and sudden death. It is now being reintroduced in Europe, but initially only for patients enrolled in clinical studies, who will be carefully selected and monitored.

Zotepine (Zoleptil) ☹

This is a relatively new antipsychotic. *Caution:* it should not be given to people intoxicated with alcohol or other central nervous system depressants, or to people with gout or kidney stones. It should be used with caution in people with epilepsy, people at risk of heart problems and those with high blood pressure, prostate problems, urinary retention, narrow-angle glaucoma, and paralytic ileus. It should also be used with caution in combination with other antipsychotics, fluoxetine (Prozac) and diazepam (Valium), and with drugs which lower blood pressure. Zotepine should be avoided, if possible, in pregnancy and while breastfeeding. *Side effects:* weight gain, drowsiness, loss of strength and energy, dry mouth, akathisia and other neuromuscular effects (but less common than with the older antipsychotics). Chills, headache, pain, low blood pressure, rapid heart beat, constipation, indigestion, altered liver function, blood effects, depression, dizziness, insomnia and blurred vision were reported during trials. Less common side effects: flu-like symptoms, raised prolactin, sexual problems, appetite changes and convulsions. Sexual side effects should be less of a problems at lower doses. Isolated cases of neuroleptic malignant syndrome and tardive dyskinesia have been reported. *Dose:* maximum 300mg per day.

Antipsychotics through depot injection

Some antipsychotics can be given in a slow-release formulation by deep injection into a muscle. They may be given weekly, fortnightly, or every few weeks. Depot injections may cause more neuromuscular reactions than oral drugs. There can be 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 risks to you, versus the benefits, and to find out whether you could have a lower dose.

These drug formulations are based on nut oils, to which some people may be hypersensitive or allergic. Sometimes, these are referred to as 'vegetable oil' in the Patient Information Leaflet, but they are either sesame or coconut oil. If you and your doctors are considering depot drugs, and you have a nut allergy, make sure they know this.

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

Caution: contains coconut oil. Can cause over-excitement if given to people who are agitated or aggressive. *Side effects:* more neuromuscular reactions than chlorpromazine. *Dose:* maximum 400mg per week.

Fluphenazine decanoate (Modecate, Modecate Concentrate) ☹

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

Haloperidol decanoate (Haldol Decanoate) ☹

See haloperidol. *Caution:* contains sesame oil.

Pipothiazine palmitate (Piportil Depot) ☹
Similar to chlorpromazine. It may cause depression. *Caution:* contains sesame oil. *Dose:* maximum 200mg every four weeks.

Zuclopentixol decanoate (Clopixol, Clopixol Concentrate) ☹
Side effects: similar to chlorpromazine but less sedating. *Caution:* contains coconut oil. *Dose:* maximum 600mg per week.

Anti-Parkinson's drugs

These drugs are given to lessen the neuromuscular effects of antipsychotics, which resemble the symptoms of Parkinson's disease. (Somewhat confusingly, they are also called antimuscarinics, although they are not used for antimuscarinic side effects.) The World Health Organisation has stated that anti-Parkinson's drugs should not be given routinely to people on antipsychotics, but only when Parkinsonism has actually developed. Anti-Parkinson's drugs should only be used when it is either not advisable to change the antipsychotic or reduce the dose, or where this has not worked.

These drugs can cause confusion and memory problems and, occasionally, makes the psychosis worse. Due to their stimulant effect, they have the potential for abuse and can occasionally be habit forming. When withdrawing, you should go gradually and not stop suddenly. Trihexyphenidyl hydrochloride is the standard to which the others are compared.

Benzatropine mesylate/benztropine mesylate (Cogentin)
A sedative rather than stimulant effect, otherwise similar to trihexyphenidyl hydrochloride. *Dose:* maximum 6mg per day. Avoid in children under three years old.

Biperiden hydrochloride (Akineton)
Similar to trihexyphenidyl hydrochloride. *Caution:* may cause drowsiness.

Orphenadrine hydrochloride (Biorphen, Disipal)
Similar to trihexyphenidyl hydrochloride. *Side effects:* it can have a euphoric effect and may cause insomnia. *Dose:* maximum 400mg per day.

Procyclidine hydrochloride (Arpicolin, Kemadrin)
Similar to trihexyphenidyl hydrochloride. *Dose:* maximum 30mg per day (60mg per day in exceptional circumstances).

Trihexyphenidyl hydrochloride/benzhexol hydrochloride (Broflex) ☹
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. *Dose:* maximum 20mg per day.

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Useful organisations

British Association of Behavioural and Cognitive Psychotherapists (BABCP)
PO Box 9, Accrington, BB5 2GD
tel. 01254 875277, fax: 01254 239114
e-mail: babcp@babcp.org.uk web: www.babcp.org.uk
Full directory of psychotherapists available online

British Association for Counselling and Psychotherapy
BACP House, 35–37 Albert Street, Rugby CV21 2 SG
tel. 0870 443 5252, fax: 0870 443 5161
e-mail: bacp@bacp.co.uk web: www.bacp.co.uk
Contact for details of local practitioners

Hearing Voices Network
91 Oldham Street, Manchester M4 1LW
tel. 0161 834 5768, e-mail: hearingvoices@care4free.net
web: www.hearing-voices.org.uk
User network and local support group for people who hear voices

Manic Depression Fellowship
Castle Works, 21 St George's Road, London SE1 6ES
tel. 020 7793 2600, fax: 020 7793 2639
e-mail: mdf@mdf.org.uk web: www.mdf.org.uk
Works to enable people affected by manic depression to take control of their lives

Rethink Serious Mental Illness
28 Castle Street, Kingston-upon-Thames, Surrey KT1 1SS
advice line: 020 8974 6814, tel. 0845 456 0455, fax: 020 8547 3862
e-mail: advice@rethink.org web: www.rethink.org
Working together to help everyone affected by severe mental illness, including schizophrenia, to recover a better quality of life

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