The ROYAL SOCIETY of MEDICINE

MEDICINES

Over 5,000 over-the-counter and prescription drugs

Dr IAN MORTON
and
Dr JUDITH HALL

SIXTH EDITION
Fully Revised and Updated

Includes detailed information on possible side-effects

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BLOOMSBURY

Dr Ian Morton graduated with a First Class Honours B.Sc. in Pharmacology from Chelsea College, University of London. He gained a Ph.D. from University College London, where he was appointed Lecturer in Pharmacology in 1965. He then moved to King's College London where he became Senior Lecturer in Pharmacology until his retirement. He is now a consultant editor and writer in pharmacology. He is the author of more than one hundred research papers, books and monographs.

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Drs Morton and Hall have a keen interest in explaining about drugs and how they work to the non-specialist, and since 1988 have worked together both in writing and editing more than a dozen books as well as contributing to numerous encyclopaedias and medical dictionaries aimed at the general public in both the UK and abroad. They now devote their energies entirely to popular and specialist medical writing.

BY THE SAME AUTHORS

Antibiotics
Medicines for Children
Tranquillizers

The ROYAL SOCIETY *of* MEDICINE

MEDICINES

THE COMPREHENSIVE GUIDE

SIXTH EDITION

Dr Ian Morton and Dr Judith Hall

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PREFACE

This is the sixth edition of *Medicines: The Comprehensive Guide* – the most popular and best-selling dictionary-style reference source-book for the range of medicines, along with possible side-effects, that is available in the UK today. Previous editions of this book have sold almost two million copies. The text has been extensively revised – to take account of the many new drugs, both generic and proprietary, as well as entire new drug groups, that have been developed and marketed since publication of the fifth edition in 2000. Changes in details of those medicines that remain on the market are also included. Requests from the public have led to the inclusion in this edition of expanded warnings about possible interactions between drugs with other medicines – especially those that can be obtained without a prescription – herbal remedies and nutritional supplements. There is also an expanded glossary of medical terms, which hopefully readers will find useful in understanding some of the more technical terms.

This edition gives international spelling of generic drug names (recommended International Non-proprietary Name; rINN). This changeover from British Approved Names (BAN) reflects the fact that drugs are increasingly often licensed for use in all member states of the European Union (EU) through the European Medicines Evaluation Agency (based in London). But all main generic drug entries in this book give both names (and some US versions), and all names listed A–Z are cross-indexed to the main entries.

The purpose of the book is to give straightforward information on constituent drug components of medicines, describing their uses, explaining in an easy-to-access A–Z format how they work, what side-effects they may have and special conditions or warnings there may be relating to their use. It has been our aim to provide as full and useful a list as is possible and practical, in such a changeable market, of the drug classes (eg antibiotics), non-proprietary (generic) drugs (eg amoxicillin) and most of the proprietary preparations (eg Amoxil) that are available.

There are some categories of preparations we have not felt it was either possible or appropriate to include, however. In particular: [1] preparations of vitamins and minerals that are part of a normal balanced diet are not included, although there are entries on medicines where vitamins and

minerals are used medically to correct clinical deficiencies (for example, iron preparations for anaemia, folic acid vitamin supplements in pregnancy); [2] homeopathic or herbal remedies do not fall within the scope of the book, but nevertheless there are many entries on drugs of plant and natural origin, and standardized plant extracts that are part of everyday medicine; [3] the 'social' and non-medical use of drugs is also not covered, although some medicines used to treat drug-overdose and drug-dependence (addiction) are included.

Finally, it is important to note that this book is not intended to be a guide to the prescription or administration of drugs, and it gives neither doses nor recommendations regarding which drugs to use in particular circumstances. A qualified practitioner should always be consulted before any medicine is taken, and the person taking the drug should always read the Patient Information Leaflet (PIL) that now comes with every prescription dispensed.

We hope we have achieved our aim – to help in the public's understanding of the medicines that we all at some time have to take.

IKMM
JMH

HOW TO USE THIS BOOK

The layout of this book was designed to be sufficiently clear for it to be used without further instructions, but some words of explanation may be helpful.

The main section of this book contains entries on the medical drugs (ie medicines) available in the UK, listed A–Z. Drugs are listed under their non-proprietary (generic) and proprietary (brand) names (both will normally appear on packaging of the latter). There are also entries covering the major drug groups that explain in more detail how they work and what they are used for. These are indicated by an Ƶ after the name. The A–Z is cross-referenced within the text of one entry to further related entries. These cross-references are indicated when the drug name is printed in the text in SMALL CAPITALS. The side-effects and warnings to be borne in mind when taking a drug are indicated by symbols – ✚ for side-effects and ▲ for warnings – in generic drugs entries. At the end of these articles there is a list of related entries – indicated by a ✪ – which are the proprietary preparations that contain that drug.

At the end of the A–Z section of drugs, there is a Glossary containing explanations of many of the medical and technical terms used in the text, which may be referred to if the reader wants clarification.

Following common practice, drugs are listed in two ways:

The generic name, without an initial capital letter, is the official internationally agreed simplified chemical name of a drug, which unambiguously describes an active constituent of a medicine. For instance, paracetamol is the generic name of an established and familiar drug. In the case of a particular generic formulation, such as paracetamol tablets, even details concerning purity, the time taken for the tablets to dissolve and accuracy of doses are subject to strict control as laid out in the British Pharmacopoeia or other official standards. The generic name is now routinely used in everyday medicine because this is less likely to be misunderstood.

Doctors will often prescribe the generic form of a drug because it costs the NHS less than using a particular proprietary named drug: the active ingredient is identical.

The proprietary name, always with an initial capital letter, is a brand (or trade) name which is a preparation of a drug, or a mixture of drugs, that represents a particular formulation from a particular manufacturer. Manufacturers' names are given in brackets (these are the names that will be found on the packaging and Patient Information Leaflet, or are the companies who can be contacted for more information).

A doctor may prescribe paracetamol simply as 'paracetamol'. In practice, however, common non-prescription drugs such as paracetamol are available not just under their generic name, but also as proprietary preparations under a variety of brand names (Disprol, Panadol etc.). Drugs for many purposes may be prescribed or sold in a variety of forms (capsules, tablets, effervescent tablets, modified-release tablets, powders for solution, suppositories etc.) and sometimes in different strengths (the stronger ones usually have distinguishing names like Forte, Extra or Ultra), and often in varieties that work over longer periods called modified-release preparations (sustained-release preparations or continuous-release preparations; commonly with names containing the terms Continus, CR, MR, SR).

Drugs such as paracetamol are also readily available for non-prescription (over-the-counter; OTC) sale in a combination with other drugs, ie as a 'compound preparation'. For example, there are compound analgesic preparations that contain two or more analgesics (such as paracetamol and codeine), or compound 'cold-cures' (such as paracetamol with a decongestant or a cough suppressant – to treat quite different co-existing symptoms).

Drug class names are used in medicine to group drugs together in various ways, depending on need and emphasis. This can cause confusion even to experts, but in this book there are explanatory entries with cross-referencing between all relevant entries, so navigation between families is straightforward. There are three main ways of grouping drugs. First, and most obvious, is by the purpose of their use (eg antidepressants, contraceptives, antimigraine drugs, HRT, anticancer drugs, vaccines and so on). Second, drugs may be grouped by how they work (eg antihistamines, beta-blockers, calcium-channel blockers etc.). Third, they may be grouped by chemical type (eg barbiturates, benzodiazepines, steroids). The usefulness of these groupings depends on the circumstances, and often one drug may belong to two or more groups.

STEP BY STEP

The following examples highlight the most common points where confusion can arise and serve to illustrate how this book can help. For example, you have bought a proprietary medicine – Nurofen – and want to learn more about its constituents, their other uses, possible side-effects and when such a drug should not be used. Take the following steps:

1. Discover the generic name(s) of the constituent(s)

This information can be obtained by reading the label or packet, or by looking the proprietary (brand) name up in this book. A proprietary entry will list the generic(s) it contains, the drug group the generic(s) belong to (eg analgesics or antibiotics), the form it is available in (eg tablets or nasal spray) and a word or two about its uses. It also provides the manufacturer's name in brackets at the beginning of the entry, which is a useful cross-check of the identity of the preparation. Major pharmaceutical companies, however, may label particular medicines either under their own familiar name or that of a subsidiary. The latter is especially common with OTC (over-the-counter) 'healthcare' products. (Occasionally there may be an unfamiliar name, with some foreign name on the packaging; in which case this may be a 'parallel import' from a country in Europe where the drug is cheaper, therefore look up the generic name – which will use international spelling – and proceed to step 2.)

2. Turn to the generic names or names

Generic entries contain substantially more detail; eg '... is a non-narcotic analgesic with antipyretic properties which is used to treat ...' It also has further information about the drug's main side-effects (✚) and warnings (▲) relating to its administration.

The list of possible side-effects can be extensive, starting with the common and most frequently experienced ones, followed by relatively infrequent reactions and finishing with rarely reported effects. But note, if it is a hospital drug or one used under specialist supervision, then it was not thought appropriate to list all the (often technical) details.

The 'warning' information describes the circumstances when the drug may be unsafe to use or should be used with extreme caution. Two common examples would be during pregnancy or when breast-feeding (where the drug could harm the baby or reduce milk production). Other circumstances may relate to certain diseases, such as kidney or liver disorders which could prevent the drug from being metabolized and excreted normally, or rare but important inherited disorders, such as porphyria, which may cause adverse reactions. These warnings are not exhaustive and do not necessarily apply to all, but they do emphasize the importance of seeking professional medical advice, and explaining all existing medical and other conditions (eg pregnancy). It is always best to check things with your doctor or pharmacist before accepting any sort of medication.

3. For more information read the cross-references

Certain terms or names in SMALL CAPITALS indicate that related or further information can be found at that term's entry. For example, antihypertensives leads to an article that discusses a number of drug types used in treating high blood pressure (eg beta-blockers, diuretics, ACE inhibitors) and its causes (eg lipid-regulating drugs), and can take the reader on to drugs for related conditions (eg anti-angina drugs, heart failure treatment, vasodilators). Some drugs interact with other drugs, herbal remedies or nutritional supplements (such as vitamin tablets) and this can change the effect of the drug or cause adverse reactions. Warnings about interactions are given in these sections. If any technical terms related are not clear, then consult the Glossary at the end of the book which contains explanations of nearly 400 such terms.

4. Going from generic drug names to proprietary preparations

At the end of every generic entry there is a related entry/entries subheading which lists all the proprietaries ('brands') in this book that contain the generic drug in question. Using the A–Z in this way is particularly useful when you are familiar with the generic drug and want to go and buy an appropriate brand.

If you are concerned whether the generic constituents included in, for example, a cold cure have adverse effects in your particular situation, then a glance at the entries would remind you that, say, a sympathomimetic vasoconstrictor should under no circumstances be taken on top of a course of a prescribed monoamine-oxidase inhibitor (MAOI) antidepressant; or that an antihistamine can cause drowsiness to the extent that it would be advisable not to operate machinery or drive a car, and is best taken last thing at night. These examples illustrate, we hope, that gaining an understanding of how prescribed drugs work is not necessarily difficult, and that such an understanding can greatly assist you in getting the most out of the modern healthcare system.

INTRODUCTION

The pharmaceutical industry is one of the UK's most successful industries. There are now about 2,000 prescription-only and 2,000 non-prescription medicines available in the UK alone. Correspondingly, people are increasingly interested in their own health and wellbeing, and particularly in the medicines they take. The medicines available change almost daily, which has meant that this sixth edition of this book is substantially different to the last edition. What are these changes and why have they occurred? And most significantly, what do they mean for those of us who buy and use these medicines?

HOW ARE DRUGS DISCOVERED?

The drug industry

The pharmaceutical industry is one of the most rapidly expanding areas of commerce. Although pharmaceutical companies are increasingly international in their organization, many (whether British or foreign-owned) have a strong base in the UK. In research and development, scientists in the UK have an enviable record of innovation. Also, in the later stages of drug development involving clinical trials, and ultimately the approval and continuing licensing of drugs for use in patients, our Committee on Safety of Medicines and other groups associated with the Medicines Control Agency set world standards for authoritative assessment of safety and efficacy of drugs. In the UK, currently we have one of the most restrictive legislation policies in the world which limits the majority of drugs to prescription-only use.

One outcome of the last couple of decades – the most dynamic period in the history of the pharmaceutical industry – has been the emergence of many new generic drugs, including some entirely new classes of drugs. Some of these have now become famous, such as the beta-blocker 'heart-drugs' and the ulcer-healing H_2-antagonist drugs, which are both British inventions. So extensive has been development work within the pharmaceutical industry, that in this sixth edition, the properties and individual uses of 20 generic beta-blockers (and 68 proprietary formulations) are explained, and they can be used to treat some eight different disease states.

Indeed this edition also sees the introduction or establishment of several promising new drugs or types of drug, including impotence treatment (sildenafil/Viagra), asthma treatment (leukotriene receptor antagonists), potassium-channel activators (to treat angina), new sorts of antidepressants (SNRIs), dementia treatments (donepezil/Aricept) and new types of immunosuppressants for use in organ transplantation (basiliximab, daclizumab, mycophenolate mofetil, alemtuzumab and trastuzumab).

Genetic engineering is proving invaluable in the synthesis of new drugs, sometimes of whole new classes. Drugs that previously required difficult extraction from materials of animal or human origin can now be manufactured by these techniques, including such vital drugs as insulin, hepatitis B vaccine, somatropin (human growth hormone), erythropoietin and interferons. It can confidently be predicted that this trend is set to continue. In some cases literally life-prolonging therapy – for instance, for cancer, AIDS, bleeding and hormone-deficiency diseases – may well become economically as well as theoretically possible. A bonus of these biosynthetically manufactured drugs is their enhanced safety, especially in preventing infection, immune reactions and other biological complications. For example, human growth hormone, used to treat short stature (dwarfism) in children, was at one time isolated from the pituitary glands of cadavers and so brought with it the risk of acquiring Creutzfeldt-Jakob disease due to infecting contamination; however, it has now been replaced in the UK by somatropin, which is a biosynthetic human form that has no risk of contamination.

Nature herself continues to give us new drugs. Pharmacology and medicinal chemistry have a long history of discovering lead compounds in plant and other organisms. In the second half of the twentieth century, hundreds of valuable antibiotics were developed from ferments of fungal moulds. These are used not only for infections by micro-organisms but also in cancer treatment, and as leads in discovery of novel chemicals for a variety of purposes. This edition sees a number of new drugs developed from natural compounds, notably additional and important uses for the taxanes, which are anticancer compounds derived from a complex substance in the yew tree, purified and modified in the laboratory to yield a reliable and safer drug. Herbal medicine is having something of a renaissance, with evidence-based research leading to a better understanding of its risks and benefits.

Future developments

Will this rapid progress continue? Some people within the industry are not optimistic because of escalating costs of drug development; to produce just one new drug can take years and cost millions. However, new research strategies, many involving the emerging science of molecular biology (including genetic engineering), may prove cheaper and more effective, and certainly allow the increased emergence of new sorts of drugs that previously could only be dreamt of. Our new-found ability to manufacture the human

form of protein hormones was touched on above. Also a new form of drug called monoclonal antibodies can now be manufactured. These are pure protein molecules of human form, which in principle might work as a sort of specific 'magic bullet' targeting only certain sites in the body so as to deliberately modify function. So far for fairly preliminary indications, they have been harnessed for diverse tasks, including as immunosuppressants for use in organ transplantation, to inhibit platelet aggregation and thrombus formation in heart operations, as antiviral agents, and to destroy certain white blood cells in anticancer treatment for people with lymphoma. Many future applications for such drugs can be envisaged.

Progress in the chemotherapy of infection in the past few decades has gone in fits and starts. In the fight against bacterial and other infections there were several decades of enormous optimism and progress, and we now have about 70 generic antibiotics in the UK alone which can work against a very wide range of infections. But, at the same time there has been worldwide over-use of antibiotics, and strains of bacteria resistant to all but a few 'reserve' antibiotics (eg infections by MRSA; methoxycillin-resistant *Staphylococcus aureus*) are becoming all too common. So the pharmaceutical industry has to look again for sources of new antibacterial drugs. In the search for drugs active against viruses, initial progress was slow. However, the spread of AIDS infection has proved a catalyst in terms of research expenditure, and there are now about 30 antiviral agents available in the UK. In terms of the development of resistance by pathogen organisms, the moral from treatment of TB and other very serious infections has been that multi-drug therapy often proves better in the long run. The concurrent use of two or three different classes of antiviral drugs in the treatment of AIDS (eg protease inhibitors together with reverse transcriptase inhibitors) has proved to be of great benefit to the patient (and the newborn infant).

The next revolutionary advance is expected to be the development of 'individualized' medications tailored to the particular patient being treated. This may be one of the spin-offs of the Human Genome Project and the recent sequencing of the entire human genetic code. It is now technically possible to examine the genome of an individual (eventually with a microchip chemical device in the 'doctor's surgery') that will identify areas within the chromosomes that make that person or their children genetically susceptible to particular diseases (eg sickle-cell anaemia) or to the effects of certain drugs, foodstuffs or environmental chemicals (eg porphyria and G6PD deficiency). Early attempts are already being made to delete, replace or prevent expression of defective genetic material (eg by transfer of DNA in gene therapy for cystic fibrosis).

How are drugs prescribed and used?

Successful medical therapy has always depended on a partnership between the patient and medical professionals – pharmacists, doctors and nursing staff.

Every patient is different and requires individual treatment – a truth that is often easy to forget in a world where the mass production and standardization of products and practice is regarded as the norm. Medicines are prepared and tested according to the most rigorous criteria of standardization, for the sake of safety as well as for economic efficiency. But because people are all likely to be different to some degree, either in their basic genetic make-up or in the circumstances surrounding the condition they are seeking to treat, an individual's response to a certain drug must therefore be taken into account.

Where prescribed medicines are concerned, the doctor has the information and knowledge to allow him or her to help interpret specific needs and situations, and prescribe accordingly. But an increasing number of medicines are now becoming available without prescription and can be bought directly from a pharmacy.

Associated with this is a growing trend to give an increasing share of the advisory role to the pharmacist. However, the doctor will know important details of a patient's history and present condition, which is privileged information that the pharmacist will not have access to. Consequently, this trend towards making more medicines available without prescription places a substantial responsibility for choosing the correct medication on the patient, or on carers in the case of children, the elderly and those who are too ill to co-operate. This book contains much of the information necessary for making sensible choices.

The move to non-prescription drugs

The number of drugs switched each year from prescription-only to an OTC, over-the-counter (non-prescription), status has markedly increased of late. About 50 have moved over in the last couple of decades. This switch has had a great effect on the marketing of proprietary medicines. For example, the analgesic ibuprofen was one of the 11 prescription drugs that changed status in this period, and now there are nearly 50 proprietary preparations of it listed in this book alone.

Members of several major drug groups have quite recently had their status changed from prescription-only to over-the-counter. For example, three members of the ulcer-healing H_2-antagonist group (eg ranitidine/Zantac) are now available OTC (although only for the treatment of dyspepsia rather than ulcers), a number of OTC corticosteroid preparations (for topical use for certain skin conditions) and antifungal treatments (for thrush infections) have all become available without prescription. However, whereas the common analgesics (paracetamol, aspirin and ibuprofen) are on the 'GSL' (General Sales List), and so are available from outlets such as supermarkets and petrol station shops, these latter drugs are on the 'P' list which indicates that they can only be obtained from a qualified pharmacist (normally in a pharmacy).

As more medicines become readily available without prescription, authorities in the UK expect patients to become more skilled at knowing when they should seek expert advice. For much the same reasons, the list of drugs that may be prescribed by nurses and dentists has also been extended, and it is likely that various healthcare workers will be empowered in future either to prescribe or to recommend medication.

Cost considerations

In part, these changes from prescription-only to OTC medicines are motivated by financial objectives. On the one hand, the cost of drugs is the biggest single item of the National Health Service annual bill, so the government is looking to shed some of this load. On the other hand, nearly half of all prescriptions actually cost less than the standard prescription charge, so there are obvious savings in encouraging patients to seek the pharmacist's help over remedies for minor conditions.

Some medicines are so expensive that the NHS has insufficient funds to allow their widespread prescription. Most people will be already aware of the impact of 'post-code prescribing' where the likelihood of a patient receiving one of these very expensive medicines depends on the fund allocations of the district in which they live.

In order to appraise new and existing therapies, and to assess their efficacy and cost-effectiveness, an independent national body, the National Institute for Clinical Excellence (NICE, which was founded in 1999) issues guidance around their use, mainly with respect to their prescription or otherwise within the NHS. Its recommendations have sought to define those types of patients who show the best chance of benefiting from expensive treatments. For example, recommendations have included guidance for taxane anticancer drug therapy for ovarian and breast cancer, and for the prescribing of beta-interferon in the treatment of multiple sclerosis (MS). In March 2002 new guidelines were issued regarding the use of two anticancer drugs, oxaliplatin and irinotecan, for certain types of advanced colorectal cancer.

The move to European practices

Some of the changes in prescribing practice are part of a gradual evolution towards a common standard in Europe. Currently, the UK has one of the most restrictive pharmaceutical legislations in the world, and those who travel widely may already be aware that a very high proportion of the drugs listed in this book as prescription-only are available over-the-counter in much of the rest of Europe (and to an even greater extent in the Americas and in the East). In fact the increasing unification of Europe is having important consequences on medicines legislation. Drugs are

increasingly often licensed for use in all member states of the European Union (EU) through the European Medicines Evaluation Agency (EMEA). British legislators have been central to this process, and the EMEA is situated in London. It is the intention of the UK to entirely change over, for generic names, from British Approved Names (BAN) to recommended International Non-proprietary Names (rINN). This book gives both names in all generic drug entries (along with other common names, including some US versions), with all cross-referenced to the main entries (listed by rINN).

Drugs and the traveller

The traveller should note that the generic names of drugs differ little between countries. Since this book lists generic drugs under the new European standard names (as well as major American ones), it should be valuable for use when travelling.

Proprietary names used by a manufacturer for the same generic drug are today less likely to be totally different according to the country in which it is marketed, although there may be minor variations in spelling to accommodate local requirements. It is important to note that some medicines available abroad, both OTC and prescription, may not have been rigorously tested or approved in the UK. A pharmacist should always be consulted in cases of doubt.

Drugs and the Internet

There is now quite wide availability of medicines (and medical advice) on the Internet, and much of this is essentially unregulated and unverified. Some of the medicines apparently freely available for sale (eg Viagra) are actually prescription-only in the UK. Clearly this is yet another set of circumstances where the individual needs access to impartial and accurate information of the type that this book can offer.

USING MEDICINES

How are medicines administered?

Medicines have to able to get to the place where they are to work. How they are given to do this is called the route of administration. They can be applied directly to the site of action (topically), by mouth (orally), by injection (parenterally), by rectum (rectally), via the lungs (by inhalation) and through the skin (transdermally). There are good reasons why different routes of administration are chosen for different purposes.

For example, when a medicine is being used to treat a skin, vaginal, ear, nose, mouth or eye condition, the best way to achieve this is by

preparing (formulating) the medicine in a form that can be applied directly (eg as a cream, pessary or drops). When a medicine is applied directly to the site at which it acts, it is called a topical medicine; and because, in general, very little of the medicine enters the body, systemic side-effects are likely to be minimal. Inhalation is another way of delivering a medicine to the site where it is to have its therapeutic effect (the bronchioles of the lungs), and again this route of administration limits side-effects if it is a drug that is little absorbed from there into the bloodstream. However, some drugs are inevitably absorbed in small amounts and so act systemically (eg corticosteroids when inhaled in asthma prophylaxis).

Often, however, medicines need to be inside the body in order to reach the tissue of an organ that needs to be treated (eg kidney, heart, blood vessels). This is mainly achieved by allowing the drug to travel to the relevant tissue or organ in the bloodstream. So when a medicine is taken by mouth (orally), it is absorbed from the stomach or intestine, enters the bloodstream of the body in much the same way as nutrients do from food, and is then transported to its site of action. After transdermal application, the medicine enters the body through the skin (eg HRT therapy, nicotine patches for smoking habituation treatment). Injection is another way of introducing a medicine into the body, and is a useful route of administration when a drug needs to act quickly (and avoids the drug getting broken down by the gastrointestinal tract). Sometimes 'depot' injections are used where the medicine is released slowly into the blood from a 'pool' injected under the skin. These systemic routes of administration, where the medicine is conveyed in the bloodstream, have the consequence that the drug reaches most tissues and organs in the body, in addition to the ones it is being used to treat, and for this reason drugs taken systemically may have quite extensive side-effects.

Sometimes a medicine may have to be taken rectally, in the form of an enema, suppository or solution. This may be because the patient is too ill to take the medicine by mouth (or is vomiting), or because the medicine would be broken down by the stomach.

Using medicines properly

It is important to know why you are taking a medicine, and how to use your medicine properly. Medicines are used to prevent (eg vaccines), cure (eg antibacterials) or control (eg antihypertensives) medical conditions, or to alleviate symptoms (eg painkillers) whilst the condition gets better on its own. Some important things that you should know before taking your medicine are listed below. Each medicine has special instructions unique to itself – therefore if you are at all unsure of any of these points, or they are not clearly explained in the Patient Information Leaflet, it is imperative that you check with either your doctor or pharmacist (often the quickest and easiest approach is to contact your pharmacist first).