1 Introduction

A man in his mid-60s is admitted to hospital for observation. He is taking a number of prescribed drugs, including digoxin, a diuretic and tranquillisers. His medication is stopped on admission and he sleeps for most of the next two days. When he wakes up, he feels rested and well. In fact, he feels better than he has felt for years. He continues to be in hospital for a further two weeks, where all investigations prove to be normal. He goes home in a much better condition.

Do not misunderstand my reasons for relating this story, which happened when I worked in hospital practice. I am not advocating that people should stop their medication suddenly or without guidance, but it does suggest that prescribed drugs may not always be as helpful or as problem-free as we are led to believe. Such experiences guide our clinical practice and teach us that prescribed drugs, although sometimes helpful, are frequently over-used, often leading to uncomfortable symptoms and feelings of ill health. My firm belief is that modern medicine has travelled too far down the cul-de-sac of searching for the 'magic bullet' with which to treat disease. The current research into genetics is merely a repetition of this underlying conventional view that such a holy grail can be discovered.

This book is not anti-drug nor anti-doctor, although it may be perceived as such. Drugs are necessary for some people and in some situations. Certain prescribed drugs prevent people from dying or from developing serious complications of a particular disease. However, these situations are relatively uncommon and most people we see in the clinic do not have a life-threatening disease. It is important for practitioners to know which drugs are used in cases of life-threatening disease and these are discussed in Chapters 3 and 20.

Conventionally, of course, it is the disease that is treated and not the patient. There are over 12 million people in the USA with asthma and they are all treated with a selection of the same two or three drugs. There is no individualisation of the treatment and there is little consideration of holistic methods of treatment. The emphasis in holistic medicine[1] is to treat the person as an individual, to work with people and to support their fundamental healing processes. Many prescribed drugs are considered to be 'anti-' something – antidepressants, antibiotics, antihistamines, anticonvulsants. Symptoms are to be removed and suppressed. Again, there are times when this is necessary to preserve life, but we now live in an age where such drugs are over-used and abused.

Any drug that is used to suppress a certain set of symptoms is likely to produce similar symptoms itself.[2] For example, antibiotics are given to kill bacteria, but they cannot differentiate between those bacteria that cause disease and those that are helpful and so they also adversely affect our whole system, leading to increased susceptibility to infection. The word 'antibiotic' means 'against life' – and not just bacterial life. This leads to the common symptoms of tiredness, poor appetite, loose bowels and so on. Another example is penicillamine – as described in Chapter 6 Arthritis. This is used to treat rheumatoid arthritis and yet its side-effects include similar autoimmune disorders, such as systemic lupus erythematosus and dermatomyositis, as well as rheumatoid arthritis itself.

The use of drugs in our society is very common and seems to be increasing. Modern conventional medicine reflects this trend and many people are given prescribed drugs. In the UK, 1 in 12 women and 1 in 25 men regularly take antidepressants. There were 12 million prescriptions for antidepressants in England alone in 2000, an increase of 50% since 1997. In the US, most adults take at least one medication each week, 12% of women over the age of 65 take at least ten medications and 25% take at least five medications. Almost 60% of general medical service patients in Ireland over 65 years of age take more than 2 medications. There are huge

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[1] The term 'holistic' means whole, the whole person. Holistic medicine can include all gentle, non-toxic treatments which seek to see the person as an individual, in a whole way and to provide the means whereby they can become or remain 'whole'. The word 'healing' means, of course, 'to make whole'. Specific forms of holistic medicine include Chinese medicine and other traditional medical systems, e.g. Ayurvedic, Tibetan, native American and so on, herbalism, homoeopathy, osteopathy (particularly cranial osteopathy), chiropractic, naturopathy, aromatherapy, massage and many others.

[2] A basic truth of energy is defined in Newton's third law of motion: 'For every action, there is an equal and opposite reaction.'

numbers of patients taking regular prescription medication and this has significant consequences, not only for health but also financially.

Cost of prescription drugs

Health services all over the world are having great difficulty funding prescribed drug use. As each year goes by, the cost rises as newer (and more expensive) drugs become available. The cost of retail prescription drugs in the US was $42.7 billion in 1991 rising to $157.5 billion in 2001. Antidepressants are currently the biggest seller, with $12.5 billion of sales in 2001 in the US alone. Anti-ulcer drugs came a close second with $10.8 billion of sales, an increase of 14.4% on the previous year. Sales of Lipitor, the cholesterol-lowering drug, rose 46% from 1998 to 1999, while sales of all statins (one class of cholesterol-lowering drugs) rose 20%. The National Health Service (NHS) in the UK spends over £6 billion per year on medications. Almost 15% of the NHS budget is consumed by prescribed drug costs. In 2001, the pharmaceutical industry in the UK exported drugs to the value of £8.9 million. In addition, much more money is spent on over-the-counter remedies.

A story from my own practice illustrates the costs of medications. I saw a patient who was suffering from a severe attack of sinusitis. She had seen her own doctor and been given a course of antibiotics. These made her ill and she returned to be a given a further course of antibiotics. At the end of the week she felt no better and, on a further visit, was given a third course of antibiotics and a corticosteroid nasal spray. She contacted me a week after with the same symptoms as before, except that she felt more tired, lethargic and unwell. The three visits to her doctor cost €75 and the four prescriptions €254, giving a total of €349 (£220 or $US340).

Information about prescribed drugs

It is frequently difficult to obtain clear, accessible information about prescribed drugs. People are often not given full information about a particular drug they have been prescribed. Such information, if available, may be difficult to understand or lacking in detail. Representatives of drug companies are an important source of information for general practitioners about prescribed drugs.[3] It can be difficult to obtain information that is free from industry bias. Approximately 50% of authors who write guidelines for clinical practice have some interaction with the pharmaceutical industry.[4] It is pharmaceutical companies that gather information about drugs[5] when they are tested and, although some effects are listed, there may well be many that are not. The bibliography at the end of this book lists useful sources of information about drugs.

Drugs are tested singly, yet, in real life, people are frequently given several drugs at the same time. My father became ill during the writing of this book and I saw at first hand the number and frequency of medications that people are given. He was taking eight drugs several times a day and his early morning routine was to take five different drugs together before breakfast. I would suggest that no one is in a position to know all the interactions and effects of such a cocktail. The effects of drugs when taken with others are not investigated and, although some drug interactions are known, many are not.

There has been no long-term follow-up of people taking drugs to check whether people who take similar drugs for similar diseases develop related conditions later. People may report adverse reactions to their doctor and these may, or may not, be relayed to the relevant authorities. This lack of information and its inevitable confusion pervades the whole area of prescribed drugs.

There are basic misunderstandings about drugs and their actions within both the medical profession and the pharmaceutical industry. Studies are not conducted in the same way as trials for homoeopathic remedies, where a substance is given to groups of healthy people and the symptoms experienced are recorded in their entirety – mental, emotional and physical. These ‘provings’ are thoroughly documented and present reliable pictures of

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[3] *BMJ* 2001; 323: 378–381.

[4] *JAMA* 2002; 287: 612–617.

[5] A recent survey of medical schools in the US and their relationships with drug companies undertaking drugs trials revealed that standards set up by the International Committee of Medical Journal Editors (ICMJE) are not adhered to. This raises a huge question mark over the validity of data produced by such tests as they are open to misinterpretation and manipulation because of commercial interests. NEJM Volume 347:1335-1341

the effects of the substances tested. Drugs, on the other hand, are given to people who already have symptoms, for indeterminate periods of time and with less detailed recording of their effects. Clinical trials[6] are performed, but there is no interest in the totality of the symptoms produced by each drug. The focus is on one, usually physical, effect.

New drugs are particularly likely to cause problems that are not picked up during trials. A US study of 548 new drugs that were introduced between 1975 and 1999 showed that 56 were either subsequently withdrawn from the market or had warnings attached about the danger of death or serious injury. Half of these problems occurred within the first seven years of the drug's introduction.[7] This is an important source of ill health, as almost 20 million Americans took one or more of the five drugs that were withdrawn between September 1997 and September 1998.

Side-effects

Prescribed drugs are given and taken in order to reduce symptoms. They do not 'cure',[8] in the sense of the term when it is used by practitioners of holistic medicine. According to the principles of holistic medicine, prescribed drugs suppress the symptoms and often merely replace the original condition with another, drug-induced, condition, which may be more severe than the original. This is the origin of so-called 'side-effects'. It is this process which can cause confusion. Instead of seeing the symptoms clearly, a picture emerges that may be due to the drug or (more likely) due to a combination of the drug and the original condition. The study of side-effects can shed some light on what is happening.

The term 'side-effect' can be misleading. All drugs have a particular group of actions specific to that agent. These actions may manifest differently in individual people, but they cannot be avoided. The constipating action of morphine cannot be separated from its sedating one, and you cannot separate the blood pressure lowering effect of betablockers from their effect on circulation of producing cold hands and feet. All of these actions are a result of the drug being administered. It is purely arbitrary, and dependent upon the needs of the moment, to name one action the desired effect and another the side-effect.

According to official figures, up to 40% of people experience side-effects when taking drugs, although my estimate and that of other clinicians would be higher. Around 8% of all hospital admissions are a result of side-effects, although some studies suggest this figure is higher. The drugs most commonly implicated include antibiotics, insulin, prednisolone, anticoagulants, non-steroidal anti-inflammatory drugs, antidepressants, tranquillisers and cardiovascular drugs (e.g. digoxin, diuretics). One report suggests that deaths from non-steroidal anti-inflammatory drugs are the fifteenth commonest cause of death in the US[9] – an estimated 16,500 people, usually dying from gastrointestinal bleeding and ulcers.

There is a significant number of deaths from prescribed drugs. In Norway, over a two-year period, 18.2% of patient deaths were classified as being directly or indirectly associated with one or more drugs.[10] In the USA, prescribed drug use is the fourth commonest cause of death, with over 100,000 deaths occurring per year.[11] In Australia, around 9,000 people die each year as a result of medical misadventure and 50,000 are ill as a result of

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[6] Clinical trials of drugs are usually conducted over a relatively short period of time (say 4 or 6 weeks). There is often a 'placebo run-in' before the main trial, where people who are more likely to respond to a placebo are excluded. Specific groups of people may also be excluded for other reasons. This means that drugs are tested on a pre-selected group.

[7] *JAMA* 2002; 287: 2215–2220.

[8] In energetic medicine, cure is the movement towards a state of balance in the mental, emotional and physical levels of a person. Suppression is the removal of symptoms with no balancing of these levels, leading to a more disordered state than previously.

[9] *Am J Med* 2000; 109: 122–130.

[10] *Archives Internal Medicine* 2001; 161: 2317–2323.

[11] *J Clin Pharmacol* 2000; 40: 1093–1101.

medical treatment.[12] Estimates show that 30% of hospital patients experience one or more adverse drug reactions. Around 5% of outpatients may require admission to hospital as a result of adverse drug reactions.[13]

The number of side-effects is dependent on several factors. Side-effects are more likely with:

- higher doses;
- multiple drug use;
- the very young and elderly; and
- women (twice as often as men).

It has also been noted that women are twice as likely as men to die as a result of a drug reaction. This may reflect the use of the oral contraceptive pill, which is widespread and has powerful effects.

An important consideration is the route of administration, since certain routes are associated with lower dosages and a lower incidence of side-effects. The routes commonly used, listed from less to more severe, are:

- topical (on the skin, for example);
- by inhalation;
- enteral (oral/rectal); and
- by injection (intravenous/intramuscular/subcutaneous).

A survey of over 2,000 people over the age of 65 in the US revealed that 6.9 million people in the US are given questionable medication, whilst almost 1 million received one or more medications considered inappropriate. These medications included tranquillisers and antidepressants that leave patients feeling 'dazed, groggy or susceptible to falls'.[14]

Simple errors in prescribing also add to the dangers from side-effects. Such errors are common and can occur in almost 20% of medication doses. They include giving the wrong dose, giving the medication at the wrong time, giving patients other drugs and forgetting to give medication. Almost 1 in 10 of these errors (that is, more than 40 in a typical 300-patient unit) could potentially carry serious medical consequences.[15] In Ireland in 2001, 400 errors in drug administration occurred in one hospital alone (Tallaght hospital). In the UK in 2001, 10,000 recorded medicine errors led to 1,100 deaths.

An additional hazard is that drugs are sometimes prescribed outside of their official uses. Many drugs used in children are unlicensed or are prescribed outside the terms of their product licence (off-label).[16]

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[12] Ron Law, Executive Director of NNFA in New Zealand and member of the New Zealand Minstry of Health Working Group advising on medical error, wrote in an email to the British Medical Journal (BMJ, 2000; 321: 1178) of official Australian government reports showing that preventable medical errors in hospitals are responsible for 11% of all deaths, and that 19% of all deaths are caused by medical errors which could have been avoided by the proper and correct use of prescribed drugs. Figures for New Zealand are very similar.

[13] *Rational Drug Bulletin* 2001; 11: 1–4.

[14] *JAMA* 2001; 286: 2823–2829, 2866–2868.

[15] *Archives of Internal Medicine* 2002; 162: 1897–1903.

[16] A survey of child psychiatrists and paediatricians in Australia revealed that 45% had prescribed stimulant drugs to children under the age of 5 years. One third said that they had given drugs that had not been properly tested on children under 12 years. The stimulant, Ritalin, and similar drugs were the most common drugs prescribed, but 60% of the doctors had prescribed Prozac or one of its relatives. More than one-third had instructed patients to take the drugs contrary to the directions on the label. The antipsychotic drug, risperidone, had been used to *treat* aggression.

According to data published in the British Medical Journal, 13.2% of GPs' prescriptions for children in Germany are off-label and 22.7% in Holland.[17]

Addiction

Prescribed drugs cause varying degrees of addiction, although the term 'dependence' may be used nowadays. The degree of dependence associated with a drug depends mainly upon the precise drug given. For example, psychoactive drugs such as tranquillisers, depressants and 'major' tranquillisers quickly lead to dependence and will cause withdrawal syndromes when they are stopped suddenly. In reality, of course, all drugs produce addiction or dependence (i.e. a desire to continue taking a drug for its effect) and withdrawal symptoms are experienced when the drug is reduced in dose or stopped.

It is inevitable that any substance taken regularly can cause dependence. This is because the body adjusts to the constant presence of the substance in question, whether it is coffee, cigarettes or a prescribed drug. Symptoms frequently appear when the substance is taken less often. Energetically, this is known as a release of suppressed symptoms.[18] These have to be dealt with as part of the treatment.

The appearance of withdrawal symptoms is not inevitable and I have seen people who have taken large doses of a drug for long periods of time and are able to stop it, apparently with little trouble. This is, however, the exception rather than the rule and not to be recommended, because strong symptoms can appear suddenly with rapid dose reduction. The consequences can be serious in the case of some prescribed drugs (see Levels 3, 4 and 5, as described in Chapter 3.

Patients are sometimes told that a particular drug is not addictive. This is common with antidepressant medication, especially since it has been recognised that tranquillisers quickly lead to dependence. Antidepressants also are addictive and people often experience withdrawal symptoms if they are stopped suddenly. Medical doctors frequently do not know themselves about the addictive qualities of a drug.

Patients may also be told that a particular drug is 'mild' in its effects. This may or may not be true. I tell people not to confuse a low dose with a mild effect. Although some drugs may be used in relatively low doses, depending on the situation, their effect is not generally mild. I remember a patient with cancer who was told that she was being given a mild form of chemotherapy. Of course, everything is relative, but I, personally, would not describe any form of chemotherapy as mild.

Drugs and the environment

A source of concern that is rarely addressed is that all pharmaceutical products end up in the environment and are diluted in water supplies. They are often detectable by analysis, although this is infrequently done, so we are generally unaware of what we are ingesting with our daily drinks. Many of these chemicals persist in the environment and have far-reaching consequences for human health, as well as the environment in general. In Germany, for example, Thomas Ternes has found up to 1 ppb of carbamazepine – an anti-convulsant drug – as well as other pharmaceutical agents in samples he has tested.[19]

In the US, about 80% of cancer patients receive chemotherapy drugs for cancer. These chemicals are toxic and are capable of producing cancer. Drugs such as cisplatin and carboplatin are excreted in the urine, up to 70% on the first day of treatment.[20] The rest stays in the body and is slowly excreted over many years. These chemicals are almost unchanged by current sewage treatment methods and therefore remain in the environment, causing untold damage to ecosystems.

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[17] *BMJ* 2002; 324: 1311–1314.

[18] As drugs are removed or reduced, the symptoms which have been suppressed over weeks, months or years are released. This is a curative response but may be uncomfortable in some and possibly life-threatening in others. The emphasis must be on how to reduce or remove safely and appropriately.

[19] Christian Daughton and Thomas Ternes. 'Pharmaceuticals and Personal Care Products in the Environment: Agents of Subtle Change', *Environmental Health Perspectives* 107(6), December 1999.

[20] *The Lost Language of Plants* by Stephen Harrod Buhner (Chelsea Green Publishing, 2002).

Summary

- Prescribed drugs are commonly used in our modern world.
- They are a major source of expenditure in health-care systems.
- They cause side-effects that can range in severity from ill health to death.
- They cause dependence and may lead to withdrawal symptoms if stopped suddenly.