

**FREE CE
FOR TECHNICIANS**

Tech Talk CE is Canada's first and only national ongoing continuing education correspondence program specifically designed for technicians. It's brought to you by the publishers of *Pharmacy Practice*, who have been producing CE lessons for pharmacists for the past 10 years. *Tech Talk CE* is generously sponsored by Novopharm. A lesson will appear in each issue of *Tech Talk*, which appears bimonthly in *Pharmacy Practice* (January, March, May, July, September, November).

Instructions

1. After carefully reading this lesson, study each question and select the one answer you believe to be correct. Circle the appropriate letter on the attached reply card.
2. Complete the card and mail, or fax Mayra Ramos at (416) 764-3937.
3. Your reply card will be marked and you will be advised of your results in a letter from *Tech Talk*.
4. To pass this lesson, a grade of 70% (7 out of 10) is required. If you pass, you will receive 1 CEU.

Please allow 6-8 weeks for notification of score.

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Investigating unfamiliar drugs

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Statement of objectives

Upon completion of this lesson, the pharmacy technician will be able to:

1. Use the common resources that provide information about new or unfamiliar drugs.
2. Find information pertaining to new or unfamiliar drugs (e.g., availability, therapeutic uses, indications and adverse effects) by following a systematic approach and using the resources discussed in the lesson.

Introduction

More than 20 new prescription drugs/biologicals are approved by Health Canada every year.¹ It is the pharmacist's role to communicate information and to educate patients and other healthcare practitioners about new and foreign drugs. The pharmacy technician can assist the pharmacist in researching, compiling, and filing new drug information.

This lesson is intended to introduce the technician to some basic steps in finding new drug information.

Systematic approach

The steps a technician takes to find drug information for the pharmacist will depend on the question asked (i.e., the type of information needed) and the resources available in the pharmacy. The table on page 3 demonstrates a *suggested* approach. The scenarios below demonstrate how to use these resources properly.

When researching a new or unfamiliar drug, it is helpful to gather as much information as possible from the person asking

the question: where he/she heard of it, the generic and trade names of the drug, what it's used for and the manufacturer; if possible. It is also important to pinpoint what the person wants to know about the product and how soon he or she requires the information.

Drug availability

Scenario 1: A local family physician phones the pharmacy to inquire whether omalizumab is available in Canada. The pharmacist learns that the doctor read about the drug in a medical journal. He wants to treat a patient with allergic asthma, and is interested in its availability and cost. The pharmacist asks you to gather information on omalizumab for her to review so she can respond to the doctor later.

In this case, the technician may begin a search in the latest *Compendium of Pharmaceuticals and Specialties (CPS)*. The *CPS* is divided into several sections, with the product monograph (white) section being the most relevant for providing detailed drug information. It is usually

best to start a search in the green pages (the index, an alphabetical listing of generic and trade names) to determine or verify the trade name of a new drug and use this name to find the product in the white pages, which are organized alphabetically by trade name.

The *CPS* is also available in CD-ROM format and online (e-CPS). The great advantage of the online version is that it is updated every two weeks³ and, like other online databases, searches can be done rapidly. Omalizumab is not listed in the hardcopy version of the 2005 *CPS* and your pharmacy does not yet have a subscription to the online version.

The next step may be to check the *Pharmacist's Letter* (see table). One search option is to check the back issues of the hardcopy newsletter. However, if your pharmacy has Internet access, a search can be done on the *Pharmacist's Letter* website. This search will tell you that omalizumab has been approved in Canada and its brand, or trade, name is Xolair[®].⁴ The *Pharmacist's Letter* also includes

Table 1: An approach to researching drug information for new or unfamiliar drugs*

Steps	Type of new drug information	Type of resource	Subscription required
1. The <i>CPS</i> , compiled and published annually, is the usual starting point for many drug information questions. It is available in all pharmacies and is a rich source of information.	<ul style="list-style-type: none"> • Manufacturer monographs 	Available in hardcopy and online e-CPS http://www.pharmacists.ca/content/about_cpha/who_we_are/publications_products/ecps.cfm	Yes
2. The <i>Pharmacist's Letter</i> is a monthly publication that regularly highlights new Canadian drugs. A useful resource if the required information is not found in the <i>CPS</i> .	<ul style="list-style-type: none"> • Information on new drugs, new indications, new trends in therapy and place in therapy 	Available in hardcopy, online and PDA versions http://www.pharmacistsletter.com	Yes
3. <i>Pharmacy Practice</i> journal is a monthly journal that has a regular column on newly marketed drugs.	<ul style="list-style-type: none"> • New drug reviews • Often information on place in therapy 	Available in both hardcopy and online http://www.pharmacyconnects.com	Yes (for print version)
4. The <i>Canadian Pharmacists Journal</i> is a bimonthly publication that has a product update column.	<ul style="list-style-type: none"> • New drug reviews • Often provides information on dose, dosage form and storage 	Available in hardcopy with some sections available online http://www.pharmacists.ca/content/hcp/resource_centre/cpi	Yes
5. The Health Canada website is a little more difficult to navigate, but it has a great deal of information not available in other resources.	<ul style="list-style-type: none"> • Notice of compliance listings • Drug and health products listings 	http://www.hc-sc.gc.ca/dhp-mps/prodpharma/notices-avis/list/index_e.html http://www.hc-sc.gc.ca/dhp-mps/prodpharma/index_e.html	No
6. To find more detailed information about therapeutic uses, adverse effects and recent research, PubMed is the next step in the search process.	<ul style="list-style-type: none"> • Journal articles including clinical trials and review articles 	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed	No (but need to pay for full text of most articles)
7. Information about medications not available in Canada is often difficult to find. <i>Martindale's</i> is a publication found in many pharmacies that provides this type of information.	<ul style="list-style-type: none"> • Monographs on a broad range of drugs, and an index of generic and international trade names 	http://www.martindalecenter.com/	Yes CD-ROM also available
8. If the pharmacy has a personal digital assistant (PDA), then the technician's search may end (or begin) using Lexi-Comp, which is a database commonly subscribed to.	<ul style="list-style-type: none"> • Comprehensive monographs, including Canadian brand names • Updated regularly 	http://www.lexi.com	Yes
9. ePocrates is another database commonly used with a PDA. The technician would also search this database if it is available.	<ul style="list-style-type: none"> • Comprehensive monographs • Updated regularly 	http://www2.epocrates.com	Yes

*Please refer to the November 2005 issue of *Tech Talk CE*, "Using the Internet as a Tool and Resource," for a more detailed overview of Internet resources.²

This chart contains a sample of commonly available resources—but numerous other useful resources may be used. Technicians should prepare and regularly update their own chart of available resources pertaining to new and unfamiliar drugs to ensure a systematic approach to answering new drug questions.

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“detail documents” that provide additional information to complement what’s available in the newsletter. The detail document on Xolair® includes facts regarding its actions, adverse effects, administration, dosage and a commentary on the drug’s place in therapy.

Your pharmacy also subscribes to *Pharmacy Practice* and the *Canadian Pharmacists Journal (CPJ)*. A search of a few recent issues of these journals finds some relevant information, including a phone number for a Xolair® patient registration program that can assist with reimbursement of the drug’s costs and a website patients can access once they are registered.^{5,6,7} *Pharmacy Practice* can be accessed online, although there is a short time lag between the receipt of the hardcopy and its availability on the Internet. Some sections of the *CPJ* are available online, but the product update section is not.

The wholesaler is another source of pricing information.

Detailed drug information

Scenario 2: A physician who acts as a medical consultant for the local chapter of the Multiple Sclerosis (MS) Society of Canada phones your pharmacy because he heard that Sativex® was recently approved in Canada. He wants to know whether it is available yet and what adverse effects it has.

Two types of information must be obtained: availability and more detailed drug information (adverse effects). Since this is a relatively new drug, it isn’t listed in the green or white pages of the hardcopy *CPS*. Because the physician believes the product has recently been approved, it may be appropriate to go to step 5 in the table and check whether it has recently received a notice of compliance (NOC). Each week, there is an updated list on the Health Canada website of all the drugs (human and

veterinary and biologicals) that have received NOC, indicating approval for marketing in Canada.⁸ The lists are organized by year of approval, with the most current year broken down into weekly approval lists and a cumulative year-to-date list. A simple search of all these lists cannot be performed simultaneously, although you can search each weekly or annual list using the “Find” function in popular software programs. The reports for each week or year can be downloaded and they are organized alphabetically according to trade name, and also provide generic name, manufacturer, date of NOC, drug identification number and therapeutic class. This search reveals that Sativex® received its NOC with conditions on April 25, 2005.⁹ The NOC list confirms that the drug has been approved in Canada, but does not provide the date that the drug will be marketed. To determine the marketing date, the manufacturer can be contacted (see yellow pages in the *CPS*). However, this search does not provide information regarding adverse effects. Returning to the steps previously described, consult the *Pharmacist’s Letter*, *Pharmacy Practice* and *CPJ*.^{10,11,12}

PubMed is another useful resource that can be searched to find more detailed information about new drugs. It is a free online service of the National Library of Medicine in the U.S. PubMed allows literature searches of articles from biomedical journals indexed on Medline, e.g., results from clinical trials and review articles. Clinical trials provide research results that

can assist healthcare providers in making clinical decisions. Review articles sometimes summarize a number of clinical trials and are a useful tool for the pharmacist. The pharmacist will indicate the type of articles he/she would like. Although it takes practice to use this database well for complex drug information questions (to get familiar try the online tutorial), even an inexperienced user can find valuable drug information. At the time of publication, a search for Sativex® on PubMed reveals seven articles,¹³ two of which are clinical trials.^{14,15} The technician can print the abstracts of each clinical trial for the pharmacist to review. The full-text articles will have more specific information but may not be available quickly. It should be noted that when searching PubMed, generic names should be used because they will provide a wider selection of articles. However, in this situation, because Sativex® contains two different cannabinoids, the trade name was used for searching.

Foreign drug names

Scenario 3: One of your regular patients comes to the pharmacy in search of Dogmatil® for her brother. He has just arrived from Hong Kong for a visit, but his medication was lost with his luggage. She says her brother needs the medication for a mental condition and shouldn’t go without it. She wants to know if he can get Dogmatil® here.

Martindale’s: The Complete Drug Reference is a textbook that many pharmacies have. It contains monographs on a variety of drugs listed according to drug class. A feature of *Martindale’s* is that it lists the trade names of drugs available in other countries. Although the *Martindale’s* textbook is not updated yearly, it may have a monograph on a drug that is not yet marketed in Canada,

because drugs are often marketed in Europe or the U.S. before Canada. Consulting *Martindale’s* reveals that Dogmatil® (sulpiride) is an antipsychotic agent used for the treatment of schizophrenia and other psychoses, with properties similar to chlorpromazine.¹⁶ The pharmacist now has the required information to assist this patient.

Using PDAs

The use of personal digital assistants (PDAs) is becoming more widespread among healthcare professionals, technicians included. The most commonly used medical/pharmacy software programs are Lexi-Comp and ePocrates (see table). These drug databases are updated frequently by synchronizing the PDA with the Internet, and provide extensive drug information that can be searched quickly and easily. The disadvantages are that PDAs can be expensive, are American and require regular access to the Internet for updating. If the required information is not found then the technician may return to the strategy described in the table.

The technician’s role

Prior to researching a new drug, the pharmacy technician should gather as much information as possible from the person asking the question or from the pharmacist, as this will help to focus the search. Approaching the search in an organized fashion will assist the technician in efficiently finding the required information. Developing excellent research skills and a systematic approach to answering questions requires practice. This lesson should introduce the technician to these concepts. Many additional resources and steps may be required, depending on the question, but even the ability to carry out the steps described here will pro-

vide invaluable assistance to the pharmacist.

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QUESTIONS

Please select the BEST ANSWER for each multiple choice question.

1. One of your patients who lives in the U.S. from December to March each year was prescribed Inversine® for smoking cessation last winter. Which of the following is particularly helpful for finding the generic name of this foreign product?
 - a. PubMed
 - b. Martindale's
 - c. Health Canada website
 - d. e-CPS
2. The search of the CPS should begin in the green pages because the technician can verify whether the drug name they have been given to research is the generic or trade name in these pages.
 - a. True
 - b. False

3. Information supplied in a Notice of Compliance (NOC) listing for a new drug on the Health Canada website includes all of the following except:
 - a. Trade name
 - b. Adverse effects
 - c. Manufacturer
 - d. Drug identification number
4. Information regarding cost of a new medication in Canada may be found by consulting:
 - a. Martindale's
 - b. CPS
 - c. Health Canada website
 - d. None of the above
5. Contact information for a specific pharmaceutical manufacturer can be found in which section of the CPS?
 - a. White pages
 - b. Green pages
 - c. Yellow pages
 - d. Purple pages

6. Which of the following would be an appropriate responsibility(ies) for the technician in terms of new drug information?
 - a. Filing new drug monographs in the CPS
 - b. Researching information about availability of a new medication
 - c. Reading Pharmacy Practice, CPJ, and Pharmacist's Letter to stay current with new drugs
 - d. All of the above
7. The NOC lists provide the date that a drug is marketed in Canada.
 - a. True
 - b. False
8. A diabetes teaching nurse knows that inhaled insulin will not be available in Canada in the immediate future but asks you to help her source information for a

- lecture. A logical initial choice to use would be:
 - a. CPS
 - b. e-CPS
 - c. PubMed
 - d. Health Canada website
9. Advantages of personal digital assistants (PDAs) for obtaining drug information include all of the following except:
 - a. Cost of PDA and software
 - b. Very frequent updating
 - c. Speed at which information can be accessed
 - d. Portability
10. Which of the following resources would provide the most up-to-date answer when checking if a drug is marketed in Canada?
 - a. e-CPS
 - b. CPS
 - c. PubMed
 - d. Martindale's

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