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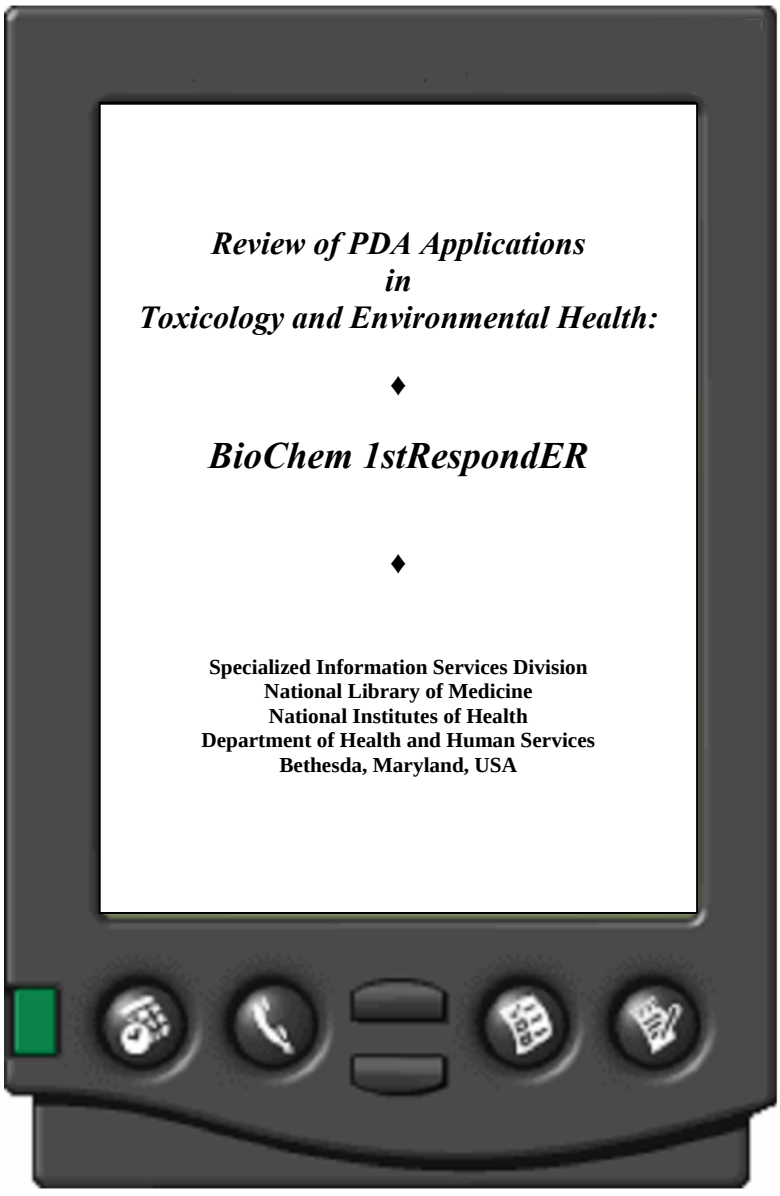

Review of PDA Applications in Toxicology and Environmental Health:

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BioChem 1stRespondER

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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

BioChem 1stRespondER

(Reviewed 03/2003)

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 *BioChem 1stRespondER (1.6)* based upon a free, downloadable demo. *BioChem 1stRespondER* is designed to help healthcare professionals deal with chemical and biological warfare attacks. The full version contains information on various aspects of 37 chemical and biological agents of interest to personnel responding to chemical or biological terrorist incidents or disasters. The data contained in this reference database on germ and biological agents are compiled from a variety of sources. *BioChem*, the layman's version of the professional application, is also available from the producer (Arkansoft).

Intended Users

- Healthcare Professionals
- Emergency Room Personnel
- Paramedics
- Rescue Personnel

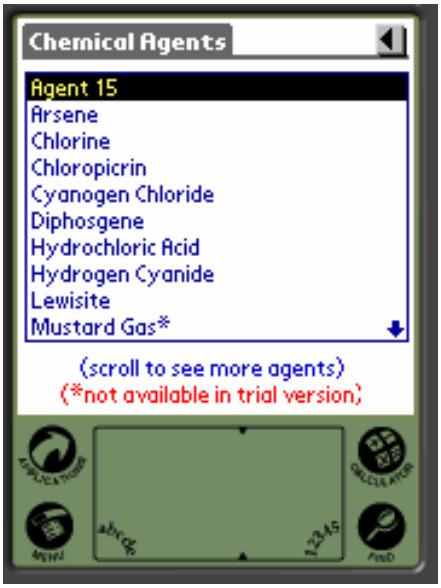
Authorship/Data Source

BioChem 1stRespondER is produced by Arkansoft. The data contained in this reference database on germ and biological agents are derived from many different sources.

Contents

BioChem 1stRespondER is intended for healthcare professionals treating patients exposed to chemical/biological agents and for emergency personnel responding to chemi-

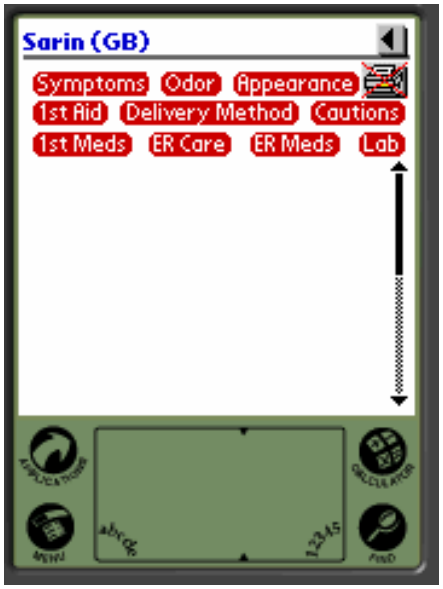
cal/biological incidents. It contains first aid data, recommended drugs and dosages for administration by paramedics, care instructions for hospital emergency departments, and recommended drugs and dosages within hospital settings as well as lab tests. As shown in the screen shot above, the information is organized into three main agent categories: Chemical Agents, Biological Agents, and Nerve Agents. Agents are also separately organized according to three specific characteristics: Action, Appearance, and Odor.



◄ ***As shown in the screen shot to the left, the Chemical Agents section of the database contains a scrollable and clickable list of chemicals.***

► ***The screen shot to the right shows the Biological Agents portion of the database — a scrollable and clickable list of pathogens of potential bioterrorist significance.***

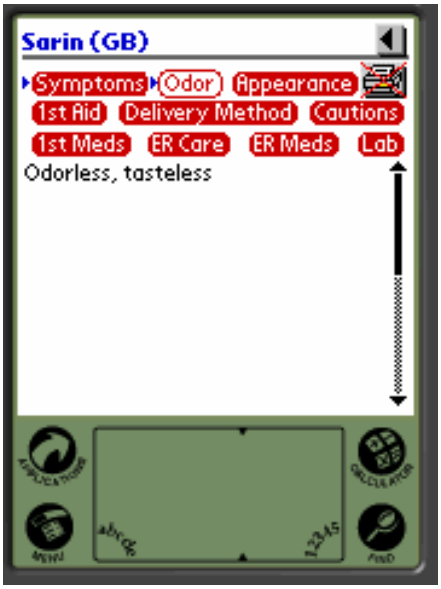
◄ *The third main section of the database – Nerve Agents – is shown in the screen shot to the left. This clickable list contains the agents Sarin, Soman, Tabun, and VX, for which no information is provided in the trial version.*



► *The screen shot to the right shows the ten topic areas the database covers for each agent: Symptoms, Odor, Appearance, First Aid, Delivery Method, Cautions, First Medications, ER Care, ER Medications, and Lab (tests). The nerve agent Sarin is used as an example.*

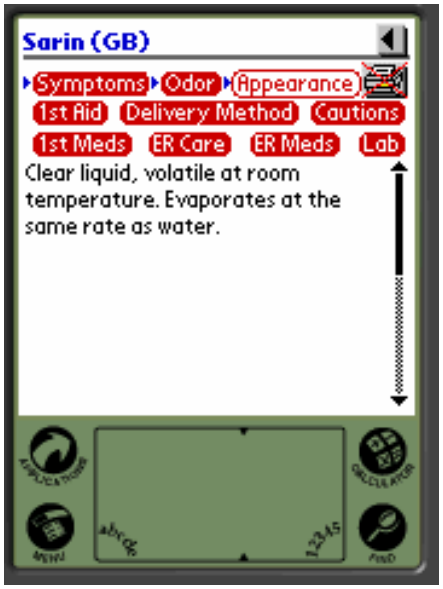
◄ *The screen shot to the left displays the first of the ten topic areas – Symptoms – with its specific information for the same agent (Sarin).*

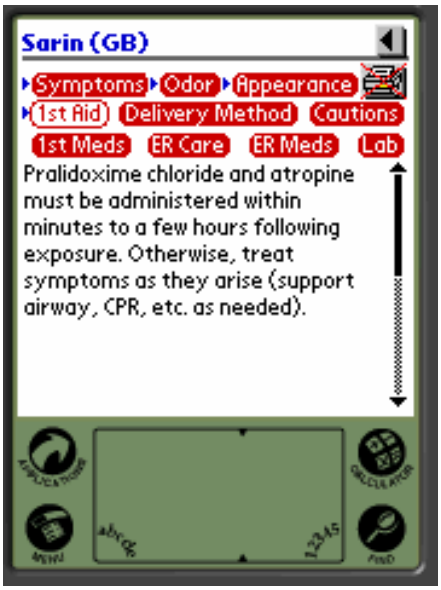
▼ *The screen shots that follow display each of the additional nine topic areas, including the specific information provided with each one.*



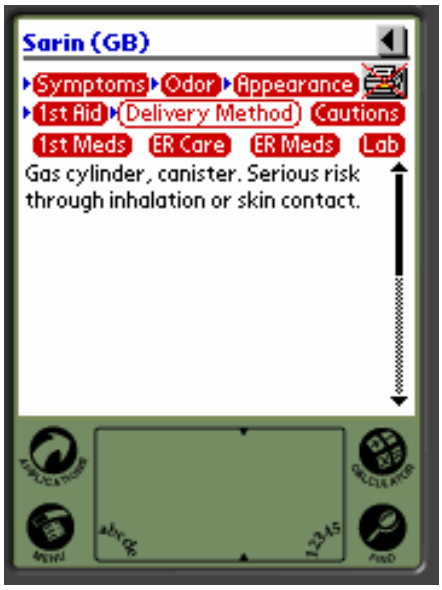
◄ ***Odor***

Appearance ►



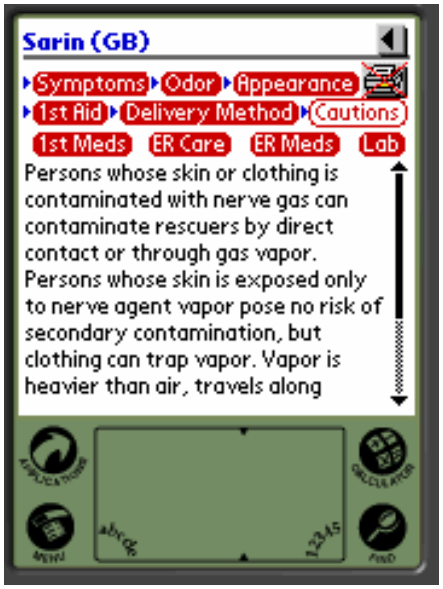


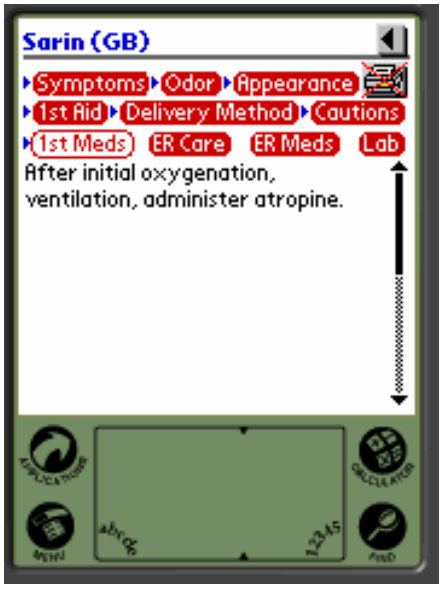
◄ ***First Aid***



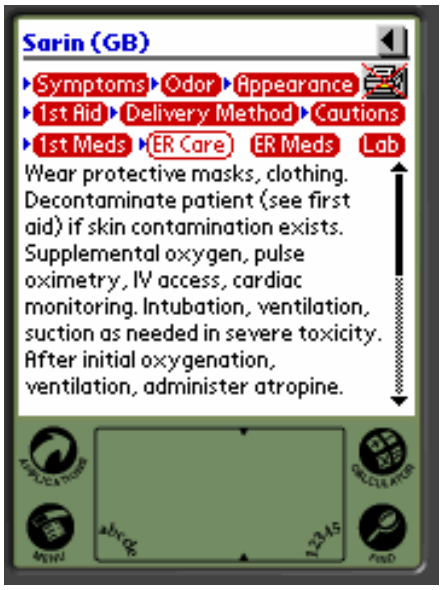
◄ ***Delivery Method***

Cautions ►



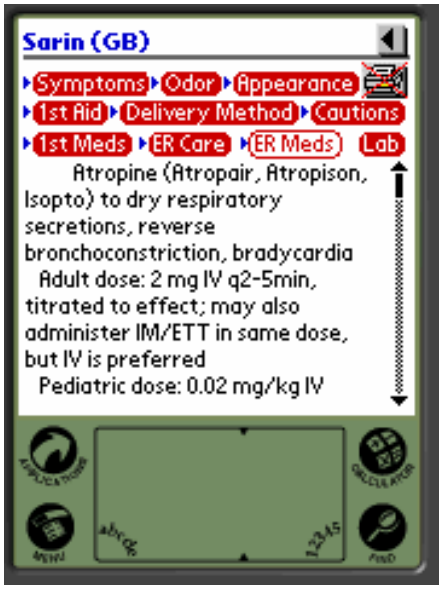


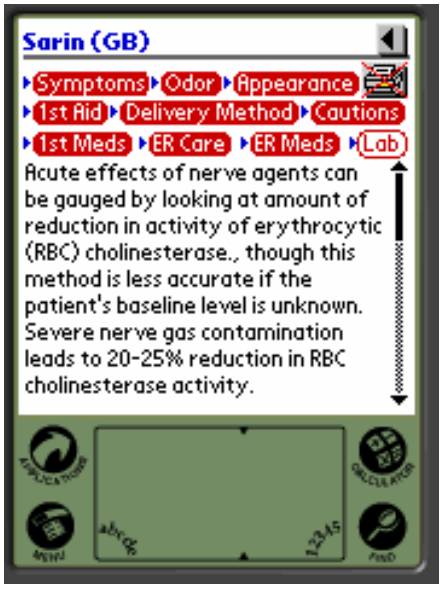
◄ ***First Medications***



◄ ***ER Care***

ER Medications ►



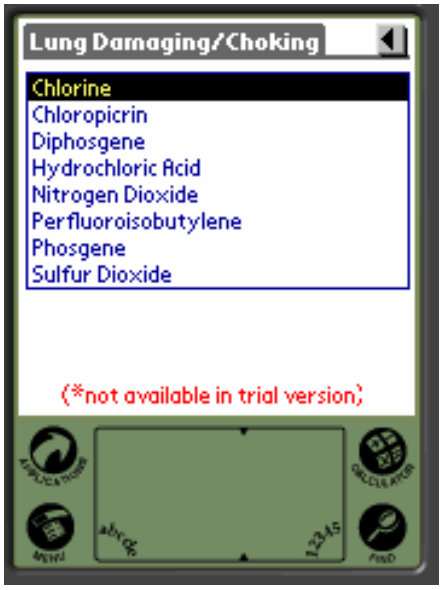


◄ ***Lab (tests)***

As mentioned above, agents are also separately organized according to three specific characteristics: Action, Appearance, and Odor. The screen shots that follow illustrate this aspect of the database's information organization.

◄ ***The Action section and its organization is shown in the screen shot to the left. In this case, agents are listed under one of the following six categories: blister/vesicant, blood, incapacitating, incendiary, lung damaging/choking, and riot control/vomiting agents.***

► ***As shown in the screen example to the right, the Lung Damaging/Choking subsection under the Action category lists the agents with that particular characteristic.***



◄ *The Appearance section and its organization is shown in the screen shot to the left. In this case, agents are listed under the categories of Liquids, Solids, and Gases and further classified according to their appearance characteristics.*

► *The screen example to the right displays those agents that have the specific appearance characteristic of being a yellow liquid.*

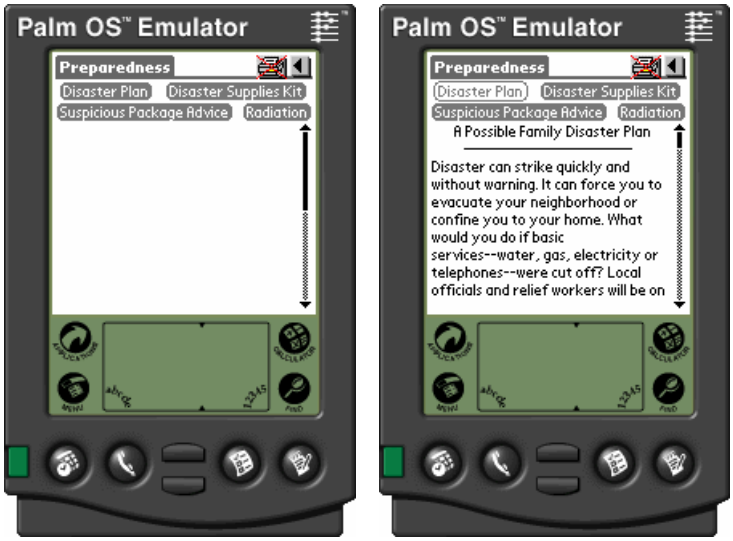
◄ *The Odor section and its organization is shown in the screen shot to the left. In this case, agents are listed under various odor characteristics, such as fishy, musty, pungent, etc.*

◄ ***The screen example to the left displays the one agent contained in the database – phosgene oxime – that is characterized by a peppery odor.***

Navigation

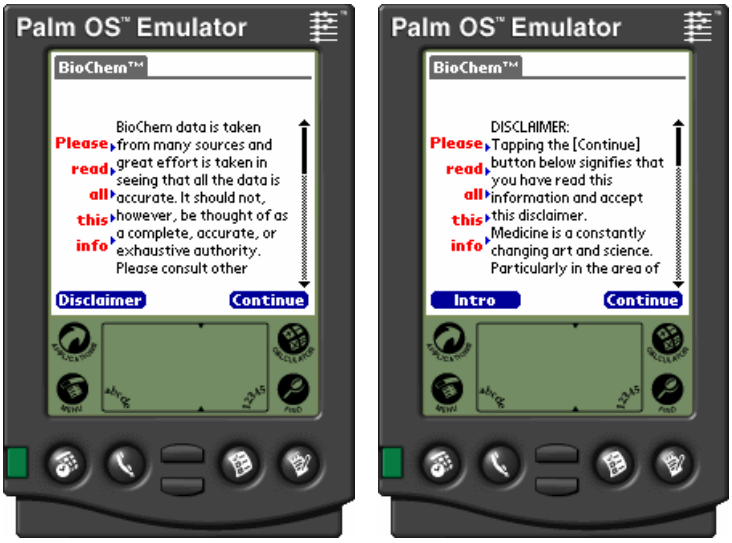
The *BioChem 1stRespondER* application functions in an offline mode and does not require any degree of mobile connectivity. Overall, navigation of this application is simple and straightforward. Tapping on the BioChem button located in the top left-hand corner of the screen will reveal a horizontal menu bar with three options – Prepare, Beam, About (see screen shots below).

Tapping on “Emergency Preparedness” under the Prepare option will display emergency preparedness information under the following subheadings: Disaster Plan, Disaster Supplies Kit, Suspicious Package Advice, and Radiation (see left screen shot below). Further tapping on one of the four subheadings (e.g., Disaster Plan) reveals more specific information (see right screen shot below). The user can then return to the previous screen by tapping on the ◀ button.



Tapping on “BioChem” under the Beam option will allow the user to beam data files to a receiving device (see screen shots below).

Tapping on any of the four menu selections under the About option, will display general information concerning the BioChem application, its producer (Arkansoft), as well as introductory information and a disclaimer. The two screen shots below exemplify the Introduction and Disclaimer sections.



Requirements

- Palm OS 3.0+ (incompatible with Palm OS 5.0)
- 288 KB of RAM

Application Type/Price

- Shareware
- $14.95

Availability

BioChem 1stRespondER is available from its producer (Arkansoft) and from commercial PDA software distributors.

Useful Web Links

For information about Arkansoft, visit www.arkansoft.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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