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DIGITAL BOOK

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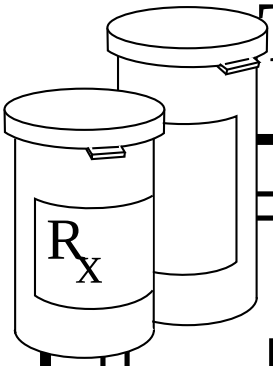

HANDBOOK OF ADVERSE DRUG INTERACTIONS

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

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.

What the *Handbook* Can Do

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

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

Read this User's Manual to learn how. You can follow its numbered steps using the examples shown or drugs that interest you.

How the *Handbook* Works

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

Highlight the HADI symbol. Then press ENTER.

At the main drug list, type a drug name. Then press ENTER.	As you type, the drug name is highlighted.
Type another drug name. Press ENTER.	You see a prompt to "show interactions."
Press ENTER.	You see the interactions, if any, between the drugs.
Press ENTER.	You see a description of the interaction.
Press CLEAR.	You're ready to find other interactions.

About Illustrations

The illustrations in this User's Manual are from the 1992 edition of the *Handbook*. The information that you see on screen may be different.

Getting Started

If you're using the *Handbook* for the first time, read this section. **WARNING:** If you install the *Handbook* with the Digital Book System on, information that you entered in the other installed book may be erased.

1. **Turn the Digital Book System off.**
2. **Put the *Handbook* in either slot on the back of the Digital Book System.**

   Align the book's tabs with the notches in the slot. Make sure its metal contacts face down.
3. **Press ON/OFF .**
4. **To adjust the screen contrast, turn the wheel on the side of the Digital Book System.**
5. **Press CARD.**
6. **Press ⇨ or ⇦ to highlight HADI.**

7. Press ENTER .

This is the *Handbook's* initial screen, the top of the main drug list. Here you enter drug names to find interactions.

Clearing the Screen and Backing Up

You can always return to the initial screen by pressing CLEAR. When you do, the drug names in your query list are also cleared.

You can always return to the previous display by pressing BACK .

Help is Always at Hand

If you're ever unsure about which key to use, press HELP to see an appropriate help message. To scroll down help messages, press ⇩ . To exit them, press BACK .

Seeing a Demonstration

Before you start using the *Handbook*, you may want to see a brief demonstration.

1. At the initial screen, press MENU .

2. Press ⇩ to highlight Demo.

3. Press ENTER to start the demonstration.

4. To stop the demonstration, press CLEAR .

Resuming Where You Left Off

If you turn off the Digital Book System while using the *Handbook*, you'll return to the previous screen when you turn the Digital Book System on. All the drugs that you entered in your query list are saved, too.

Entering Drug Names

You enter drug names by typing them at the main drug list. The main drug list contains brand and generic names, foods, and drug and food groups. In this User's Manual, "drug name" refers to any name on the main drug list. Try this example.

1. At the initial screen, type META.

2. Press ENTER to enter the drug in the your query list .

3. Press CLEAR to clear the entry.

Tips for Entering Drug Names

- Usually you need type only the first few letters to highlight a drug name.
- You don't need to type capitals or punctuation.
- To type numbers, hold [ ] and press the numbered keys.
- To erase letters, press BACK.

Moving Up and Down Lists

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	or
Go to the start or end of the list	+ or *

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

Follow the Arrows

Blinking arrows at the top right of the screen indicate which direction keys you can press to move around the screen. Look for them.

Correcting Misspellings

When you type letters that don't match any drug name on the main drug list, you activate the spell-correction mode. Try this example.

1. At the initial screen, type PSEUDOFED.

To exit the spell-correction mode, press BACK repeatedly.

2. Press ENTER.

3. Press ⇩ to highlight a drug name.

4. Press ENTER to enter the drug in your query list. Then press Y to add the related drug.

5. Press ENTER to clear your entry.

Finding Spellings with ? and ✻

You can find spellings even when you don't know all the letters in the names.

Simply type a question mark for each letter that you don't know in a name. Or type an asterisk for a series of unknown letters. For example. . .

- Type `CIM?T?DINE` and press ENTER. You'll see the correct spelling, `CIMETIDINE`.
- Type `CORTI*`. To type the asterisk, hold SHIFT and press ? *. Then press ENTER. You'll see a list of drugs and groups starting with CORTI.

You can type more than one question mark or asterisk in a drug name. And you can type both in one name.

Brands, Generics, and Groups

By highlighting a drug name on the main drug list and pressing SPEC, 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. At the initial screen, type `PENICILLIN G`.

2. Press SPEC.

3. To see the brands, press ⇩ repeatedly. Or press ▭ plus DN.

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

4. Press ENTER to see the drugs in the group.

5. Press ⇩ to scroll down.

6. To return to the main drug list, press BACK twice.

Finding MAO Inhibitor Interactions

When you highlight a food on the main drug list, pressing SPEC shows if it interacts with MAO inhibitors. For example. . .

1. Type `AVOCADOS` . Then press SPEC . `MAO Inhibitor info` is highlighted.
2. Press ENTER . You see a description of avocados and MAO inhibitors.

Finding Interactions

You can see adverse interactions by entering drug names at the main drug list and pressing (ENTER) at `*SHOW INTERACTIONS*` . Then you can read a description of each interaction.

Between Many Drugs

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

1. At the initial screen, enter ALCOHOL.

2. Enter ACETAMINOPHEN.

3. Press (ENTER) . Or press (MENU) and select `Query interactions`.

4. If there is more than one interaction, press ⇩ to highlight an interaction.

To return to the main drug list (for example, if there are no interactions), press BACK .

5. At a highlighted interaction, press ENTER .

This is an interaction description. The pointing hand indicates a comment or recommendation.

6. Press ⇩ or DN to move down.

To. . .	**Press. . .**
View the drug names of the interaction description	SPEC then BACK
View the next or previous description, if any	▭ + DN or UP
Return to the interactions	BACK

7. Press CLEAR to clear your entries.

For a Single Drug

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

1. At the initial screen, type `HEPARIN`.

2. Press ENTER.

3. Press LIST to see your query list.

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

These are the interactions for heparin.

5. Press ⇩ to highlight an interaction.

6. Press ENTER to see its description.

Using Your Query List

Whenever you enter a drug name, it's saved in your query list. To see your query list, press LIST. At the query list, use these keys:

To. . .	Press. . .
Delete a highlighted drug	D
See the interactions between all the drugs	Q
See all the interactions for a highlighted drug	O
Go to the initial screen and save the query list	A
Go to the initial screen and clear the query list	CLEAR

NOTE: Your query list is 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 a journal reference for that description.

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

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 mark.

2. Press [ENTER] to see the reference.

3. To scroll down, hold ⇩ .

4. To see the next reference, if any, hold ▭ and press DN .

If there are more references, repeat Step 4. To see previous ones, hold ▭ and press UP.

5. To go back to the interaction description, press BACK .

Viewing Next or Previous References

Once at a reference, you can see the next or previous reference, if any, in an interaction description by pressing ▭ plus DN or UP .

SPECifying Interactions

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

Sending Words to Other Books

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

1. Highlight a word in the *Handbook*.

To. . .	**Press. . .**
Highlight a drug name in a list	⇩ or ⇧
Highlight a word in a description	ENTER. Then the arrow keys
Turn off highlighting in a description	BACK

2. Hold ▭ and press CARD.

3. Highlight the digital book you want to send the word to. Then 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

Installing Digital Books

NOTE: Your Digital Book System will operate only when one or two digital books are installed.

1. **Turn the Digital Book System off.**
2. **Align the digital book's tabs with the notches in either book slot on the back of the Digital Book System.**

   If you install only one digital book, it doesn't matter which slot you use. But make sure that the digital book's metal contacts are facing down.
3. **Gently snap the digital book into the slot.**

Removing Digital Books

1. **Turn the Digital Book System off.**

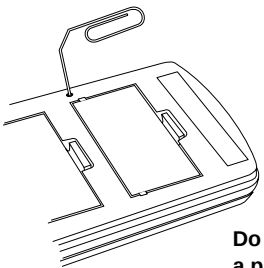
   > **WARNING** If you install or remove digital books while the Digital Book System is on, you may erase information that you entered in them.

2. **Compress the digital book's tab and lift it from the slot.**

Resetting the Digital Book System

If the keyboard fails to respond or the screen performs erratically, follow these steps:

1. **Press CLEAR.**
2. **Press ON/OFF.**
3. **Hold CLEAR and press ON/OFF.***
4. **Using a paper clip, press the recessed reset button on the back.***



Do not use a pen or pencil.

*** WARNING** When you reset your Digital Book System, information that you entered in the currently installed digital books will be erased.

Switching Between Digital Books

1. With two digital books installed, press CARD.

You see the digital book symbols.

2. Highlight a symbol by pressing ⇨ or ⇦. Then press ENTER.

You switch to the other digital book. To return to the first digital book, repeat the steps above.

Sending Words Between Books

Some digital books can send and receive words from other digital books. Generally, here's how:

1. Highlight a word in a digital book.

Read its User's Manual to learn how.

2. Hold ▭ and press CARD.

3. Highlight the other digital book symbol. Then press ENTER.

You see its main display. You may have to press ENTER again to look up the word.

Replacing the Batteries

Your unit uses CR2032 lithium batteries. Before replacing them, have four new batteries ready.

1. ***Turn your Digital Book System off.***
2. **Remove the battery cover on the back. Then remove all batteries.**
3. **Promptly slide two new batteries into the battery cavity with the metal clip over it.**

   Don't bend the clip; it's an electrical contact. And make sure the batteries' plus (+) signs face up.
4. **Slide two new batteries into the other cavity. Then replace the battery cover.**

> **WARNING** To prevent erasing information from installed digital books:
>
> • Always replace the batteries before they completely lose power, and never remove batteries while the unit is on.
>
> • Never mix old and new batteries. And, once batteries have been removed, install new ones within two minutes.

Protecting Your Digital Book System

- **Don't** touch the metal contacts on the back of your digital books or the rubber contacts in the book slots of the Digital Book System.

  > **WARNING** Touching the contacts with statically charged objects, including your fingers, could erase information that you entered in your installed digital books.

- **Don't** put excessive pressure or weight on your digital books or Digital Book System.
- **Don't** expose your digital books to extreme or prolonged heat, cold, or other adverse conditions.

When you're not using your Digital Book System, keep two digital books or dummy books in its slots to prevent dust build-up.

To clean the digital books, apply isopropyl alcohol with cotton swab. To clean the Digital Book System, apply a mild household cleaner onto a soft cloth.

> **WARNING** Spraying liquids directly on your Digital Book System could damage its circuitry.

Limited Warranty (U.S.A only)

FRANKLIN warrants to you that the DIGITAL BOOK will be free from defects in materials and workmanship for one year from purchase. In the case of such a defect in your DIGITAL BOOK, FRANKLIN will repair or replace it without charge on return, with purchase receipt, to the dealer from which you made your purchase or Franklin Electronic Publishers, Inc., 122 Burrs Road, Mt. Holly, NJ 08060, within one year of purchase. Alternatively, FRANKLIN may, at its option, refund your purchase price. Data contained in the DIGITAL BOOK may be provided under license to FRANKLIN. FRANKLIN makes no warranty with respect to the accuracy of data in the DIGITAL BOOK. No warranty is made that the DIGITAL BOOK will run uninterrupted or error free. You assume all risk of any damage or loss from your use of the DIGITAL BOOK. This warranty does not apply if, in the sole discretion of FRANKLIN, the DIGITAL BOOK has been tampered with, damaged by accident, abuse, misuse, or misapplication, or as a result of service or modification by any party, including any dealer, other than FRANKLIN. This warranty applies only to products manufactured by or for FRANKLIN. Batteries, corrosion or battery contacts and any damage caused by batteries are not covered by this warranty. NO FRANKLIN DEALER, AGENT, OR EMPLOYEE IS AUTHORIZED TO MAKE ANY ADDITIONAL WARRANTY IN THIS REGARD OR TO MAKE ANY MODIFICATION OR EXTENSION OF THIS EXPRESS WARRANTY.

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Product Specifications

Model IC-104

- Data: More than 1,150 interactions; 2,600 references; 2,400 brand names; 800 drug, food, and group names; and 31 MAO inhibitor/food reactions.
- Alpha-numeric searching
- A user query list holding up to 20 drug names
- Spelling correction
- Self-demonstration.
- Context-sensitive help messages
- ROM size: 4 megabits

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

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Key Guide

Function Keys

CLEAR	Clear the query list and go to the initial screen.
MENU	Show the menu.
GAMES	Doesn't apply.
MORE	Doesn't apply.
LIST	Show the query list.
SPEC	Specify names and related drugs.
CARD	Exit the *Handbook*.

Gold Key Combinations

+ number keys	Type numbers.
+ CARD	Send a word to another book.
+ ⇩ ⇧	Go to the start or end of a list, section, description, or reference.
+ DN UP	Go to next or previous description or reference.
+ ⇨ ⇦	Highlight a reference mark in a description.

Direction Keys

	Move the highlight.
	Scroll through lists and text, or move the highlight.
	Page up or down.

MatchMaker™ Key

? *	At the main drug list, stand for an unknown letter.
SHIFT + ? *	At the main drug list, stand for a series of letters.

Query List Keys

These functions apply only in the query list.

A	Go to the initial screen.
D	Delete a highlighted drug.
O	Show interactions for a drug.
Q	Show all the interactions between the drugs.

Other Keys

A Z	Type letters.
BACK	Erase a letter, back up, delete an entry, or turn off the highlight in interaction descriptions.
ENTER	Make an entry. In descriptions, highlight a word.
HELP	Show a help message.
ON/OFF	Turn unit on or off.
, - ; :	Type punctuation.
? *	Except at the main drug list, the same as SPEC.
SHIFT	Shift keys.
SPACE	Type a space.

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