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Eighth Edition

SYMPTOMS IN THE **PHARMACY**

A Guide to the Management
of Common Illnesses



WILEY Blackwell

Symptoms in the Pharmacy

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8th Edition

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WILEY Blackwell

This edition first published 2018

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Edition History

Wiley-Blackwell (7e, 2014)

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Registered Office(s)

John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

Editorial Office

9600 Garsington Road, Oxford, OX4 2DQ, UK

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Library of Congress Cataloging-in-Publication Data

Names: Blenkinsopp, Alison, author. | Duerden, Martin, author. | Blenkinsopp, John, author.

Title: Symptoms in the pharmacy : a guide to the management of common illnesses / by

Alison Blenkinsopp, Martin Duerden, and John Blenkinsopp.

Description: Eighth edition. | Hoboken, NJ, USA : Wiley-Blackwell, [2018] |

Includes bibliographical references and index. |

Identifiers: LCCN 2017060730 (print) | LCCN 2017061257 (ebook) | ISBN 9781119317975 (pdf) | ISBN 9781119318002 (epub) | ISBN 9781119317968 (pbk.)

Subjects: | MESH: Drug Therapy | Pharmaceutical Services | Diagnosis | Referral and Consultation | Handbooks

Classification: LCC RS122.5 (ebook) | LCC RS122.5 (print) | NLM QV 735 | DDC 615.5/8-dc23

LC record available at <https://lccn.loc.gov/2017060730>

Cover Design: Wiley

Cover Image: ©Piotr Zajc/Shutterstock; ©Sentavio/Shutterstock

Set in 10/12pt SabonLTStd by Aptara Inc., New Delhi, India

Printed and bound in Spain by GraphyCems

10 9 8 7 6 5 4 3 2 1

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Preface

This is the eighth edition of our book and appears 28 years after the first. Dr Martin Duerden has joined us as co-author and we wish Dr Paul Paxton well in his retirement. Paul was instrumental in the original development of the ideas and format for the book and made a major contribution over the years. The update in this edition comes at an exciting time for pharmacists in the United Kingdom with increasing emphasis on their clinical role.

Among the changes in this new edition are

- A more explicit emphasis on the evidence base for ‘over-the-counter’ medicines and a clearer explanation of the book’s approach and evidence sources
- A visual display of the guidelines, systematic reviews and other reliable sources of information used to update the book
- Greater highlighting of ‘red flag’ symptoms/signs and explanation of their significance
- A reworked Introduction with consideration of
 - how community pharmacy teams fit within a changing NHS landscape as a source of first contact care
 - increasing digital integration of community pharmacies into wider primary care
- New sections on Erectile Dysfunction and Malaria Prevention to reflect recent POM to P changes

As for previous editions, we have received positive and constructive feedback and suggestions from pharmacists (undergraduate students, pre-registration trainees and practising pharmacists) as well as formal reviewers and have tried to act on your suggestions. We have continued to add more accounts by patients to our case studies. We thank all the pharmacists who sent us comments and we hope you like the new edition.

We once again thank Kathryn Coates and her network of mums, who provided advice on the sort of concerns and queries that they hope their pharmacists can answer.

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Introduction: How to Use This Book

Every working day, people come to the community pharmacy for advice about minor ailments and symptoms. Recent research found that the proportion of general practice and emergency department (ED) consultations for minor ailments potentially suitable for management in community pharmacy was around 13 and 5%, respectively. Encouraging self-care is a good thing, and with increasing pressure on doctors' and nurses' workload, it is likely that the community pharmacy will be even more widely used as a first port of call for minor illness. There are often local initiatives to encourage this. Members of the public present to pharmacists and their staff in a number of ways, which include

- Requesting advice about symptoms and appropriate treatment
- Asking to purchase a named medicine
- Requiring general health advice (e.g. about dietary supplements)
- Asking about effects/symptoms perceived to relate to prescribed medicines

The pharmacist's role in responding to symptoms and overseeing the sale of over-the-counter (OTC) medicines is substantial and requires a mix of knowledge and skills in diseases and their treatment. In addition, pharmacists are responsible for ensuring that their staff provide appropriate advice and recommendations. Key skills are as follows:

- Differentiation between minor and more serious symptoms
- Listening skills
- Questioning skills
- Treatment choices based on evidence of effectiveness
- The ability to pass these skills on by acting as a role model for other pharmacy staff

Working in partnership with patients

In this book we refer to the people seeking advice about symptoms as patients. It is important to recognise that many of these patients will in fact be healthy people. We use the word ‘patient’ because we feel that the terms ‘customer’ and ‘client’ do not capture the nature of consultations about health.

Pharmacists are skilled and knowledgeable about medicines and about the likely causes of illness. In the past the approach has been to see the pharmacist as expert and the patient as beneficiary of the pharmacist’s information and advice. But patients are not blank sheets or empty vessels. They have choices to make and they are experts in their own and their children’s health. The patient

- May have experienced the same or a similar condition in the past
- May have tried different treatments already
- Will have their own ideas about possible causes
- Will have views about different sorts of treatments
- May have preferences for certain treatment approaches

The pharmacist needs to take this into account during the consultation with the patient and to enable patients to participate by actively eliciting their views and preferences. Not all patients will want to engage in decision making about how to manage their symptoms, but research shows that many do. Some will want the pharmacist to simply make a decision on their behalf. What the pharmacist needs to do is to find out what the patient wants.

Much lip service has been paid to the idea of partnership working with patients. The question is how to achieve this. Healthcare professionals can only truly learn how to go about working in partnership by listening to what patients have to say. The list below comes from a study of lay people’s ‘tips’ on how consultations could be more successful. Although the study was concerned with medical consultations, many of the tips are equally relevant to pharmacists’ response to patients’ symptoms.

How to make a consultation more successful from the patient’s perspective: tips from lay people

- Introduce yourself with unknown patients.
- Keep eye contact.
- Take your time; don’t show your hurry.
- Avoid prejudice – keep an open mind.
- Treat patients as human beings and not as a bundle of symptoms.
- Pay attention to psychosocial issues.
- Take the patient seriously.
- Listen – don’t interrupt the patient.

- Show compassion; be empathic.
- Be honest without being rude.
- Avoid jargon, check if the patient understands.
- Avoid interruptions.
- Offer sources of trusted further information (leaflets, web links).

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Use these tips to reflect on your own consultations about minor illness both during and afterwards. Try to feel how the consultation is going from the patient's perspective.

Reading and listening to patients' accounts of their experience can provide valuable insights. Websites and blogs can give a window into common problems and questions, can help to see the patient perspective, and can also show how powerful social media can be in sharing experience and information (Netmums is a good example, www.netmums.com). Do not be patronising about lay networks; why not contribute your own expertise?

Do be aware that some information from these sources can be inaccurate or have poor quality, and some can create unrealistic beliefs and expectations. Others may be overtly promotional. Being a world wide web, occasionally information relates to medicines in different countries. If you are concerned about the quality or relevance of health information that has been accessed by a patient, one suggestion is to gently or tactfully point the patient towards accredited sources of information such as that provided on NHS Choices (www.nhs.uk). Another useful resource that rapidly interrogates and translates news coverage of health topics, and debunks these if necessary, is Behind the Headlines from NHS Choices (<http://www.nhs.uk/News/Pages/NewsArticles.aspx>).

Responding to a request for a named product

When a request is made to purchase a named medicine, the approach should be to consider if the person making the request might already be an expert user or may be a novice. We define the expert user as someone who has used the medicine before for the same or a similar condition and is familiar with it. While pharmacists and their staff need to ensure that the requested medicine is appropriate, they also need to bear in mind the previous knowledge and experience of the purchaser.

Research shows that the majority of pharmacy customers do not mind being asked questions about their medicine purchase. An exception to this is those who wish to buy a medicine they have used before and would prefer not to be subjected to the same questions each time they ask for the product. There are two key points here for the pharmacist: firstly, it can be helpful to briefly

explain why questions are needed, and secondly, fewer questions are normally needed when customers request a named medicine that they have used before.

A suggested sequence in response to a request for a named product

Ask whether the person has used the medicine before, and if the answer is yes, consider if any further information is needed. Quickly check on whether other medicines are being taken. If the person has not used the medicine before, more questions will be needed. One option is to follow the sequence for responding to requests for advice about symptoms (see below). It can be useful to ask how the person came to request this particular medicine; for example, have they seen an advertisement for it? Has it been recommended by a friend or family member?

Pharmacists will use their professional judgement in dealing with regular customers whom they know well and where the individual's medication history is known. The pharmacy patient medication records (PMRs) are a source of backup information for regular customers. However, for new customers where such information is not known, more questions are likely to be needed.

Responding to a request for help with symptoms

1. Information gathering: By developing rapport and by listening and questioning to obtain information about symptoms, for example, to identify problems that require referral; what treatments (if any) have helped before; what medications are being taken regularly; what the patient's ideas, concerns and expectations are about their problem and possible treatment.
2. Decision making: Is referral for a medical opinion required?
3. Treatment: The selection of possible, appropriate and effective treatments (when needed), offering options to the patient and advising on use of treatment.
4. Outcome: Advising the patient what action to take if the symptoms do not improve.

Information gathering

Most information required to make a decision and recommended treatment can be gleaned from just listening to the patient. In some cases, the patient may have prepared a story to tell you and may be dissatisfied if the story is not heard; experience suggests that the story can give you much of the information you might need. The process should start with open-type questions and perhaps an explanation of why it is necessary to ask personal questions. Some patients do

not yet understand why the pharmacist needs to ask questions before recommending treatment. An example might be the following:

Patient Can you give me something for my piles?

Pharmacist I'm sure I can. To help me give the best advice, though, I'd like a bit more information from you, so I need to ask a few questions. Is that OK?

Patient That's fine.

Pharmacist Could you just tell me what sort of trouble you get with your piles?

Hopefully, this will lead to a description of most of the symptoms required for the pharmacist to make an assessment. Other forms of open questions could include the following: How does that affect you? What sort of problems does it cause you? By carefully listening and possibly reflecting on comments made by the patient, the pharmacist can obtain a more complete picture.

Patient Well, I get spells of bleeding and soreness. It's been going on for years.

Pharmacist You say years?

Patient Yes, on and off for 20 years since my last pregnancy. I've seen my doctor several times and had them injected, but it keeps coming back. My doctor said that I'd have to have an operation but I don't want one; can you give me some suppositories to stop the bleeding?

Pharmacist Bleeding ... ?

Patient Yes, every time I go to the toilet blood splashes around the bowl. It's bright red.

This form of listening can be helped by asking questions to clarify points: 'I'm not sure I quite understand when you say...', or 'I'm not quite clear what you meant by...'. Another useful technique is to summarise the information so far: 'I'd just like to make sure I've got it right. You tell me you've had this problem since...'.

Once this form of information gathering has occurred, there will be some facts still missing. It is now appropriate to move onto some direct questions.

Pharmacist How are your bowels Has there been any change? (This question is very important to exclude a more serious cause for the symptoms that would require referral.)

Patient No, they are fine, always regular.

Pharmacist Can you tell me what sort of treatments you have used in the past, and how effective they were?

Other questions could include the following: What treatments have you tried so far this time? What sort of treatment were you hoping for today? What other medications are you taking at present? Do you have any allergies?

Decision making

Triaging is the term given to assessing the level of seriousness of a presenting condition and thus the most appropriate action. It has come to be associated with both prioritisation (e.g. as used in accident and emergency [A&E] departments) and clinical assessment. Community pharmacists have developed procedures for information gathering when responding to requests for advice that identify when the presenting problem can be managed within the pharmacy and when referral for medical advice is needed. The use of questioning to obtain the sorts of information needed is discussed below. Furthermore, in making this clinical assessment, pharmacists incorporate management of certain conditions and make recommendations about them.

The use of protocols and algorithms in the triaging process is common in many countries including the United Kingdom, with computerised decision-support systems increasingly used. It is possible that in the future computerised decision support may play a greater part in face-to-face consultations, perhaps including community pharmacies.

If the following information were obtained, then a referral would be required.

- Pharmacist* Could you tell me what sort of trouble you have had with your piles?
- Patient* Well, I get spells of bleeding and soreness. It's been going on for years, although seems worse this time
- Pharmacist* When you say worse, what does that mean?
- Patient* Well ... my bowels have been playing up and I've had some diarrhoea I have to go three or four times a day ... and this has been going on for about 2 months.

For more information on when to refer see 'D: Danger/Red flag symptoms' under the ASMETHOD mnemonic below.

Treatment

The pharmacist's background in pharmacology, therapeutics and pharmaceuticals gives a sound base on which to make logical treatment choices based on the individual patient's need, together with the characteristics of the medicine concerned. In addition to the effectiveness of the active ingredients included in the product, the pharmacist will need to consider potential interactions, cautions, contraindications and adverse reaction profile of each constituent. Evidence-based practice requires that pharmacists need to carefully think about the effectiveness of the treatments they recommend, combining this with their own and the patient's experience.

Concordance in the use of OTC medicines is important and the pharmacist will elicit the patient's preferences and discuss treatment options in this context. Some pharmacies have developed their own OTC formularies with preferred treatments that are recommended by their pharmacists and their staff.

In some areas these have been discussed with local general practitioners (GPs) and practice nurses to cover the referral of patients from the GP practice to the pharmacy. These may be area initiatives arranged by local healthcare organisations (clinical commissioning groups or health boards).

PMRs can play an important part in supporting the process of responding to symptoms. Prior to the introduction of the new community pharmacy contractual framework (CPCF) in 2005, research showed that only one in four pharmacists recorded OTC treatment on the pharmacist's own PMR system. Yet such recording can complete the profile of medication, and review of concurrent prescribed drug therapy can identify potential drug interactions and adverse effects. In addition, such record keeping can make an important contribution to clinical governance. Improvements in IT systems in pharmacies will make routine record keeping more feasible; community pharmacies now have access to part of the NHS primary care medical record (Summary Care Record, SCR). Keeping records for specific groups of patients, for example, older people, is one approach in the meantime. The CPCF for England and Wales includes a requirement to keep a record of OTC advice and treatment:

“Pharmacies will help manage minor ailments and common conditions, by the provision of advice and where appropriate, the sale of medicines, including dealing with referrals from NHS 111. Records will be kept where the pharmacist considers it relevant to the care of the patient.”

At the time of writing, digital integration of community pharmacy with the wider NHS is under active development, for example, so that electronic referrals can be made for an Urgent Medicine Supply Advanced Service (NUMSAS) from the NHS 111 service in England. The NHS 111 call handler will take and record patient consent for receipt of service and data sharing with GP.

Effectiveness of treatments

Pharmacists and their staff should, wherever possible, base treatment recommendations on evidence. For more recently introduced medicines and for those that have moved from prescription-only medicine (POM) to pharmacy (P) medicine, there is usually an adequate evidence base. For some medicines, particularly older ones, there may be little or no evidence. Here, pharmacists need to bear in mind that absence of evidence does not in itself signify absence of effectiveness. Current evidence of effectiveness is summarised in the relevant *British National Formulary* (BNF) monograph. The BNF is now updated every month online and can be found at <https://bnf.nice.org.uk/>.

Useful websites for clinical guidelines in the United Kingdom are NHS Evidence (www.evidence.nhs.uk), which includes links to the BNF (<https://www.evidence.nhs.uk/> and <https://bnf.nice.org.uk/>), Clinical Knowledge Summaries (CKS) (<https://cks.nice.org.uk>), the Scottish Intercollegiate Guideline Network (SIGN) (www.sign.ac.uk) and the National Institute for Health and Care Excellence (www.nice.org.uk). The website for NHS Choices (www.nhs.uk) includes symptom checkers and management advice for minor ailments.

Reference sources used in this book

This book has drawn wherever possible on these types of clinical guidelines and resources (CKS, NHS Choices [which draws on CKS and could be thought of as the portal to evidence for members of the public], BNF, NICE, SIGN, etc.) when discussing clinical management. When necessary, it has also drawn on evidence from high quality systematic reviews such as those produced by the Cochrane collaboration. In the absence of such reviews, randomised controlled trials may be referred to. For many common conditions, research evidence may be lacking as treatment approaches have evolved and developed over many years, and in such cases a consensus of best practice has usually been agreed (e.g. within CKS, or public health guidance).

Also, in this book

Key interactions between OTC treatments and other drugs are included in each section of this book. For further information, the BNF provides an alphabetical listing of drugs and interactions, together with an indication of clinical significance. In this book, generic drug names are *italicised*.

For symptoms discussed in this book, the section ‘Management’ includes brief information about the efficacy, advantages and disadvantages of possible therapeutic options. Also included are useful points of information for patients about the optimum use of OTC treatments, under the heading ‘Practical points’. At any one time, not all of the medicines that could be sold OTC are available as OTC products. Throughout the book we have included the names of medicines and, where possible, have also said where there is an OTC product available at the time of writing.

Some sections of the book use the expression ‘referral to doctor’. This is a commonly used expression within pharmacies and is generally well understood by patients. Increasingly in primary care and out of hours (OOH) centres and Emergency Departments (EDs, also referred to as accident and emergency or A & E) patients may not see the doctor directly. Often trained nurses may assess patients, and sometimes suitably qualified clinical pharmacists, and they may prescribe treatment. We have used this phrase for convenience, but sometimes if these alternative systems are fairly well established in your area, this may need explaining to patients.

Pharmacists are likely to be increasingly involved in the management of long-term chronic or intermittent conditions. Here, monitoring of progress is important and a series of consultations is likely rather than just one.

Developing your consultation skills

Effective consultation skills are the key to finding out what the patient’s needs are and deciding whether you can manage the symptoms or whether they might need to be referred to another practitioner. A useful framework for thinking

about and improving your consultation skills is provided by Roger Neighbour's five 'checkpoints'.

A	Connecting	'Have we got a rapport?'	Rapport building skills
B	Summarising (clinical process)	'Can I demonstrate to the patient I have understood why she has come?'	Listening and eliciting skills (history taking and summarising to the patient)
C	Handing over	'Has the patient accepted the management plan we agreed?'	Concordance skills
D	Safety netting	'Have I anticipated all likely outcomes?'	Contingency plans
E	Housekeeping*	'Am I in good condition for the next patient?'	Taking care of yourself

*Housekeeping – This is a period of reflection where practitioners look at themselves and their response to the consultation. It may involve having a brief chat with a colleague, a coffee, or merely acknowledging to oneself the effect a particular consultation has had.

Structuring the consultation

It is very useful to adopt a framework to help structure the consultation. Pharmacists need to develop a method of information seeking that works for them. There is no right and wrong here. Some pharmacists find that a mnemonic such as the two shown below can be useful, although care needs to be taken not to recite questions in rote fashion without considering their relevance to the individual case. Good listening will glean much of the information required. The mnemonic can be a prompt to ensure all relevant information has been obtained. Developing rapport is essential to obtain good information, and reading out a list of questions can be off-putting and counterproductive.

W – Who is the patient and what are the symptoms?

H – How long have the symptoms been present?

A – Action taken?

M – Medication being taken?

W: The pharmacist must first establish the identity of the patient: the person in the pharmacy might be there on someone else's behalf. The exact nature of the symptoms should be established: patients often self-diagnose illnesses, and the pharmacist must not accept such a self-diagnosis at face value.

H: Duration of symptoms can be an important indicator of whether referral to the doctor might be required. In general, the longer the duration, the more likely the possibility of a serious rather than a minor case. Most minor conditions are self-limiting and should clear up within a few days.

A: Any action taken by the patient should be established, including the use of any medication to treat the symptoms. About one in two patients will have tried at least one remedy before seeking the pharmacist's advice. Treatment may have consisted of OTC medicines bought from the pharmacy or elsewhere, other medicines prescribed by the doctor on this or a previous occasion or medicines borrowed from a friend or neighbour or found in the medicine cabinet. Homoeopathic or herbal remedies may have been used. The cultural traditions of people from different ethnic backgrounds include the use of various remedies that may not be considered medicines.

If the patient has used one or more apparently appropriate treatments without improvement, referral to the family doctor may be the best course of action.

M: The identity of any medicines taken regularly by the patient is important for two reasons: possible interactions and potential adverse reactions. Such medicines will usually be those prescribed by the doctor but may also include OTC products and complementary or alternative remedies. The pharmacist needs to know about all the medicines being taken by the patient because of the potential for interaction with any treatment that the pharmacist might recommend.

The community pharmacist has an increasingly important role in detecting adverse drug reactions, and consideration should be given to the possibility that the patient's symptoms might be an adverse effect caused by medication. For example, whether gastric symptoms such as indigestion might be due to a non-steroidal anti-inflammatory drug (NSAID) taken on prescription or a cough might be due to an angiotensin-converting enzyme (ACE) inhibitor being taken by the patient. When the pharmacist suspects an adverse drug reaction to a prescribed medicine, the pharmacist should discuss with the prescriber what actions should be taken (perhaps including a Yellow Card report to the Commission on Human Medicines, which can now be made by the pharmacist or patient) and the prescriber may wish the patient to be referred back to them so that treatment can be reviewed.

The second mnemonic, ASMETHOD, was developed by Derek Balon, a community pharmacist in London:

- A** – Age and appearance
- S** – Self or someone else
- M** – Medication
- E** – Extra medicines
- T** – Time persisting
- H** – History
- O** – Other symptoms
- D** – Danger/red flag symptoms.

Some of the areas covered by the ASMETHOD list have been discussed already. The others can now be considered.

A: Age and appearance

The appearance of the patient can be a useful indicator of whether a minor or more serious condition is involved. If the patient looks ill, for example, pale, clammy, flushed or grey, the pharmacist should consider referral to the doctor. As far as children are concerned, appearance is important, but in addition the pharmacist can ask the parent whether the child is generally well. A child who is cheerful and energetic is unlikely to have anything other than a minor problem, whereas one who is quiet and listless, or who is fractious, irritable and feverish, might require referral.

The age of the patient is important because the pharmacist will consider some symptoms as potentially more serious according to age. For example, acute diarrhoea in an otherwise healthy adult could reasonably be treated by the pharmacist. However, such symptoms in a baby could produce dehydration more quickly; elderly patients are also at a higher risk of becoming dehydrated. Oral thrush is common in babies, while less common in older children and adults; the pharmacist's decision about whether to treat or refer could therefore be influenced by age.

Age will play an important part in determining any treatment offered by the pharmacist. Some preparations are not recommended at all for children under 12 years, for example, *loperamide*. *Hydrocortisone* cream and ointment should not be recommended for children aged under 10 years; *aspirin* should not be used in children aged under 16 years; corticosteroid nasal sprays and *omeprazole* should not be recommended for those under 18 years of age. Others must be given in a reduced dose or as a paediatric formulation, and the pharmacist will thus consider recommendations carefully.

Other OTC preparations have a minimum specified age, for example, 16 years for emergency hormonal contraception, 12 years for nicotine replacement therapy (NRT) and 18 years for treatments of vaginal thrush. Pharmacists are used to assessing patients' approximate age and would not routinely ask for proof of age here, unless there was a specific reason to do so.

S: Clarification as to who is the patient – Self or Someone else?**M: Medication regularly taken, on prescription or OTC****E: Extra medication tried to treat the current symptoms****T: Time, that is, duration of symptoms****H: History**

There are two aspects to the term 'history' in relation to responding to symptoms: first, the history of the symptom being presented and second, previous medical history. For example, does the patient have diabetes, hypertension or asthma? PMRs should be used to record relevant existing conditions.

Questioning about the history of a condition may be useful; how and when the problem began, how it has progressed and so on. If the patient has had the problem before, previous episodes should be asked about to determine the action taken by the patient and its degree of success. In recurrent mouth ulcers, for example, do the current ulcers resemble the previous ones? Was the doctor

or dentist seen on previous occasions? Was any treatment prescribed or OTC medicine purchased, and, if so, did it work?

In asking about the history, the timing of particular symptoms can give valuable clues as to possible causes. The attacks of heartburn that occur after going to bed or on stooping or bending down are indeed likely to be due to reflux, whereas those that happen during exertion such as exercise or heavy work may not be.

History taking is particularly important when assessing skin disease. Pharmacists often think, erroneously, that recognition of the appearance of skin conditions is the most important factor in responding to such symptoms. In fact, many dermatologists would argue that history taking is more important because some skin conditions resemble each other in appearance. Furthermore, the appearance may be altered during the course of the condition. For example, the use of a topical corticosteroid inappropriately on infected skin may substantially change the appearance; allergy to ingredients such as local anaesthetics may produce a problem in addition to the original complaint. The pharmacist must therefore know which creams, ointments or lotions have been applied.

O: Other symptoms

Patients generally tend to complain about the symptoms that concern them most. The pharmacist should always ask whether the patient has noticed any other symptoms or anything different from usual because, for various reasons, patients may not volunteer all the important information. Embarrassment may be one such reason, so patients experiencing rectal bleeding may only mention that they have piles or are constipated.

The importance or significance of symptoms may not be recognised by patients, for example, those who have constipation as a side effect from a tricyclic antidepressant will probably not mention their dry mouth because they can see no link or connection between the two problems.

D: Danger/red flag symptoms

These are the symptoms or combinations of symptoms that should ring warning bells for pharmacists because immediate referral to the doctor is required. They are often called 'red flag' symptoms and we refer to them as such throughout the rest of this book. Blood in the sputum, vomit, urine or faeces would be examples of such symptoms, as would unexplained weight loss. Red flag symptoms are included and discussed in each section of this book so that their significance can be understood by the pharmacist.

Decision making: risk assessment

Most of the symptoms dealt with by the community pharmacist will be of a minor and self-limiting nature and should resolve within a few days. However, sometimes this will not be the case, and it is the pharmacist's responsibility

to make sure that patients know what to do if they do not get better. This is sometimes called ‘safety netting’. Here, a defined timescale should be used, as suggested in the relevant sections of this book, so that when offering treatment, the pharmacist can set a time beyond which the patient should seek medical advice if symptoms do not improve. The ‘treatment timescales’ outlined in this book naturally vary according to the symptom and sometimes according to the patient’s age, but are usually less than 1 week.

In making decisions the pharmacist assesses the possible risk to the patient of different decision paths. The possible reasons for referral for further advice include the following:

- Red flag signs or symptoms
- Unknown cause for symptoms
- Incomplete information (e.g. an ear condition where the ear has not been examined)
- Duration or recurrence of symptoms
- Potential need for a prescription-only medicine

As a general rule, the following indicate a higher risk of a serious condition and should make the pharmacist consider referring the patient to the doctor:

- Long duration of symptoms
- Recurring or worsening problems
- Severe pain
- Failed medication (one or more appropriate medicines used already, without improvement)
- Suspected adverse drug reactions (to prescription or OTC medicine)
- Red flag symptoms

Discussions with local family doctors can assist the development of protocols and guidelines for referral, and we recommend that pharmacists take the opportunity to develop such guidelines with their medical and nursing colleagues in primary care, where possible. Often this process can be facilitated by the local healthcare organisation (clinical commissioning group or health board). Joint discussions of this sort can lead to effective two-way referral systems and local agreements about preferred treatments.

Accidents and injuries

Pharmacists are often asked to offer advice about injuries, many of which are likely to be minor with no need for onward referral. The list below shows the types of injuries that would be classified as ‘minor’.

- Cuts, grazes and bruising
- Wounds, including those that may need stitches
- Minor burns and scalds

- Foreign bodies in eye, nose or ear
- Tetanus immunisation after an injury
- Minor eye problems
- Insect bites or other animal bites
- Minor head injuries where there has been no loss of consciousness or vomiting
- Minor injuries to legs below the knee and arms below the elbow, where patients can bear the weight through their foot or move their fingers
- Minor nose bleeds

Pharmacists need to be familiar with the assessment and treatment of minor injuries in order to make a decision about when and where referral is needed. Referral to the ED may need to be considered in certain circumstances. The list below provides general guidance on when a person might need to immediately go to the ED.

- There has been a serious head injury with loss of consciousness or heavy bleeding.
- The person is, or has been, unconscious or confused for whatever reason.
- There is a suspected broken bone or dislocation.
- The person is experiencing severe chest pain or is having trouble breathing.
- The person is experiencing severe stomach ache that cannot be treated by OTC remedies.
- There is severe bleeding from any part of the body.

Each attendance at the ED costs the NHS over £100 and pharmacies have an important role in considering whether to refer a patient to a minor injuries unit or walk-in service (if there is one locally) and explaining to patients about when ED attendance is needed.

Privacy in the pharmacy

The vast majority of community pharmacies in England and Wales have a consultation area. Research shows that most pharmacy customers feel that the level of privacy available for a pharmacy consultation is now acceptable. There is some evidence of a gap between patients' and pharmacists' perceptions of privacy.

Pharmacists observe from their own experience that some patients are content to discuss even potentially sensitive subjects in the pharmacy. While this is true for some people, others are put off asking for advice because of insufficient privacy.

The pharmacist should always bear the question of privacy in mind and, when possible, seek to create an atmosphere of confidentiality if sensitive problems are to be discussed. Using professional judgement and personal experience, the pharmacist can look for signs of hesitancy or embarrassment on the

patient's part and can suggest moving to a quieter part of the pharmacy or to the consultation area to continue the conversation.

Patient group directions and symptoms in the pharmacy

A patient group direction (PGD) is a legal framework to allow the safe supply of a medicine for specific patients. PGDs are widely used in the NHS and in some areas community pharmacies are commissioned to provide a service that may include one or more PGDs, the most common being stop smoking services, the supply of emergency hormonal contraception, and the provision of influenza vaccinations. PGDs can also be used in private sector services. Pharmacies providing NHS or private PGDs are required to meet specific criteria for quality and safety of services. Such requirements usually include demonstration of competencies and the keeping of certain records. The list below shows the range of PGDs that might be seen in community pharmacies.

- Erectile dysfunction
- Antimalarials
- Influenza and hepatitis B vaccine
- Meningitis vaccine
- Stop smoking (varenicline)
- Hair loss (private supply)
- Emergency contraception
- Salbutamol inhalers (for repeat supply)
- Oral contraception
- Cystitis treatment (*trimethoprim*)
- Weight loss (*orlistat* 120 mg)

Working in partnership with family doctors and nurse colleagues in primary care

Community pharmacists are the key gateway into the formal NHS through their filtering of symptoms, with referral to the GP surgery, the OOH service or the ED when necessary. This filtering is more correctly termed triaging and is increasingly important in maximising the skills and input of pharmacists and nurses.

Many community pharmacists are now working more closely with local GP practices and local healthcare organisations by participating in NHS minor ailment schemes. Scotland has had a national service with electronic records for several years, and there has been discussion about a national service in England. Currently in England and Wales, this is a locally-commissioned service decided upon by local healthcare organisations.

Some areas have policies to dissuade GPs from prescribing OTC medicines and require patients to buy these.

There is a great deal of scope for joint working in the area of OTC medicines. We suggest that pharmacists might consider the following steps:

- Agreeing guidelines for referral with local family doctors, perhaps including feedback from the GP to the pharmacist on the outcome of the referral. Two-way referrals with OOH centres are also helpful.
- Using PMRs to keep information on OTC recommendations to patients.
- Keeping local family doctors and nurses informed about POM to P changes.
- Using referral forms when recommending that a patient sees his or her doctor.
- Agreeing an OTC formulary with local GPs and practice nurses (or at local healthcare organisation level).
- Agreeing with local GPs the response to suspected adverse drug reactions.

Actions like these will help to improve communication, will increase GPs' and nurses' confidence in the contribution the pharmacist can make to patient care and will also support the pharmacist's integration into the primary care team. Patients will also appreciate this work and have greater confidence and understanding of pharmacists as part of their clinical support network.

About the Companion Website

This book is accompanied by a companion website:

www.wiley.com/go/Blenkinsopp/SymptomsPharmacy8e

The website includes:

- Multiple choice questions and answers for practice.

Chapter 1

Respiratory Problems

Colds and flu

The common cold comprises a mixture of viral upper respiratory tract infections (URTIs). Although colds are nearly always self-limiting, some people go to their general practitioner (GP) for treatment, and increasingly there is concern about overprescribing of antibiotics when this happens as these do not improve outcome. Self-management or getting advice and support from a pharmacist are usually much better options. Many people choose to buy over-the-counter (OTC) medicines for symptomatic relief and this is to be encouraged. However, some of the ingredients of OTC cold remedies may interact with prescribed therapy, occasionally with serious consequences. Therefore, careful attention needs to be given to taking a medication history and selecting an appropriate product where indicated. Educating people on the self-limiting nature of symptoms is also important.

What you need to know

Age (approximate)

Child, adult

Duration of symptoms

Runny/blocked nose

Summer cold

Sneezing/coughing

Generalised aches/headache

High temperature

Symptoms in the Pharmacy: A Guide to the Management of Common Illnesses, Eighth Edition.

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Companion Website: www.wiley.com/go/Blenkinsopp/SymptomsPharmacy8e

Sore throat
Earache
Facial pain/frontal headache
Flu
Asthma
Previous history
 Allergic rhinitis
 Bronchitis
 Heart disease
 Present medication

Significance of questions and answers

Age

Establishing who the patient is – child or adult – will influence the pharmacist's decision about the necessity of referral to the doctor and choice of treatment. Children are more susceptible to URTI than are adults and may get complications. Very young children and babies are also at increased risk of bronchiolitis, pneumonia and croup, and these conditions need to be considered. Older people, particularly if they are frail and have co-morbidities (e.g. diabetes), may be at risk of complications such as pneumonia.

Duration

Patients may describe a rapid onset of symptoms over hours or a gradual onset over a day or two; the former is said to be more commonly true of flu, the latter of the common cold. Such guidelines are general rather than definitive. The symptoms of the common cold usually last for 7–14 days. Some symptoms, such as a cough, may persist after the worst of the cold is over and coughing for 3 weeks is not unusual. This is often poorly recognised, so expectations of recovery may be unrealistic, and it is worth advising patients that this may happen.

Box 1.1 NICE Guideline: Respiratory tract infections (self-limiting)

The average total lengths of the illnesses are as follows:

- Acute otitis media: 4 days
- Acute sore throat/acute pharyngitis/acute tonsillitis: 1 week
- Common cold: 1½ weeks
- Acute rhinosinusitis: 2½ weeks
- Acute cough/acute bronchitis: 3 weeks

Source: NICE Clinical Guideline 69 (CG69) (July 2008).

Symptoms

Runny/blocked nose

Most patients will experience a runny nose (rhinorrhoea). This is initially a clear watery fluid, which is then followed by the production of thicker and more tenacious, often coloured mucus. Nasal congestion occurs because of dilatation of blood vessels, leading to swelling of the lining surfaces of the nose and can cause discomfort. This swelling narrows the nasal passages that are further blocked by increased mucus production.

Summer colds

In summer colds, the main symptoms are nasal congestion, sneezing and irritant watery eyes; similar symptoms are commonly caused by allergic rhinitis (see Allergic rhinitis: Duration, later in this chapter).

Sneezing/coughing

Sneezing occurs because the nasal passages are irritated and congested. A cough may be present (see Cough: What you need to know, later in this chapter) either because the pharynx is irritated (producing a dry, tickly cough) or as a result of irritation of the bronchus caused by postnasal drip.

Aches and pains/headache

Headaches may be experienced because of inflammation and congestion of the nasal passages and sinuses. A fever may also cause headache. A persistent or worsening frontal headache (pain above or below the eyes) may be due to sinusitis (see below). People often report muscular and joint aches and this is more likely to occur with flu than with the common cold (see below).

High temperature

Those suffering from a cold often complain of feeling hot, but in general a high temperature (e.g. exceeding 38°C) will not be present. The presence of fever may be an indication that the patient has flu rather than a cold (see below).

Sore throat

The throat often feels dry and sore during a cold and may sometimes be the first sign that a cold is imminent. A sore throat can be a prominent feature in colds and flu, and it is often treated erroneously as a throat infection (see the separate section on sore throat later in this chapter).

Earache

Earache is a common complication of colds, especially in children. When nasal catarrh is present, the ear can feel blocked. This is due to blockage of the Eustachian tube, which is the tube connecting the middle ear to the back of the nasal cavity. Under normal circumstances, the middle ear is an air-containing compartment. However, if the Eustachian tube is blocked, the ear can no longer be cleared or air pressure equilibrated by swallowing and may feel uncomfortable and deaf. This situation often resolves spontaneously, but decongestants and inhalations can be helpful (see 'Management' below). Sometimes the situation worsens when the middle ear fills up with fluid and is under pressure. When this does occur, the ear becomes acutely painful and this is called acute otitis media (AOM). AOM is common in young children and usually the best treatment is pain relief. A secondary infection may follow, but even in the context of infection, the evidence for antibiotic use is conflicting with some trials showing benefit and others showing no benefit from taking antibiotics. Overall the evidence from clinical trials shows that without antibiotic treatment, symptoms will improve within 24 h in 60% of children and will settle spontaneously within 3 days in 80% of children. Antibiotics have also been shown to increase the risk of vomiting, diarrhoea and rash, and these risks can be greater than the potential for benefit. Antibiotics are most useful in children under 2 years of age with pain in both ears or with a painful ear with discharge from that ear (otorrhoea), so in these circumstances suggesting getting a fairly rapid doctor or nurse assessment is appropriate. Do not advise that antibiotics may be needed as this raises expectations that may not be met; it is better to say that examination is required.

In summary, a painful ear can initially be managed by the pharmacist. There is evidence that *paracetamol* and *ibuprofen* are effective treatments for AOM. However, if pain were to persist or be associated with an unwell child (e.g. high fever, very restless or listless, vomiting), then referral to the GP would be advisable.

Facial pain/frontal headache

Facial pain or frontal headache may signify sinusitis. The sinuses are air-containing spaces in the bony structures adjacent to the nose (maxillary sinuses) and above the eyes (frontal sinuses). During a cold, their lining surfaces become inflamed and swollen, producing catarrh. The secretions drain into the nasal cavity. If the drainage passage becomes blocked, fluid builds up in the sinus. This causes pain from pressure that is called acute sinusitis. It can become secondarily (bacterially) infected but this is rare. If this happens, more persistent pain arises in the sinus areas. The maxillary sinuses are most commonly involved. A recent systematic review indicated only a small benefit from antibiotics even in acute sinusitis that had lasted for longer than 7 days.

Antibiotics however may be recommended if the symptoms of sinusitis persist for more than 10 days or are severe with fever ($>38^{\circ}\text{C}$), severe local pain,

discoloured or purulent nasal discharge or if a marked deterioration in sinusitis symptoms develops following a recent cold that had started to settle (so called ‘double sickening’). These may be reasons to direct patients for further assessment. When these features are not present, treatment should be aimed at symptom relief. Options include *paracetamol* or *ibuprofen* to reduce pain; an intranasal decongestant (for a maximum of 1 week, in adults only) may help if nasal congestion is problematic. Oral decongestants, commonly found in combination products with an analgesic, are generally not recommended for sinusitis. A randomised controlled trial found that steam inhalations had little effect in sinusitis but that saline nasal irrigation improved symptoms, patients were more likely to feel they could manage the problem themselves and used less OTC medication. Pharmacists can recommend a short video showing patients how to use saline nasal irrigation that was used in the trial. Drinking adequate fluids and rest will generally help.

Flu

Differentiating between colds and flu may be needed to make a decision about whether referral is needed for patients in ‘at-risk’ groups who might need to be considered for antiviral treatment. Flu is generally considered to be likely if

- Temperature is 38 °C or higher (37.5 °C in the elderly).
- A minimum of one respiratory symptom – cough, sore throat, nasal congestion or rhinorrhoea – is present.
- A minimum of one constitutional symptom – headache, malaise, myalgia, sweats/chills, prostration – is present.

Infection with the influenza virus usually starts abruptly with sweats and chills, muscular aches and pains in the limbs, dry sore throat, cough and high temperature. Someone with flu may be bedbound and unable to go about usual activities, and this differentiates it from viruses causing cold. There is often a period of generalised weakness and malaise following the worst of the symptoms, and this may last a week or more. A dry cough may also persist for some time.

True influenza is relatively uncommon compared with the large number of flu-like infections that occur, but when it does occur, it can spread rapidly throughout a community (it is then said to be a ‘flu epidemic’). Influenza is generally more unpleasant than a cold, although both usually settle with no need for referral.

Because of damage caused to the airways by the influenza virus, flu can be complicated by secondary lung infection (pneumonia or pneumonitis). Such complications are much more likely to occur in the very young, who have not yet developed resistance, the very old and frail, who may have impaired immunological responses, and those who have pre-existing heart disease or respiratory disease (asthma or chronic obstructive pulmonary disease [COPD]), where further damage is more critical. People with kidney disease, a weak

immune system or diabetes are also at greater risk of pneumonia. Warning that pneumonia complications are developing may be given by a severe or productive cough, persisting high fever, pleuritic-type chest pain (see Respiratory symptoms for direct referral, at the end of this chapter) or delirium. If this is suspected, people with such symptoms need urgent referral for further assessment.

Asthma

Asthmatic attacks can be triggered by respiratory viral infections. Most asthma sufferers learn to start or increase their usual medication to prevent such an occurrence. However, if these measures fail, referral is recommended.

Previous history

People with a history of COPD, also sometimes called chronic bronchitis or emphysema, may need referral. COPD should be considered in patients over the age of 35 who are or who have been long-term smokers and who have shortness of breath on exercise, persistent cough, regular sputum production and frequent winter 'bronchitis' or wheeze. Ideally all COPD patients should get an annual flu immunisation, although this will not protect against colds or all strains of flu virus. Such patients may be advised to see their doctor if they have a bad cold or flu-like infection, as it often causes an exacerbation of their COPD. The main signs to watch for are worsening cough, purulence of sputum and increasing shortness of breath. In this situation, the doctor is likely to increase the dose of inhaled anticholinergics and β_2 -agonists and prescribe oral steroids and a course of antibiotics. Certain OTC medications are best avoided in those with heart disease, hypertension and diabetes (see section on Management: Decongestants, earlier in Colds and flu).

Present medication

The pharmacist must ascertain if any medicines are being taken by the patient. It is important to remember that interactions might occur with some of the constituents of commonly used OTC medicines.

If medication has already been tried for relief of cold symptoms with no improvement, and if the remedies tried were appropriate and used for a sufficient amount of time, referral for primary care assessment might occasionally be needed. In most cases of colds and flu, however, OTC treatment will be appropriate.

When to refer

Earache not settling with analgesic (see above)
In the very young

In the frail and old

In those with heart or lung disease, for example, COPD, kidney disease, diabetes, compromised immune system

With persisting fever and productive cough

With delirium

With pleuritic-type chest pain

Asthma

Colds and flu: Hygiene advice

When people seek help with symptoms of a cold or flu, it is also worth giving advice on how to prevent transmission of infection. Transmission of the common cold cannot be completely prevented, but basic good hygiene measures may help to prevent spread. These include washing hands frequently with soap and hot water when the person has symptoms of the common cold or comes into contact with someone who has symptoms, avoiding the sharing of towels, and, for children, discouraging the sharing of toys with an infected child.

Treatment timescale

Once the pharmacist has recommended treatment, patients should be advised to see their nurse or doctor in several weeks (see Box 1.1 earlier in Colds and flu) if the respiratory infection has not improved or earlier if there is a marked deterioration in symptoms. If they are unsure, they can check with the pharmacist first; sometimes all that is needed is further reassurance.

Management

The use of OTC medicines in the treatment of colds and flu is widespread, and such products are heavily advertised to the public. There is little doubt that appropriate symptomatic treatment can make the patient feel better; the placebo effect also plays an important part here. For some medicines used in the treatment of colds, particularly older medicines, there is little evidence available with which to judge effectiveness.

The pharmacist's role is to select appropriate treatment based on the patient's symptoms and available evidence, and taking into account the patient's preferences. Polypharmacy abounds in the area of cold treatments and patients should not be overtreated. The discussion of medicines that follows is based on individual constituents; the pharmacist can decide whether a combination of two or more drugs is needed.

The UK Commission on Human Medicines (CHM) made recommendations in 2009 about the safer use of cough and cold medicines for children under 12 years of age. As a result, the UK Medicines and Healthcare products and

Regulatory Agency (MHRA) advised that the following OTC cough and cold remedies should no longer be sold for children under 6 years:

- Antitussives: Dextromethorphan and pholcodine
- Expectorants: Guaifenesin and ipecacuanha
- Nasal decongestants: Ephedrine, oxymetazoline, phenylephrine, pseudoephedrine and xylometazoline
- Antihistamines: Brompheniramine, chlorphenamine, diphenhydramine, doxylamine, promethazine and triprolidine

Children aged between 6 and 12 years can still use these preparations, but with an advice to limit treatment to 5 days or less. The MHRA rationale was that for children aged over 6 years,

the risk from these ingredients is reduced because: they suffer from cough and cold less frequently and consequently require medicines less often; with increased age and size, they tolerate the medicines better; and they can say if the medicine is working.

Simple cough remedies (such as those containing glycerine, honey or lemon) are still licensed for use in children. Alternatively, for children over the age of 1 year, a warm drink of honey and lemon could be given.

Remember that all aspirin-containing products are contraindicated in all children under the age of 16. This includes oral salicylate gels.

Decongestants

Sympathomimetics

Sympathomimetics (e.g. *pseudoephedrine*) can be effective in reducing the symptoms of nasal congestion. Nasal decongestants work by constricting the dilated blood vessels in the nasal mucosa. The nasal membranes are effectively shrunk, so drainage of mucus and circulation of air is improved, and the feeling of nasal stuffiness is relieved. These medicines can be given orally or applied topically. Tablets and syrups are available, as are nasal sprays and drops.

If nasal sprays/drops are to be recommended, the pharmacist should advise the patient not to use the product for longer than 7 days. Rebound congestion (rhinitis medicamentosa) can occur with topically applied, but not oral sympathomimetics. The decongestant effects of topical products containing *oxymetazoline* or *xylometazoline* are longer lasting (up to 6 h) than those of some other preparations such as *ephedrine*. The pharmacist can give useful advice about the correct way to administer nasal drops and sprays. The MHRA advises that these decongestants can be used in children between the ages of 6 and 12 years, but should not be used in children under the age of 6.

A combination topical product containing *xylometazoline* and *ipratropium* in a nasal spray is also available through pharmacy sales (P) for the symptomatic treatment of nasal congestion and rhinorrhoea (runny nose) in connection with common colds, in adults aged 18 years and above. Use should not exceed 7 days. *Ipratropium* is an anticholinergic drug that helps to reduce mucus secretion.

Problems

Ephedrine and *pseudoephedrine*, when taken orally, have the theoretical potential to keep patients awake because of their stimulating effects on the central nervous system (CNS). In general, *ephedrine* is more likely to produce this effect than *pseudoephedrine*. A systematic review found that the risk of insomnia with *pseudoephedrine* was small compared with placebo.

Sympathomimetics can cause stimulation of the heart and an increase in blood pressure and may affect diabetic control because they can increase blood glucose levels. They should be used with caution (as per current *British National Formulary (BNF)* warnings) in people with diabetes, those with heart disease or hypertension and those with hyperthyroidism. The hearts of hyperthyroid patients are more vulnerable to irregularity, so stimulation of the heart is particularly undesirable.

Sympathomimetics are most likely to cause these unwanted effects when taken by mouth and are unlikely to do so when used topically. Nasal drops and sprays containing sympathomimetics can therefore be recommended for those patients in whom the oral drugs are less suitable. Saline nasal drops, things like menthol inhalations, or sitting in a steamy room (e.g. in a bathroom with a running shower) would be other possible choices for patients in this group.

The interaction between sympathomimetics and monoamine oxidase inhibitors (MAOIs) is potentially extremely serious (although MAOIs are rarely prescribed these days); a hypertensive crisis can be induced and several deaths have occurred in such cases. This interaction can occur up to 2 weeks after a patient has stopped taking the MAOI, so the pharmacist must establish any recently discontinued medication. There is a possibility that topically applied sympathomimetics could induce such a reaction in a patient taking an MAOI. It is therefore advisable to avoid both oral and topical sympathomimetics in patients taking MAOIs.

Cautions

Diabetes
Heart disease
Hypertension
Hyperthyroidism

Interactions: Avoid in those taking

MAOIs (e.g. *phenelzine*)

Reversible inhibitors of monoamine oxidase A (e.g. *moclobemide*)

Beta-blockers

Tricyclic antidepressants (e.g. *amitriptyline*) – a theoretical interaction that appears not to be a problem in practice

Restrictions on sales of pseudoephedrine and ephedrine

In response to concerns about the possible extraction of *pseudoephedrine* and *ephedrine* from OTC products for use in the manufacture of methylamphetamine (crystal meth), restrictions were introduced in 2007. The medicines are available only in small pack sizes, with a limit of one pack per customer, and their sale has to be made by a pharmacist or by suitably trained pharmacy staff under the supervision of a pharmacist. When the MHRA reviewed these arrangements in 2015, they concluded that these measures had made an important contribution to managing the risk of misuse of pseudoephedrine and ephedrine in the United Kingdom.

Antihistamines (see also Allergic rhinitis (hay fever): Management, later in this chapter)

Antihistamines could theoretically reduce some of the symptoms of a cold: runny nose (rhinorrhoea) and sneezing. These effects are due to the anticholinergic action of antihistamines. The older drugs (e.g. *chlorphenamine* (*chlorpheniramine*), *promethazine*) have more pronounced anticholinergic actions than the non-sedating antihistamines (e.g. *loratadine*, *cetirizine*, *acrivastine*). Therefore the non-sedating antihistamines are less effective in reducing symptoms of a cold. Antihistamines are not so effective at reducing nasal congestion. Some (e.g. *diphenhydramine*) may also be included in cold remedies for their supposed antitussive action (see Cough: Management: Cough remedies – Other constituents, later in this chapter) or to help the patient to sleep (included in combination products intended to be taken at night). Evidence indicates that antihistamines alone are not of benefit in the common cold but that they may offer limited benefit for adults in combination with decongestants, analgesics and cough suppressants.

Interactions: The problem of using antihistamines, particularly the older types (e.g. *chlorphenamine*), is that they can cause drowsiness. Alcohol will increase this effect, as will drugs such as *benzodiazepines* or *phenothiazines* that have the ability to cause drowsiness or CNS depression. Antihistamines with known sedative effects should not be recommended for anyone who is driving, or in whom an impaired level of consciousness may be dangerous (e.g. operators of machinery at work).

Because of their anticholinergic activity, the older antihistamines may produce the same adverse effects as anticholinergic drugs (i.e. dry mouth, blurred vision, constipation and urinary retention). These effects are more likely if antihistamines are given concurrently with anticholinergics such as *hyoscine* or with drugs that have anticholinergic actions such as tricyclic antidepressants or bladder antispasmodics (e.g. *oxybutynin*). Anticholinergic adverse effects

are also more likely to be problematic if antihistamines are taken by people using some inhaled drugs containing anticholinergics used for COPD, such as *ipratropium* or *tiotropium*. In older and frail people, the combined effects of several drugs with anticholinergic properties can be particularly troublesome (often referred to as “anticholinergic load”) and also aggravate confusion or memory problems.

Antihistamines should be avoided in patients with a history of angle-closure glaucoma (usually this will have presented acutely) or prostatic symptoms because of possible anticholinergic side effects. In patients with angle-closure glaucoma, they may cause increased intraocular pressure. Anticholinergic drugs can occasionally precipitate acute urinary retention in predisposed patients, for example, men with prostatic problems (lower urinary tract symptoms (LUTS)) where bladder outlet obstruction causes poor urinary flow.

While the probability of such serious adverse effects is low, the pharmacist should be aware of the potential for possible adverse effects from OTC medicines.

At high doses, antihistamines can produce stimulation rather than depression of the CNS. There have been occasional reports of fits being induced at very high doses of antihistamines, and it is for this reason that it has been argued that they should be avoided in epileptic patients. However, this appears to be a theoretical rather than a practical problem.

Interactions

- Alcohol
- Hypnotics
- Sedatives
- Betahistine
- Anticholinergics

Side effects

- Drowsiness (driving, occupational hazard)
- Constipation
- Blurred vision
- Urinary symptoms
- Confusion

Cautions

- Closed-angle glaucoma
- LUTS in men
- Epilepsy
- Liver disease

Zinc

Two systematic reviews have found limited evidence that *zinc gluconate* or *acetate lozenges* may reduce continuing symptoms at 7 days compared

with placebo. It is therefore generally not recommended that people take zinc supplements for colds.

Echinacea

A systematic review of trials indicated that some echinacea preparations may be better than placebo or no treatment for the prevention and treatment of colds. However, due to variations in preparations containing echinacea, there is insufficient evidence to recommend a specific product. Echinacea has been reported to cause allergic reactions and rash.

Vitamin C

A systematic review found that high-dose vitamin C (over 1 g/day) taken prophylactically could reduce the duration of colds by a slight amount (about 8%). Although it is relatively cheap and safe, general advice is that there is not much to be gained from taking extra vitamin C for colds.

Cough remedies

For discussion of products for the treatment of cough, see the section on cough later in this chapter.

Analgesics

For details of analgesics, their uses and side effects, see Chapter 4 Painful Conditions: Management.

Products for sore throats

For discussion of products for the treatment of sore throat, see the separate section later in this chapter.

Practical points

Inhalations

Breathing in warm moist air generated by steam (with or without the addition of aromatic oils) has traditionally been used to reduce nasal congestion and soothe the air passages. The BNF warns against using boiling water because of the risk of burns. Inhalants for use on handkerchiefs, bedclothes and pillowcases are available. These usually contain aromatic ingredients such as eucalyptus or menthol. There has been a move away from recommending steam inhalations for children because of the risk of scalding, and aromatic inhalants should not be used in those 3 months or younger.