UNITED STATES
National Library of Medicine

Review of PDA Applications
in
Toxicology and Environmental Health:

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iFacts™

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Specialized Information Services Division
National Library of Medicine
National Institutes of Health
Department of Health and Human Services
Bethesda, Maryland, USA

iFacts™

(Reviewed 05/2004)

General Information

For general comments regarding the *Review of PDA Applications in Toxicology and Environmental Health*, please see the **Overview**. Here we review the main technical and content features of the Palm OS version of *iFacts*™ *(7.0.0)* based upon the downloadable demo. *iFacts*™, the handheld version of the *Drug Interaction Facts* guide published by Facts and Comparisons (Wolters Kluwer Health, Inc.), is a drug interaction analyzer covering over 2700 generic and brand name drugs and including 1400 monographs that provide drug interaction information and data. The *iFacts*™ application allows practitioners to assess possible drug interactions at the point of care. Skyscape indexes the information by group, significance, and generic and brand name to allow users to access it more efficiently.

Intended Users

- ➢ Physicians
- ➢ Physician's Assistants
- ➢ Nurse Practitioners
- ➢ Medical Students
- ➢ Pharmacists

Authorship/Data Source

The contents of the *iFacts*™ application is based on the hardcopy publication *Drug Interaction Facts*, authored by David S. Tatro, PharmD, and published by Facts and Comparisons (Wolters Kluwer Health, Inc.). The handheld version is produced by Skyscape, Inc.

Contents

The *iFacts*™ application, which is based on the print publication *Drug Interaction Facts* (published by Facts and Comparisons, Wolters Kluwer Health, Inc.), is a drug interaction analyzer covering over 2700 generic and brand name drugs and containing 1400 drug interaction monographs. Drugs are listed individually (indexed by generic and brand names) and by group (e.g., MAO inhibitors, tetracyclines). Drug interactions are rated for significance (on a scale of 1 to 5, with 1 being the most serious), thus providing a quick summary of the seriousness of the reaction.

◄ The Drug Selection view, shown in the screen shot to the left, allows the user to access the iFacts contents in three different ways, which will be illustrated in the screen shots that follow.

► If, for example, a user seeks information on the potential interaction between acetaminophen and ethanol, one way he/she can access that information is by tapping on "acetaminophen" in the Drug Selection list shown above, which reveals a list of potential interactions involving acetaminophen (shown at right). Further tapping on the Acetaminophen+Ethanol entry reveals the significance rating for this interaction (shown below).
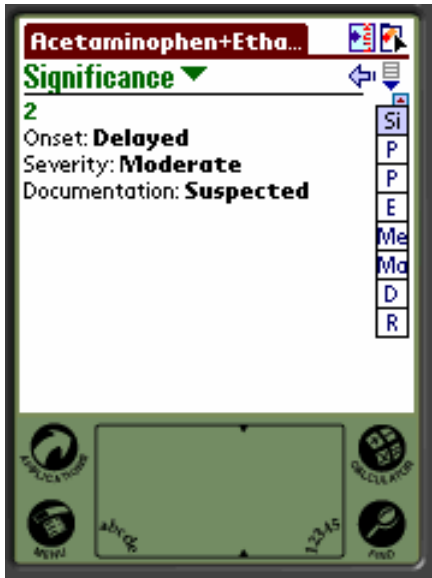
◄ *The screen shot to the left shows the first section (Significance) of a series of sections in the Acetaminophen+Ethanol interaction monograph. This section displays the significance rating (in this case, 2) below the section name and provides summary information for the interaction (Onset, Severity, Documentation).*

► *Any subsequent monograph section for the same interaction may be accessed either by tapping on the section name (Significance), thus displaying the full list of sections (shown at right), and then tapping on any item in that list, or by tapping on any box in the vertical series of boxes on the right side of the screen (shown above).*
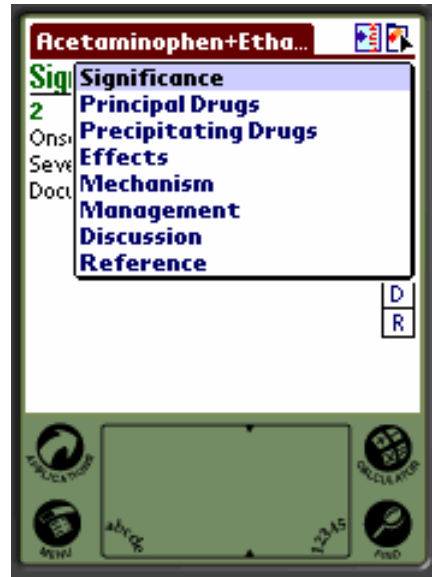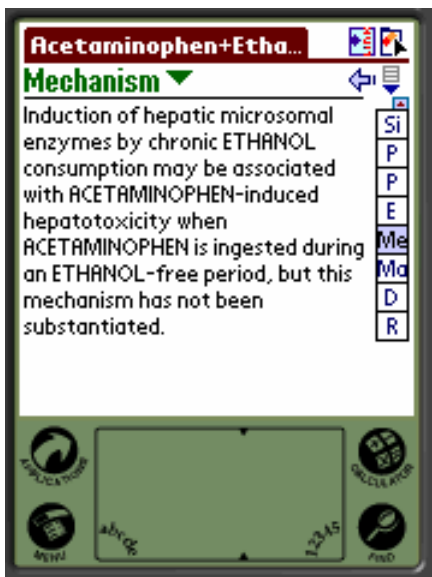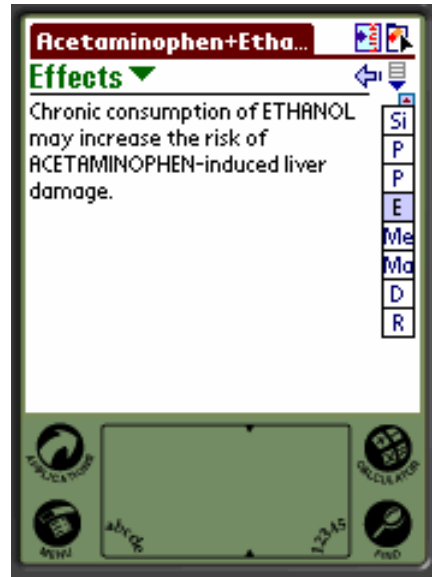

◄ *Continuing with the acetaminophen– ethanol interaction example, the Principal Drugs section of the related monograph is shown in the screen shot to the left.*
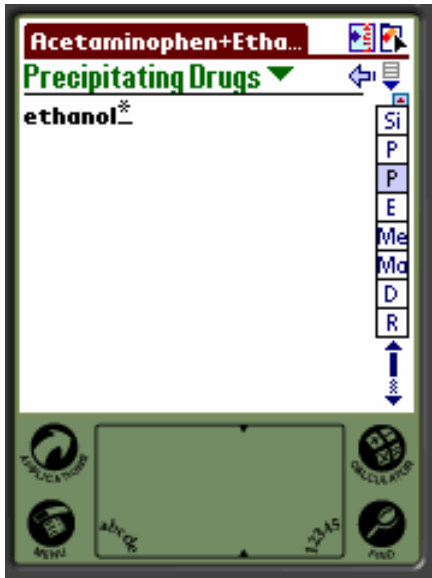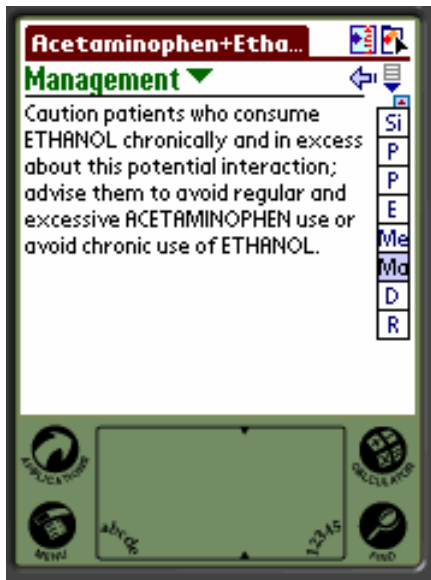
◄ *The Precipitating Drugs section of the same interaction monograph is shown in the screen shot to the left.*

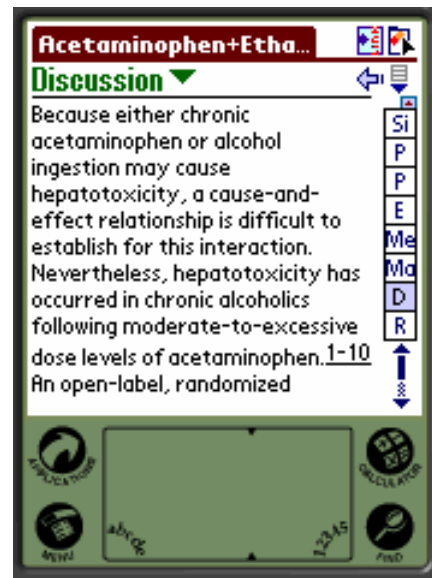► *The Effects section of the monograph is shown in the screen shot to the right.*

◄ *The mechanism of the acetaminophen–ethanol interaction is discussed in the Mechanism section, shown in the screen shot to the left.*

Acetaminophen+Etha...

Management ▼

Caution patients who consume ETHANOL chronically and in excess about this potential interaction; advise them to avoid regular and excessive ACETAMINOPHEN use or avoid chronic use of ETHANOL.

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◄ *Information concerning the management of a potential acetaminophen–ethanol interaction, covered in the Management section of the monograph, is displayed in the screen shot to the left.*

► *The referenced Discussion section of the monograph is shown in the screen shot to the right.*

Acetaminophen+Etha...

Discussion ▼

Because either chronic acetaminophen or alcohol ingestion may cause hepatotoxicity, a cause-and-effect relationship is difficult to establish for this interaction. Nevertheless, hepatotoxicity has occurred in chronic alcoholics following moderate-to-excessive dose levels of acetaminophen.[1-10] An open-label, randomized

Si P P E Me Ma D R

Acetaminophen+Etha...

Reference ▼

1. Wright N, et al. *Scott Med J* 1973;18:56.
2. Emby DF, et al. *S Afr Med J* 1977;51:208.
3. McClain CJ, et al. *JAMA* 1980;244:251.
4. Licht H, et al. *Ann Intern Med* 1980;92:511.
5. Lieber CS. *Pharmacol Biochem Behav* 1983;18 (Suppl 1):181.
6. Dietz AJ, et al. *J Clin Pharmacol*

Si P P E Me Ma D R

◄ *Finally, the screen shot to the left displays a portion of the monograph's Reference section.*
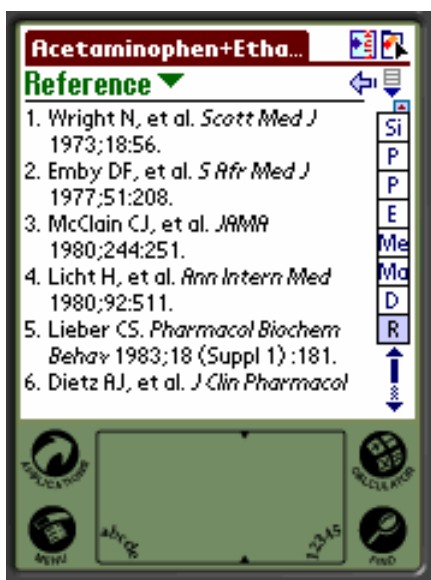
◄ *Returning to the Drug Selection view, the second way to access information on the potential interaction between acetaminophen and ethanol is to use the check boxes next to these substances in the list, as shown to the left. This route will lead the user to a Result screen with summary information about the interaction (shown below). The user can then access the entire monograph by tapping on the Monograph button.*
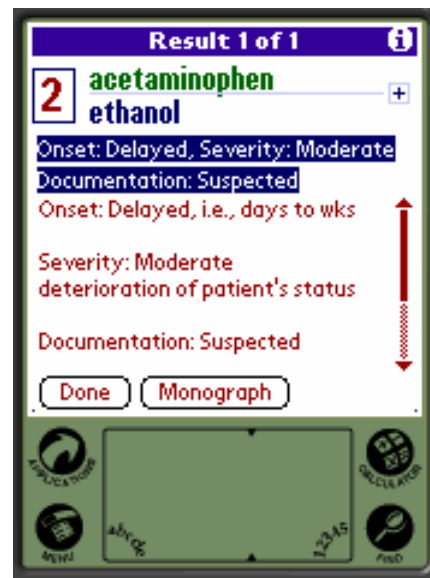

◄ *If the user wanted to assess multiple potential interactions (e.g., among acetaminophen, aspirin, and ethanol), he/she could check those substances in the Drug Selection list. Doing so would lead to two Result screens, the first of which would address the acetaminophen–ethanol interaction (as above) and the second of which would address the aspirin–ethanol interaction (shown at left). No significant acetaminophen–aspirin interaction exists, hence the lack of a third Result screen.*

◄ *The third way to access information on the potential interaction between acetaminophen and ethanol is to tap on the icon to the left of the term "acetaminophen." Doing so will display a new screen (shown below), which lists all drugs in alphabetical order that have potential interactions with acetaminophen.*

► *By scrolling down to the section of the list containing the term "ethanol" and tapping on that term, the user will be taken to the first screen of the acetaminophen–ethanol interaction monograph (see screen shot below), as with the previous two approaches.*
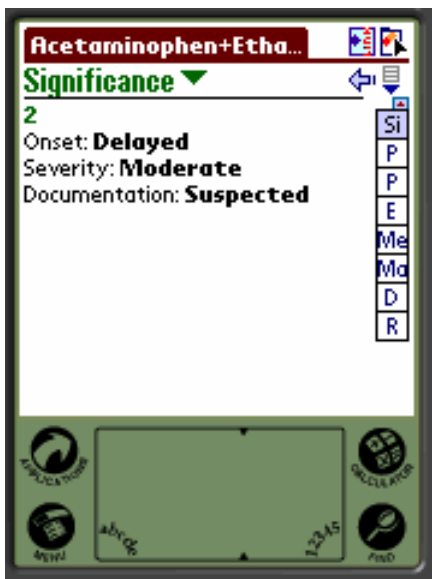
Navigation

Tapping on the *iFacts* title in the top left corner of the screen provides access to the following features (see two screen shots below):

- Get Info
- Register
- Drug Selection
- Preference
- Graffiti Help

On most screens the user can tap on ⟵ to return to the previous screen; additionally, the user can tap on ▤ to access help documentation (see top right corner of left screen above).

At the bottom of the screen, the application allows the user to perform a search. By typing text into the space following Look for: ...., an incremental search is initiated, and the list scrolls in response to the user's input. The user can also type a series of letters (e.g., statin) into the space and tap 🔍; upon tapping 🔍 repeatedly, the user will be taken to each occurrence within the list of that series of letters.

The (Go) button is used to access information on potential drug interactions after having tapped on (checked) two or more boxes (refer to second approach in accessing drug interaction information, as described above). Tapping on the ❌ button allows the user to clear all previously checked boxes and enter new drug interaction pairs or groupings.

The up/down arrows ⬍ (bottom right of screen) allow the user to scroll through the Drug Selection menu. A vertical scroll bar on the left side of the screen allows the user to scroll through drug monograph sections that extend beyond the screen display.

Tapping on the ✖ at the top right of any pop-up screen, allows the user to close out that screen and return to the previous screen display.

Requirements

- ❖ Palm OS (reviewed here) or Windows Pocket PC
- ❖ 3.2 MB of RAM (Palm OS 3.1 or higher)
- ❖ 7.0 MB of RAM (Windows CE version 2.0 or higher, which supports ActiveSync and Pocket PC lines of handhelds)

Most Skyscape products work off memory cards. For exceptions and installation questions, please visit www.skyscape.com/support/memorycardmatrix.asp.

Application Type/Price

- ❖ Commercial
- ❖ $69.95

Availability

The *iFacts*™ application is available from commercial PDA software distributors.

Useful Web Links

For information about Facts and Comparisons (Wolters Kluwer Health, Inc.), visit www.factsandcomparisons.com. For additional information about Skyscape Inc., go to www.skyscape.com.

Review of PDA Applications
in
Toxicology and Environmental Health

Overview

Handheld computer devices known as Personal Digital Assistants (PDAs) are increasingly being used in the fields of toxicology and environmental health. Moreover, software applications covering specialized subject matter in these fields are increasingly being made available to PDA users.

In an effort to provide information on the main technical and content features of selected applications, the National Library of Medicine's Division of Specialized Information Services (SIS) has undertaken an ongoing review of them. Typically, individual reports in the review series are based on free, downloadable demos.

Each report typically covers the following topics: General Information, Intended Users, Authorship/Data Source, Contents, Navigation, Requirements, Application Type/Price, Availability, Useful Web Links, and Updates.

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Note: The *Review of PDA Applications in Toxicology and Environmental Health* is not intended to be all comprehensive, but rather a review of selected applications. SIS staff welcomes any comments on completed reviews or suggestions for additional reviews of applications not currently included, as long as they fall within the scope of toxicology and environmental health. You may contact us via email at tehip@teh.nlm.nih.gov with any comments, questions, or suggestions.

It is not the intention of SIS staff to recommend, or not recommend, any particular PDA device(s) or software application(s), but rather to provide an objective and descriptive review of the main technical and content features of selected applications based on their downloadable demo versions.

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