

IC-145

DIGITAL BOOK



The Medical Letter[®]



HANDBOOK OF ADVERSE DRUG INTERACTIONS

User's Manual

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Introduction

This handbook offers a quick guide to possible adverse effects of drug interactions, with brief recommendations for precautionary measures. References are given to original reports that provide more complete discussions of each interaction.

This book— lists adverse drug interactions, their mechanisms, and recommendations for clinical management. These listings are usually based on clinical reports in humans.

Reports of interactions between more than two drugs are appearing in the medical literature with increasing frequency. Where these have been documented, they are noted as comments under interacting pairs of drugs. Interactions listed for groups of drugs (such as “cephalosporins” or “antidepressants, tricyclic”) may not have been reported for every drug in the group; known exceptions to the interaction are noted.

It is not possible to determine the frequency of most interactions. When an interaction is documented by one or two case reports rather than by clinical studies or reports in many patients, the year of each report is given as some indication of frequency.

Omissions—Drugs for which we have no documented interaction are not included. New adverse interactions are continually being reported; the absence of an interaction does not necessarily mean that drugs will not interact when given concurrently. Interactions between general anesthetics and drugs likely to be administered during surgery, such as autonomic drugs and local anesthetics, are not included here. Interactions useful in therapy, such as increased plasma concentration of penicillin with concurrent use of probenecid, are also not included.

Common additive effects, such as occur with the use of two

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antihypertensive agents or two central-nervous-system depressants, are generally not included. Effects expected from the mechanism of a drug's action, such as that of potassium on digitalis glycosides or calcium on calcium-entry blockers, and useful antagonist effects, such as that between a poison and an antidote, are not listed. Most interactions of drugs with foods, beverages, or other nutrients are not included, but foods interacting with monoamine oxidase inhibitors are included.

Mechanisms of Interaction—Genetic differences can affect drug metabolism and interactions. Drugs can interact by changing the metabolism of other drugs, either through inhibition or induction of any of several hepatic enzyme activities or through alterations in hepatic blood flow; by altering the binding of other drugs to plasma proteins or tissue receptors; by altering the distribution of drugs to active receptor sites; by delaying or enhancing excretion; or by causing additive or synergistic effects.

Recommendations—Monitoring is most important when one of the interacting drugs is stopped or started. Some experienced clinicians may prefer to monitor the patient's clinical status rather than follow serum concentration of drugs.

Important Notice: The Medical Letter Drug Interactions Program reports interactions occurring in people, which can be documented primarily by published reports. These may not include interactions mentioned in other sources, such as the manufacturer's package insert, which are extrapolated from animal studies or interactions reported for related drugs.

Overview of Operation

What the *Handbook* Can Do

The Medical Letter® Handbook of Adverse Drug Interactions is a powerful reference. Using this digital book, you can. . .

- find brand name drugs, generic drugs, drug groups, and food groups,
- correct drug name misspellings,
- find foods that interact with MAO inhibitors,
- select up to 20 drugs and view a list of the interactions between them,
- select a single drug and view a list of the drugs with which it interacts,
- read descriptions and references about drug interactions, and
- look up drugs and words in related digital books.

Read this User's Manual to learn how.

Overview of Operation

How the *Handbook* Works

The *Handbook* is easy to use. Here are the basics.

Highlight the HADI symbol and press .

At the main drug list, type a drug name.

As you type, the drug name is highlighted.

Then press .

Type another drug name. Press .

You see a message to "SHOW INTERACTIONS."

Press .

You see the interactions, if any, between the drugs.

Press .

You see a description of the interaction.

Press .

You're ready to find other interactions.

✓ About Illustrations in this Manual

Some screen shots in this User's Manual may vary slightly from what you see on screen. These variations do not mean that this digital book or your Digital Book System is malfunctioning.

Installing the Digital Book

Before you can use this digital book, you must install it. **Warning:** If you install a digital book while the Digital Book System on, information that you entered in other currently installed digital books may be erased.

1. Turn the Digital Book System off.
2. Install the digital book into a slot on the back of the Digital Book System.

Align the tabs on the digital book with the notches in the slot. Make sure its metal contacts face down.

3. Press **ON/OFF**.
4. Turn the wheel on the side of the Digital Book System to adjust the screen contrast.
5. Press **CARD**.
6. Press  or  to highlight the HADI symbol.



Installing the Digital Book

7. Press **ENTER** .

SELECT 1ST ITEM TO LOOK UP: ↓

~~ABITREXATE~~

ACABAMATE

ACAPAV

ACCUPRIL

ACCUREON

This is the main drug list, where you select drugs to find interactions.

✓ Resuming Where You Left Off

While using this digital book, you can turn off the Digital Book System at any time. When you turn the Digital Book System on again, the screen that you last viewed appears. Any drugs entered in your query list are saved, too.

✓ Clearing the Main Drug List

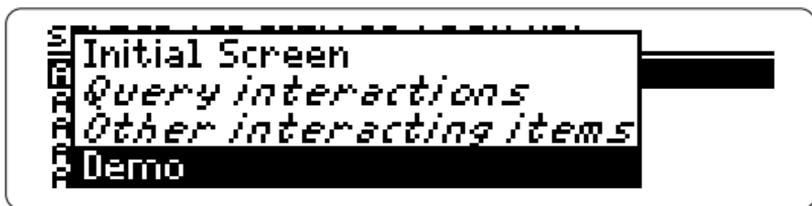
You can always return to the main drug list by pressing **CLEAR** . *Note:* When you do, the drugs in your query list are also cleared.

You can return to the previous screen without clearing your query list by pressing **BACK** .

Viewing a Demonstration

Before you start using this digital book, you may want to view a brief demonstration of what it can do.

1. Press **MENU** at the main drug list.
2. Press  to highlight "Demo."



3. Press **ENTER** to start the demonstration.
4. Press **CLEAR** to stop the demonstration.

✓ Help is Always at Hand

Except during the demonstration, you can view a help message at any screen by pressing **HELP**. To read the help message, press . To exit it, press **BACK**.

Selecting Drugs

The main drug list contains brand and generic drugs, foods, as well as drug and food groups. You select an item from the main drug list by typing it and then pressing **ENTER**. Usually you need to type only a few letters to highlight an item. Try this example.

1. Type “META” at the main drug list.



```
SELECT 1ST ITEM TO LOOK UP:
MESTRANOL
METAGLUCINA
METAHYDRIN
METALONE
METANDREN
```

To erase a letter, press **BACK**.

2. Press **ENTER** to select the drug and add it to the query list.
3. Press **CLEAR** to clear the query.

✓ Drug Selecting Tips

You do not need to type capital letters or punctuation. However, you can type numbers at the main drug list. *Note:* In this User’s Manual, “drug” refers to any item on the main drug list.

Selecting Drugs

✓ Using the Direction Keys

You can use these keys to move up and down the main drug list, the query list, and other lists.

| To... | Press... |
|-------------------------------------|--|
| Scroll up and down | Hold  or  |
| Page up and down | UP or DN |
| Zoom to the top or bottom of a list |  +  or  |

* Hold  while pressing the other key, or press  and then the other key. The second method displays a G at the bottom of the screen.

✓ Follow the Arrows

The flashing arrows at the top right of the screen indicate which direction keys you can press to move around the screen.

Correcting Misspellings

Don't worry if you misspell a word. The spell-correction mode automatically appears. Try this.

1. Type "PSEUDOFED" at the main drug list.



```
SPELL-CORRECTION MODE
PSEUDOFED
```

To exit spell-correction, press **BACK** repeatedly.

2. Press **ENTER**.



```
SPELL-CORRECTION CANDIDATES:
SUDAFED
PSEUDOEPHEDRINE
```

3. Press **↓** to highlight a drug.
4. Press **ENTER** to select the drug and add it to the query list.
5. Press **Y** to add the related drug.
6. Press **ENTER** to clear the query.

Correcting Misspellings

✓ Finding Letters in Words

If you are not sure how to spell a word, type a question mark in place of each unknown letter or an asterisk in place of a series of unknown letters. Here are two examples.

- Type “CIM?T?DINE” and press **ENTER**.
The correct spelling, CIMETIDINE, appears.
- Type “CORTI*.” To type the asterisk, hold **SHIFT** and press **? ***. Then press **ENTER**.
a list of drug and group names beginning with “CORTI” appears.

Note: You can type more than one question mark or asterisk in a word, and you can type both in one word. However, you cannot type two consecutive asterisks in a word.

Finding Brands, Generics, Groups

By highlighting a drug name on the main drug list and pressing , you can see its generic or brand names and any drug or food groups to which it belongs. In this example, we'll find the brand names and drug group of penicillin G.

1. Type "PENICILLIN G" at the main drug list.
2. Press .



3. Press  repeatedly to view the brands.
Or hold  and press .



At the bottom of the list, notice that penicillin G belongs to the drug group, penicillins.

Finding Brands, Generics, Groups

4. Press **ENTER** to view the drugs in the group.



penicillins +
is a *Group*
Brands:
~~Win-Cillin~~
Win-Cillin UK

5. Press **↓** to scroll down.
6. Press **BACK** twice to go back to the main drug list.

✓ Finding MAO Inhibitor Interactions

When you highlight a food name on the main drug list, pressing **SPEC** shows if that food interacts with MAO inhibitors. Try this example.

1. Type “AVOCADOS”.
2. Press **SPEC**. “MAO Inhibitor info” is highlighted.
3. Press **ENTER**. A description of avocados and MAO inhibitors appears.

Finding Interactions

You can find adverse interactions by selecting drugs from the main drug list and then pressing **ENTER** at “*SHOW INTERACTIONS*.” Then you can view a description of each interaction.

Between Many Drugs

You can select up to 20 drugs at time to find interactions between them. In this example, we'll find the interactions between alcohol and acetaminophen.

1. Select “ALCOHOL” from the main drug list.
2. Select “ACETAMINOPHEN.”

```
SELECT 3RD ITEM TO LOOK UP: ↓  
*SHOW INTERACTIONS*  
ABITREXATE  
ACABAMATE  
ACAPAV  
ACUPRIL
```

3. Press **ENTER** to view the interactions. Or press **MENU** and select “Query interactions.”

```
INTERACTIONS FOR YOUR QUERY:  
ACETAMINOPHEN & ALCOHOL
```

Finding Interactions

4. If more than one interaction is listed, press  to highlight one.

Note: You can return to the main drug list now by pressing .

5. Press  at a highlighted interaction.

Severe hepatotoxicity with therapeutic doses of acetaminophen in chronic alcoholics (mechanism not established)[†]  Incidence unknown; warn patients

This is an interaction description. The hand points to a comment or recommendation.

6. Press  or the DN key to move down.

To...

View the drug names of the interaction description

View the next or previous description, if any

Return to the interactions

Press...

 then 

 + UP or DN



7. Press  to clear the queries.

Finding Interactions

For a Single Drug

You can select a single drug from the main drug list and quickly find the drugs with which it interacts. In this example, we'll find the interactions for heparin.

1. Type "HEPARIN" at the main drug list.
2. Press **ENTER**.
3. Press **LIST** to view your query list.

```
ITEMS IN YOUR QUERY: ['D' = DELETE]
HEPARIN
```

4. Press **O**. Or press **MENU** and select "Other interacting items."

```
YOUR QUERY INTERACTS WITH:
ALCOHOL & HEPARIN
ASPIRIN & HEPARIN
CEPHALOSPORINS & HEPARIN
HEPARIN & HYPOGLYCEMICS, S
HEPARIN & NITROGLYCERIN
```

These are the interactions for heparin.

Finding Interactions

5. Press  to highlight an interaction.

6. Press  to view its description.

✓ Using the Query List

Whenever you select a drug from the main drug list, it is saved in the query list. To view your queries, press . Once at the query list, you can use these keys.

To...

Press...

Delete a highlighted item



View the interactions
between all the items



View all the interactions
for a highlighted item



Go to main drug list
and *save* your queries



Go to main drug list
and *clear* your queries



Note: Your queries are saved between sessions unless you reset the Digital Book System or remove its batteries.

Viewing References

Whenever you see a reference mark (†) in an interaction description, you can view its journal reference.

1. At the start of an interaction description with a †, hold  and press .

Possible increased methotrexate toxicity with kanamycin (mechanism not established)†
Decreased methotrexate effect

Notice that the † is highlighted.

If you're below or to the left of the †, hold  and press . If the description has other reference marks, hold  and press  to highlight the next reference mark.

2. Press  to view the reference.

MH Cohen et al, Effect of oral prophylactic broad spectrum nonabsorbable antibiotics on the gastrointestinal absorption of nutrients and methotrexate in

Viewing References

3. Hold  to scroll down.
4. Hold  and press the DN key repeatedly to view more references, if any.
To view a previous reference, hold  and press the UP key.
5. Press  to go back to the description.

✓ Viewing Next or Previous References

Once at a reference, you can view the next or previous reference, if any, in an interaction description by holding  and pressing the UP or the DN key.

✓ Viewing Complete Drug Names

Pressing  or  at an interaction list, an interaction description, or a reference displays the full names of the drugs involved in the interaction. Then press  to go back to previous screen.

Sending Words to Other Books

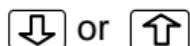
You can send drug names and other words from this digital book to other installed digital books. For example, you can look up a drug from the *Handbook* in *The Washington Manual* digital book.

1. Highlight a word in the *Handbook*.

To . . .

Highlight a drug
or item in a list

Press . . .



Highlight a word
in a description

ENTER and then
the arrow keys

Turn off highlight
in a description



2. Hold  and press **CARD**.

3. Highlight the symbol of the digital book to which you want to send the word.

4. Press **ENTER**.

To look up the word, follow the instructions for that book. In many cases, you simply press **ENTER**.

To return to the *Handbook*, press **CARD**, highlight its symbol and then press **ENTER**.

Digital Book System®

Resetting the Digital Book System

To reset the Digital Book System, hold **CLEAR** while pressing **ON/OFF**. Or press the recessed reset button on the back of the Digital Book System. (Read its Basic Operating Guide for details.)

Warning: Resetting the Digital Book System may permanently erase information, such as notes, that you have entered in the installed digital books.

Note: If the keyboard fails to respond or the screen performs erratically, you can press **CLEAR** and then press **ON/OFF** rather than resetting the Digital Book System. If nothing happens, then reset.

Protecting and Cleaning

- Do not touch the metal contacts on the back of digital books or the rubber contacts on the Digital Book System with statically charged objects. Statically charged objects may erase information that you entered in the digital books.
- Do not put excessive weight on digital books or the Digital Book System, or expose them to extreme or prolonged heat, cold, or other adverse conditions.
- To clean digital books, apply isopropyl alcohol with cotton swab. To clean the Digital Book System, apply a mild household cleaner with a soft cloth.

Caution: Spraying liquids on digital books or the Digital Book System may damage them.

Replacing the Batteries

The DBS-1 and DBS-2 use four 3-volt, CR2032 lithium batteries. The DBS-2D uses four 1.5-volt, AA batteries.

1. **Have new batteries ready.**
2. **Turn the Digital Book System off.**
3. **Slide the battery cover off the back.**
4. **Remove all the batteries.**
5. **Place new batteries in the cavities, with the +’s oriented correctly. (In the DBS-1 and DBS-2, the +’s should face up.)**
6. **Replace the battery cover**

✓ **Battery Precautions**

When you replace batteries, follow these precautions to avoid erasing information on your installed digital books.

- Replace the batteries before they lose power.
- Once batteries have been removed, install new ones within two minutes.
- Do not mix old and new batteries.
- Never remove batteries with the unit on.

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Product Specifications

Model IC-145

- Data: More than 1,150 interactions; 2,600 references; 2,400 brand names; 800 drug, food, and group names; and MAO inhibitor/food reactions.
- Alphanumeric searching
- A user query list holding up to 20 drug names
- Spelling correction
- Self-demonstration.
- Context-sensitive help messages
- size: 2-1/4" x 1-1/4" x 1/4"
- weight: 0.3 oz.

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U.S. Patent 4,490, 811; 4,830,618; 5,113,340;
5,218,536. European Patent 0 136 379.

Patents Pending.

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Key Guide

Function Keys

| | |
|--|---|
|  | Clears your queries and shows the main drug list. |
|  | Shows menus. |
|  | No effect. |
|  | No effect. |
|  | Shows the query list. |
|  | Shows brands, generics, groups. |
|  | Exits the digital book. |

Gold Key Combinations

| | |
|--|--|
|  + number keys | Type numbers. |
|  +  | Sends a word to another book. |
|  +   | Zooms to the start or end of a list, section, description, or reference. |
|  + UP or DN | Shows the next or previous description or reference. |
|  +   | Highlights a reference mark in a description. |

Key Guide

Direction Keys



Move the highlight.

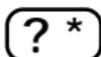


Scroll through lists and text, or move the highlight.

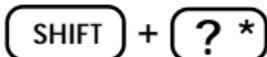
UP or DN

Page up or down.

MatchMaker™ Key



At the main drug list, types a ? to find a letter in a word.



At the main drug list, types a * to find a series of letters in a word.

Query List Keys

These functions apply only in the query list.



Shows the main drug list.



Deletes a highlighted item.



Shows interactions for an item.



Shows the interactions between all the items.

Key Guide

Other Keys

A **Z**

Type letters.

BACK

Erases a letter, backs up, deletes an entry, or turns off the highlight in interaction descriptions.

ENTER

Make an entry. In descriptions, highlight a word.

HELP

Shows a help message.

ON/OFF

Turns unit on or off.

, **-** **;** **:**

Types punctuation.

? *****

Except at the main drug list, acts the same as **SPEC**.

SHIFT

Shifts keys.

SPACE

Types a space.

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