CHAPTER 29
Drugs

Many drugs have effects on sex and the great majority of these effects are negative. A list of some of the numerous prescription drugs causing impotence is given in the previous chapter. There are at least 200 medications that can interfere with your sexuality in one way or another.

Nearly all the antianxiety agents reduce sex drive by increasing the production of serotonin. The one exception is buspirone (Buspar), which causes a uniform and significant improvement in all aspects of sexual behaviour. Methaqualone has also been reported as an aphrodisiac, more effective in women than in men.

All the antipsychotic drugs cause a decline in sex drive by blocking dopamine transmission and thereby increasing levels of prolactin. They also tend to inhibit ejaculation or cause painful ejaculation in men and block orgasm and reduce sexual arousal in women by interfering with vaginal lubrication. Many also cause priapism by alpha-adrenergic, but not cholinergic, actions.

Antidepressants also produce negative effects by blocking the action of dopamine and also by increasing the production of serotonin. With a few exceptions, they all tend to reduce sex drive and many may produce impotence and retard ejaculation in men and prevent orgasm in women. Clomipramine (Anaphranil, Placil) and phenylzine (Nardil) are so effective at impairing ejaculation that they have been used for treating premature ejaculation. Paradoxically, clomipramine and others that act specificially by reducing serotonin may also give rise to irresistible sexual feelings, leading to impulsive sexual assaults on others. Viloxazine, trazodone (Deseryl), lofepramine and tranylcypromine (Parnate) actually increase sex drive independent of mood by causing increased production of noradrenalin. Trazodone can, however, cause priapism, by the same mechanism as antipsychotic drugs. In one trial, sex drive, frequency of sexual fantasies and desire to have sex all increased significantly in patients given bupropion hydrochloride but there was no significant increase in sexual activity frequency or sexual response.

If the medication cannot be stopped, the adverse effects of antidepressants on sex can sometimes be reversed by other drugs. Cyproheptadine hydrochloride (Periactin), yohimbine and bethanechol chloride (Urecholine, Urocarb) have successfully reversed orgasmic dysfunction, while yohimbine has also resolved ejaculatory dysfunction and reversed reduced sex drive, and bethanechol has also been reported to reverse erectile and ejaculatory dysfunction.

Some prescription drugs antagonise the effects of testosterone. These include spironolactone (Aldactone, Spiractin) and cimetidine (Cimehexal, Cimetimax, Magicul, SBPA Cimetidine, Sigmetadine, Tagamet), both of which cause males to develop female-like breasts and cause decreased sexual desire and erection problems (in 20-25 percent with spironolactone and about half of this with cimetidine). In women, they often cause menstrual irregularities but don't usually have negative sexual impact. Other diuretics (chlorothiazide, chlorthalidone, furosemide, hydrochlorothiazide) all lower sex drive and cause erection problems in about ten percent of users.

Chronic digoxin (Lanoxin) therapy lowers sex drive by reducing testosterone and leutinising hormone levels in males. Clofibrate is also reported to reduce sex drive. Many of the drugs used to treat epilepsy also reduce sex drive by reducing levels of testosterone but temporal lobe epilepsy itself causes loss of sex drive.

Virtually all the cardiovascular drugs can cause sexual dysfunction. Calcium channel blocking agents (amlodipine, nifedipine) and ACE inhibitors (captopril, enalapril) do not appear to be as likely to cause erectile dysfunction as are other agents, but reduce sex drive in 16-20 percent of men. Methyldopa (Aldoclor, Aldomet, Aldopren, Aldoril, Hydopa) produces dose-dependent effects on sexual drive, potency, orgasm and arousal in 10-25 percent of patients. However, beta-blockers (atenolol, metoprolol, nadolol, propanolol, timolol) only cause erectile

difficulties in 8-12 percent of men.

The peripheral vasodilator, guanethidine (Esimil, Ismelin), produces a dose-dependent blocking or inhibition of ejaculation, rising from 50-60 percent with low doses to 85 percent at higher doses. Some fifteen percent also develop erectile difficulties.

Antihistamines have a drying effect on the vagina and may impair vaginal lubrication.

Several drugs which increase levels of dopamine have been used to improve sexual function. These include selegiline (Eldepryl, Selgene), levodopa (Kinson, Madopar, Sinacar, Sinemet) and bromocryptine (Bromolactin, Kripton, Parlodel).

On the other hand, drugs which decrease levels of dopamine, such as the antidepressants mentioned above, have been used to depress sex drive in sex offenders, though drugs which depress testosterone production are more often used. These include cyproterone acetate, oestrogens, flutamide, progesterone, buserelin and gosrelin. The latter two are found to be the most effective, probably because they also inhibit production of leutinising hormone and leutinising hormone releasing hormone.

Most recreational drugs have a negative effect on sex. The effect of alcohol was perhaps best summarised by Shakespeare in *Macbeth*: 'It provokes the desire but takes away the performance.' Small amounts of alcohol may relax a person, allow the loosening of minor inhibitions and increase the desire for lovemaking. In one survey, 45 percent of males and 68 percent of females reported that alcohol 'greatly or somewhat' enhanced their sexual enjoyment.

However, more than a little (more than three drinks) tends to dampen desire and hinder performance. It reduces a woman's level of sexual arousal and slows down her response cycle so that she takes longer to reach orgasm. She will also feel it less intensely than she otherwise would. Chronic heavy drinking in women can lead to loss of desire and diminished capacity for pleasure as well as wreak havoc with her reproductive system, disrupting menstruation and ovarian function, decreasing fertility and causing shrunken breasts and malformed genitals. Drinking during pregnancy can also cause irreparable harm to the foetus.

Large amounts of alcohol also slow things down in men. They take more time to become erect (and usually achieve a half-hearted effort when they do) and to ejaculate (if, in fact, they manage this at all). Up to eighty percent of male chronic heavy drinkers suffer from decreased desire or potency or both. This is because alcohol causes an increased production of oestrogens from testosterone so that, after years of abuse, their oestrogen levels may be as high as a woman's. They lose their body hair. Their breasts swell. Their muscle mass begins to shrink. Their penises and testicles may even shrink. Though reducing sexual drive, alcohol also appears to broaden the range of erotic stimuli to which a man may respond, thus increasing the development of sexual deviance.

Amphetamines create sudden bursts of energy like an adrenalin rush and subjects report an immediate erection on intravenous injection of methylamphetamine and increased desire. This appears to be due to general arousal within the central nervous system. However, this leaves many users too hyper for sex.

Over eighty percent of users report that marijuana enhances the sense of touch and gives the impression that time is passing more slowly. Some users feel this improves sexual functioning; males are more likely to report an increase in pleasure and females an increase in desire. However, expectation seems to play a big part in this and, in any case, the effects appear to be purely subjective and to have no basis in physiological fact. The Indian Hemp Drugs Commission of 1894 reported that cannabis preparations 'have no aphrodisiac power whatsoever: and as a matter of fact, they are used by ascetics in this country [India] with the ostensible object of destroying sexual appetite'. Whatever the truth of this, long term heavy use lowers leutinising hormone and testosterone levels, decreasing sexual function and interfering with fertility in both sexes.

Cocaine does initially increase sex drive and loosen inhibitions by stimulating production of dopamine, a neurotransmitter that acts as a kind of aphrodisiac. Many report not only greater

desire but also more intense and/or multiple orgasms. It often allows men to prolong intercourse. In fact, the effect can sometimes be so dramatic that there are reports of guys presenting to outpatient departments of hospitals with excoriated penises from hours of more or less continuous intercourse. However, with continued use, the body simply stops making dopamine, cocaine loses its sex-enhancing properties and men have trouble getting erections, while women can't lubricate or reach orgasm. If use still continues, sexual desire disappears. It will, however, usually reappear after two or three weeks of complete abstinence from the drug. Cocaine, because it touches off a rush of adrenaline, also causes a rapid heart beat and a boost in blood pressure and can precipitate a heart attack. It has also been linked to neurological abnormalities in babies born to users.

Barbiturates are profound depressants and destroy any desire or capacity for sex.

Heroin puts the user in a euphoric state in which one is company and two is a crowd. It causes loss of sex drive in nearly all addicts, impotence in 40-50 percent and delayed ejaculation in 70-80 percent, by suppressing testosterone production and reducing luteinising hormone production by the pituitary gland.

Morphine also suppresses all aspects of sexual behaviour and this continues over the withdrawal period.

However, spontaneous erections and ejaculations occur in heroin and morphine addicts treated with the opiate antagonist, naltrexone.

On the other hand, methadone treatment is not as effective in restoring sexual function. Nearly all methadone users experience reduced sex drive, while 32 percent suffer impotence and 22 percent delayed ejaculation.

LSD produces an even more altered state than opiates, in which sex is usually a non-event. Less than fifteen percent of users report any sexually enhancing effect. Since LSD dramatically changes the perception of external stimuli, it would be expected that the experience of sex would also be changed.

Ecstasy has been widely reported in the press as being a 'love drug' and it has been claimed that users become sexually disinhibited. There appears to be little evidence of this. Ninety percent of users decribe a sense of 'closeness' with other people but sexual effects are not mentioned.

The use of anabolic steroids among athletes and body builders to gain strength and increase muscle mass is increasing despite its illegality and known physical and psychological complications. Studies have shown an increase in aggression ('roid rage'), mood disturbances and psychotic symptoms. In both sexes, there is a significant risk of liver damage (hepatitis, jaundice, tumours), high blood pressure, endocrine and reproductive effects. Women are masculinised, growing facial and body hair and developing male pattern baldness and enlargement of the clitoris. They are also apt to have menstrual irregularities and blocked or inhibited ovulation. In males, these drugs cause a sharp drop in ciruculating testosterone, leading to shrinkage of the testes, serious impairment of sperm production, sometimes permanent sterility, and enlargement of the breasts.They gradually develop low levels of sexual desire and erectile dysfunction.

Tobacco is a stimulant but there is no evidence of any effect on sex drive. It does, however, reduce fertility in women and hastens the menopause. Smoking is seen as a high risk factor in relation to erectile failure - presumably because of its effect on the cardiovascular system. Impotence can improve after cessation of smoking but, with severe cardiovascular damage, the erectile failure is permanent. There is also a statistical correlation between smoking and cancer of the cervix and penis.

On the other hand, coffee has, at least in some surveys, been found to be associated with a more active sex life in men and women over sixty. This effect, if real, could be because caffeine is a methylxanthine, a group of substances known to be powerful central nervous system stimulants and smooth muscle relaxants and also known to enhance the response to sensory stimulation.

Volatile solvents (petrol, glues, etc) are used mainly by young teenage boys for their

euphoriant and hallucogenic effects. There is no current work on their effect on sexuality when used as drugs of abuse but, interestingly enough, when chloroform was first used in the mid nineteenth century, cases were reported of women behaving obscenely whilst under its effect, and ether was also reported to have caused sexual dreams in a prostitute.

Amyl nitrite is widely used in the male homosexual population because it relaxes the anal sphincter and facilitates anal penetration. It also delays ejaculation, gives a rapid heartbeat and users also report a loosening of inhibitions (including less fussiness in choice of partner) and euphoria. It must be inhaled immediately prior to penetration as it can otherwise cause a loss of erection. The effect lasts about two minutes. A common side effect is headache but it can also precipitate a heart attack.

Nitroglycerine applied directly to the penis can induce marked dilation of the arteries in the corpora cavernosa and thereby cause erection. However, this results in full erection in less than half of men. At the moment, an ointment containing nitrate and ascorbic acid, which will presumably produce the same result, is being developed for trial. The physiological basis for this is the production of nitrous oxide, which has been shown to be vital for obtaining an erection. Viagra produces its effect in the same manner and promises to revolutionise the treatment of impotence.

Another drug which has been found to improve erectile function in men with blocked penile blood vessels is pentoxifylline.

Injection of a number of vasoactive drugs into the corpora cavernosa of the penis has been found to induce erection and this is used in treating impotence. This is a purely physiological effect and does not affect sex drive or any other aspect of sexual behaviour. Thus, it is useful only for men who want sex but just cannot achieve an erection because of diminished blood flow to the penis.

Yohimbine, an alkaloid obtained from the bark of the yohimbine tree, was being used as a treatment for sexual difficulties in both men and women more than seventy years ago. It apparently can have a positive effect on sexual arousal and sexual motivation and can help improve erectile function in men by preventing the action of adrenaline at certain receptors. However, the varying effectiveness found in trials, the advent of other more effective methods, and several side effects (hyertension, anxiety, manic symptoms, restlessness, agitation, skin rash, diarrhoea) have seen its decline.

Over the years, various local anaesthetics have been used in an attempt to delay ejaculation by reducing penile sensory input. Some of these are marketed by sex shops under names like 'Long Time' and 'Stud' and a lidocaine spray (Studd 100) has been approved by the FDA for over the counter sale as an aid to the management of premature ejaculation. These can work to an extent but who wants desensitised sex?

Though some religious sects and others advocate witholding ejaculation of semen at orgasm, most men are somewhat disturbed when their climax is not accompanied by emission. Some cases of this are due to retrograde ejaculation, where the semen passes into the bladder instead of being discharged through the penis. This results either from impairment of the nerve supply by either disease or surgical trauma, or from the administration of drugs that block the action of adrenaline at certain receptors. Drugs that stimulate the sympathetic nervous system can help return things to normal. These include ephedrine, phenylpropanolamine and midrodine.

Anyone experiencing a sudden decline in sexual function should immediately suspect a drug. If you are using one of the so-called 'recreational' drugs, stop it. Check with your doctor on any drugs you are taking on prescription (in fact, it pays to always read the leaflet that comes with your prescription and to ask the pharmacist dispensing it about side effects - but don't talk yourself into a problem; listed side effects by no means apply to everyone taking the drug). It may be possible to get a substitute that will be as effective in treating your medical condition but not have the same effect on your sex life. Sometimes, it may be necessary to continue the medication but there may be means (including taking another drug) which will at least lessen its unwanted

effects. Or you may decide that the effect on your sex life is worse than the effects of the condition it is being used to treat and to discontinue it. This is, however, a decision that should only be taken in consultation with your doctor and in full knowledge of the risks of doing so.