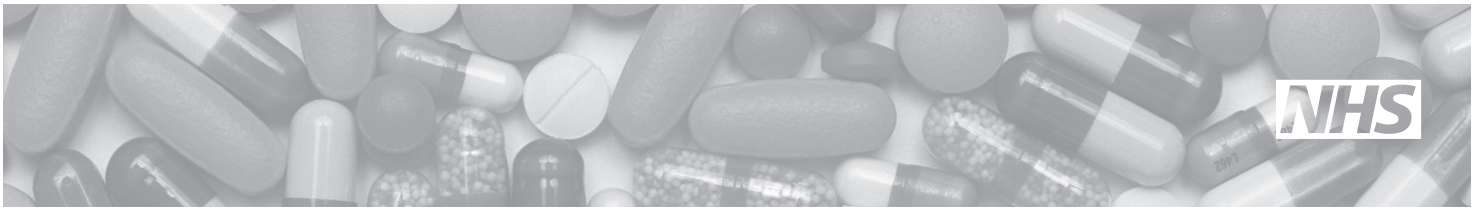

Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Families

Understanding medicines

Medicines can be confusing. We are told that they can cure an illness or improve our symptoms, but they can be dangerous if taken incorrectly. The key to dealing with medicines effectively is to understand them. This information sheet aims to explain a little more about how medicines are organised in the UK, understanding your prescription and who to ask for more information. This information is part of a series, for our other information sheets please see the GOSH website at www.gosh.nhs.uk or ask at the Pharmacy department.

How new medicines are developed

Pharmaceutical (medicine-making) companies are always carrying out research to find completely new medicines or discover new ways of using existing medicines. It is never a quick process to develop a new medicine. The ones that make the news have usually been in development for tens of years costing millions of pounds before they are released.

All medicines contain an 'active ingredient'. Once a new active ingredient has been discovered, the pharmaceutical company has to work out how to produce it in large enough quantities to make medicines. Some active ingredients are man-made but many are derived from nature, such as plant extracts. For instance, the cancer medicines vincristine and vinblastine contain an active ingredient found in periwinkle plants. The pharmaceutical company had to find a way to synthesise or make an artificial version of the active ingredient so that enough of these medicines could be manufactured. Other active ingredients need to be purified. Once the company has solved this puzzle, the next stage is to discover how to mix the active ingredient with other substances to form a liquid, tablet, capsule or other format of medicine.

The medicine then goes through several clinical stages of testing to make sure it works as designed and to discover any possible side effects. These tests are called clinical trials and can last for many years. More information about clinical trials and other research projects is included in our Research and Innovation section at www.gosh.nhs.uk.

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Once the clinical trials have been completed, the medicine is then submitted to the Medicines and Healthcare products Regulatory Agency (MHRA) for licensing. All medicines and medical products used in the UK have to be licensed by the MHRA. It monitors the medicines and products licensed continually and can withdraw one if concerns are raised. For instance, the yellow card scheme is the way to report side effects, particularly if they are not mentioned in the Patient Information Leaflet (PIL) or are severe. Similar schemes are in place for reporting side effects or problems with products. Anyone can report side effects or problems with medicines or products to the MHRA. It is not limited to doctors and pharmacists. For further information, please visit their website at www.mhra.gov.uk.

Over-the-counter and prescription-only medicines

There are two main categories of medicines available in the UK: prescription-only medicines (POMs) or over-the-counter (OTC) medicines. Prescription-only medicines can only be given to patients with a prescription signed by a prescriber. They tend to be medicines that need closer supervision or regular monitoring by a doctor. However, doctors often prescribe medicines for which there is an OTC alternative, so if you pay prescription charges, it is often worth asking the pharmacist about alternative preparations.

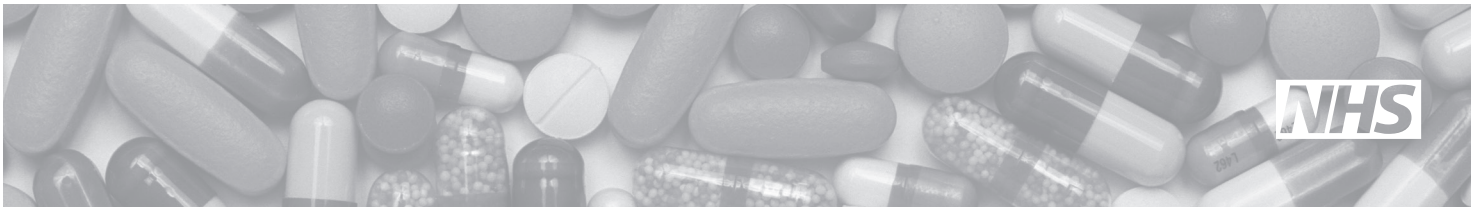
Over-the-counter medicines are those that you can buy without a prescription, such as mild painkillers, cough and cold remedies and antacids. You can buy some of these from a supermarket but others can only be bought from a pharmacy. Even though you can buy OTC medicines without a prescription, you should still take care. Taking them in the wrong way or combining them with other medicines can still have serious effects.

Understanding your prescription

Your prescription is an order from the prescriber to a pharmacist saying that you need a particular medicine. You might also hear it called a 'script'. These days, most prescriptions are generated by computer so the pharmacist no longer has to decipher a doctor's handwriting. The prescription should contain your name and address (and age if under 16 years old) and details of the medicine(s). The name and strength of the medicine is usually given first, followed by the dosage and frequency. Finally, tthe length of the treatment course is included.

In the community pharmacy, when you hand over your prescription, you should complete the back of the form if you are collecting the medicine on behalf of someone else or you are receiving certain benefits. Remember that children in England aged under 16 (or 19 if in full time education) receive free prescriptions. If you are likely to need a number of prescriptions over a period of months, it may be worth checking whether a prescription pre-payment certificate could save you money. Visit the NHS Choices page at www.nhs.uk/NHSEngland/Healthcosts/Pages/Prescriptioncosts.aspx. If you live outside of England, the situation may be different so check with your pharmacist.

If the medicine can interact with other medicines, the pharmacist may ask you some questions. They will then dispense the medicine, that is, check all the medicines against the prescription, before adding a label to the package or medicine bottle. When you receive the medicine, check that you understand the label. It should contain your name and the date it was dispensed, along with instructions for taking the medicine. It will also state any special instructions, for instance, whether it should be taken with or after food or on an empty stomach. The pharmacist will check that you understand the instructions before you leave the pharmacy.



Patient information leaflets (PILs)

All licensed medicines now come with a patient information leaflet or PIL. These are provided by the manufacturer and have to conform to a certain format and contain particular information. The PIL describes the medicine, its active ingredients and how it should be taken. Some medicines were originally developed to treat one condition, but were found to help a completely different condition so the PIL might not mention your condition or even seem misleading. It might also say that the medicine is not recommended for children and young people (for more information about this, please see the next section). The majority of side effects are identified when the medicine is being tested, and they are all included in the PIL. This can make for worrying reading, but remember that some of the reported side effects are extremely rare.

If you are concerned about the information in the PIL, please talk it over with your pharmacist.

Medicines for children

Some medicines used to treat children's illnesses are said to be 'unlicensed'. This means that the medicine being used is not covered by the licence. Manufacturers may not have included children in the clinical trials used to test the medicine so cannot include them in the licence application. In other circumstances, medicines may not have a license at all, often because they are used to treat very rare conditions. However, you can be assured that your doctor has only prescribed an 'unlicensed' medicine because he or she thinks that the medicine will benefit your child and no licensed alternative is available. If you would like more information about unlicensed medicines for children, Medicines for Children have a webpage at www.medicinesforchildren.org.uk/unlicensed-medicines.

Recently, some changes have come about to increase the number of medicines being developed and tested specifically for children. For instance, medicines that can be used for children will be given a license once the company has detailed its planned investigations. Investigations into children's medicines throughout Europe will be recorded centrally so that testing is not repeated unnecessarily. Generic medicines (that is, unbranded medicines) can also take out a license under the Paediatric Use Marketing Authorisation (PUMA) scheme. Medicines that are newly developed and/or only used to treat small numbers of people will also be able to take out a license. This is unlikely to impact on you as a parent, but in the long term will mean that fewer 'unlicensed' medicines will need to be used.

Asking questions

Your pharmacist should always be your first port of call if you have any questions about medicines. Most community pharmacies have a quiet room where you can talk to a pharmacist in private and many hold a selection of health information leaflets as well.

If your child is a patient at GOSH and you would like to know more about their medicines, please speak to your pharmacist. Please note that we might not be able to give advice to parents of children not currently being treated at GOSH.

If your child is not a patient at GOSH, please contact the hospital looking after your child or your family doctor (GP).

Useful numbers

GOSH switchboard: 020 7405 9200

Pharmacy medicines information: 020 7829 8608 (Monday to Friday from 9am to 5pm)

Compiled by the Pharmacy department in collaboration with the Child and Family Information Group
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