

Filters located on the left side of the page allow users to narrow the search to medical topics, calculators, quizzes, or videos. The right side of the page shows related images, news items containing the keyword, and a list of the top articles from the other version of the site so that a search for hypertension from the professional site, for example, will show the top results from the consumer version (“high blood pressure”) and a link to retrieve all search results from the consumer site.

For topics that have too many results to find using the search bar, users can access content via the toolbar, which links to medical topic summaries, health news, drug information, and resources. The professional version also links to “procedures and exams” and “quizzes and cases,” while the consumer version instead includes links to “symptoms” and “emergencies.” The toolbar is also the most efficient way to directly navigate supplementary content, such as drug information or videos.

#### CONSIDERATIONS AND ADVANTAGES

The Merck Manuals site describes in great detail the publisher’s efforts to provide unbiased and accessible medical information [2]. Articles are reviewed by an independent editorial board of medical professionals, and authors and reviewers cannot be employed by or promote Merck drugs or products from any of their subsidiaries. The site does not contain any advertisements, and readers are never asked to register or provide personal information. Authors for each article are listed along with their credentials and the dates that the article was last fully reviewed or revised. Medical topic articles

are clearly differentiated from editorial commentary and news items.

As with its print predecessor, the online Merck Manuals continue to be a reliable and trusted source for medical information. The two versions are well suited to their audiences, providing a greater level of detail than might be found in other sources without the advertising and privacy concerns that accompany other free options. Merck Manuals can be recommended with confidence as a useful ready reference tool for both consumer patrons and health sciences students and professionals.

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#### REFERENCES

1. Merck Manuals. Global medical knowledge 2020 [Internet]. Kenilworth, NJ: Merck Manuals; 2016 [cited 19 May 2016]. <<http://www.merckmanuals.com/professional/resourcespages/global-medical-knowledge-2020>>.
2. Adams M (Merck & Co.). Phone interview. April 2016.
3. Merck Manuals. About the Merck Manuals [Internet]. Kenilworth, NJ: Merck Manuals; 2016 [cited 19 May 2016]. <<http://www.merckmanuals.com/professional/resourcespages/about-the-merck-manuals>>.

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**Natural Medicines.** One Davis Square, Somerville, MA 02144. <https://naturalmedicines.therapeuticresearch.com>. Person-

al subscription \$14.99 per month; contact vendor for institutional pricing; NMCD mobile app free with subscription.

Natural Medicines is the combination of two of the leading evidence-based information databases in the field of complementary and alternative medicine: the Natural Medicines Comprehensive Database (NMCD) and Natural Standard. In 2013, the Therapeutic Research Center merged with Natural Standard in order to create Natural Medicines, calling itself, “The most authoritative resource available on dietary supplements, natural medicines, and complementary alternative and integrative therapies” [1].

The goal of Natural Medicines is to provide “unbiased, evidence-based information and ratings for over 90,000 dietary supplements, natural medicines, and integrative therapies” for health care professionals [2]. This combined product provides A–Z listings of over 1,400 monographs, updated daily. According to a representative of the Therapeutic Research Center, the product includes more than 50,000 scientific citations, which the center states is the “largest natural medicines database in the world,” with approximately 1,200 monographs on natural ingredients and over 200 monographs on complementary and alternative treatments [2]. This content is divided into 4 main headings: Databases, Tools, [Continuing Education/Continuing Medical Education] CE/CME Center, and Colleagues Interact, detailed below, plus News and About Us sections. Patient handouts are included with all monographs, and ingredient monographs include background information, history, toxicology, and pharmacokinetics, as well as expanding on preexisting

information such as dosing and administration.

## DATABASES

Natural Medicines provides seven searchable resources in its databases section:

■ **Food, Herbs & Supplements** includes evidence-based monographs on the safety and effectiveness of “vitamins, herbs, minerals, non-herbal supplements, naturally sourced chemical compounds, and foods” [3].

■ **Health & Wellness** includes evidence-based monographs on complementary therapies and specialized diets (e.g., acupuncture, kosher diet, gluten-free diet, yoga). Monographs in this section include information on safety and effectiveness as well as any interactions. This section has recently been expanded to cover many popular therapies and diets.

■ **Sports Medicine** contains monographs relevant to sports medicine, which includes “specific exercise regimes, injury treatments, and sports supplements” [3].

■ **Comparative Effectiveness** lists multiple therapies for a specific condition in a single chart. The charts in this section are clear and concise. Therapies are also ranked by their levels of effectiveness.

■ **Manufacturers** includes a list of all commercial product manufacturers found in the Natural Medicines Commercial Products section.

■ **Commercial Products** includes information on more than 92,000 products. Monographs cover product ingredients, information on product safety and effectiveness, adverse events and interactions, and the Natural Medicines Brand Evidence-based Rating (NMBER).

■ **Medical Conditions** includes a detailed summary of conditions, with information such as related terms, background, causes, signs and symptoms, diagnosis, complications, treatment, integrative therapies, and prevention.

## NATURAL MEDICINES BRAND EVIDENCE-BASED RATING (NMBER)

Natural Medicines now includes a new grading system, the NMBER, which “takes into account Safety Ratings and Effectiveness Ratings from Natural Medicines Comprehensive Database as well as manufacturing quality data directly from adverse event report systems and recognized sources such as the United States Pharmacopeia (USP) and other regulatory agencies” [4]. NMBER is a color-coded, numeric scale from 1–10. Products with lower numbers have potential safety concerns, whereas products with higher numbers have met rigorous standards and have shown positive results. The color-coded marking identifies products with Major (red), Moderate (yellow), or Insignificant (green) levels of significance. In addition, citations to published literature are included, along with links to abstracts in PubMed where available.

## TOOLS

In addition to basic and advanced search functionality, the following search tools are available for herb, supplement, vitamin, mineral, or complementary practices: Interaction Checker, Effectiveness Checker, Nutrient Depletion Checker, Pregnancy & Lactation, and Adverse Effects. The Interaction Checker allows users to search for interactions in natural medicine agents but clearly states that

this checker “does not check for drug-drug interactions” [1]. The Effectiveness Checker gives users the ability to enter the name of a condition or disease and see lists of natural medicines based on effectiveness. Results are listed in four categories: Likely Effective, Possibly Effective, Possibly Ineffective, and Insufficient Reliable Evidence To Rate. The Nutrient Depletion Checker tool allows users to search for nutrients that might be depleted by prescription or over-the-counter medication. The Pregnancy & Lactation checker searches ingredients and grades them on their level of safety for pregnant and breastfeeding women; citations to related articles are provided when available. Finally, the Adverse Effects tool allows users to select adverse effects from an alphabetized list and provides a list of agents that can be associated with each effect.

The Tools section can be found in two locations: along the header and along the left-hand side. The content in both locations is the same, except that the Charts and Natural MedWatch sections are only available under the header. The Charts section provides a comprehensive alphabetical list of monographs for herb classifications, plus a “special chart for Caffeine Content of Energy Drinks and Shots” [3]. Natural MedWatch is an online form that allows users to make confidential reports of adverse events and side effects of any natural medicine.

## PATIENT HANDOUTS

Each monograph in Natural Medicines includes patient handouts in English, Spanish, and French. Patient handouts include general information on products, their level of effectiveness, a brief explanation of how the product works,

safety concerns, food or drug interactions, dosing information, and alternative names. All of this information is presented in a format that is clear and easy to read.

### CONTINUING EDUCATION/ CONTINUING MEDICAL EDUCATION CENTER

CE and CME credit is available via the CE/CME Center with two options for coursework: a Clinical Management Series on the “clinical management of disease states and medical conditions” and Monograph-Based Courses “focused on safety and effectiveness of natural medicine ingredients” [5]. The Clinical Management series carries over from NMCD and is continuously updated with the most current information available [6]. Users who wish to access CE/CME coursework in the Clinical Management Series will be required to create a CE ID number. The Monograph-Based Course series is a carryover from the former Natural Standard and will only be offered through March 24, 2017 [7].

### COLLEAGUES INTERACT

The Colleagues Interact section is a forum that allows members to post, search, and comment on messages created by other members. A member’s CE ID number is required to be able to post and comment on messages in this section. Comments and additional feedback from the Natural Medicines editorial team are easy to find, because each of these posts are designated with a highly visible red star.

### THE APP

Currently, there is no app that includes the newly combined data

from NMCD and Natural Standard. However, the NMCD app is still available. Subscribers to Natural Medicines can access the app’s subscribers-only content, which includes access to all the features of NMCD. A free consumer version of the app is also available. Although the consumer version of the app does not include the full suite of subscribers-only content, it does include the Effectiveness Checker, Nutrient Depletion Checker, Natural Product/Drug Interaction Checker, and NMBER rating. Both apps are available for iOS and Android devices and, to remain unbiased and noncommercial, do not include any endorsements or advertisements [8]. The app can be used offline, with content updated automatically whenever a WiFi connection is available.

### CONCLUSION

The merger between NMCD and Natural Standard has had an overall positive impact on the creation of the Natural Medicines database in numerous ways, including improved ingredient monographs, additional monograph types, expanded tools, and an updated user interface. The merger has also dramatically increased the amount of searchable content.

Natural Medicines would be an asset to any medical institution for both educational and clinical purposes. It provides high-quality, evidence-based information on natural medicines and alternative therapies in an often-overlooked area of medicine. No other resources in this field seem to offer an equivalent amount of evidence-based rigor. However, subscribers would benefit greatly from a new Natural Medicines mobile device app that includes the merged

content from NMCD and Natural Standard.

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### REFERENCES

1. Natural Medicines [Internet]. Somerville, MA: Natural Medicines; c2016 [cited 19 May 2016]. <<https://naturalmedicines.therapeuticresearch.com>>.
2. Therapeutic Research Center Natural Medicines [Internet]. Stockton, CA: The Center [cited 19 May 2016]. <<http://trchealthcare.com/solutions/natural-medicines>>.
3. Explore key features of the most comprehensive database of its kind [Internet]. Somerville, MA: Natural Medicines; c2016 [cited 19 May 2016]. <<https://naturalmedicines.therapeuticresearch.com/about-us/explore-features.aspx>>.
4. Therapeutic Research Faculty. Get ratings on brand name products: get NMBER [Internet]. Stockton, CA: The Faculty; c1995–2016 [cited 20 May 2016]. <<http://naturaldatabase.therapeuticresearch.com/Content.aspx?page=ratings>>.
5. Natural Medicines. CE/CME Center [Internet]. Somerville, MA: Natural Medicines; c2016 [cited 20 May 2016]. <<https://naturalmedicines.therapeuticresearch.com/cecme-center.aspx>>.
6. Natural Medicines. Clinical Management Series [Internet]. Somerville, MA: Natural Medicines; c2016 [cited 20 May 2016]. <<http://naturaldatabase.therapeuticresearch.com/nd/ClinicalMngt.aspx?cs=naturalstandard&s=ND>>.
7. Natural Medicines. Monograph-based courses [Internet].



Somerville, MA: Natural Medicines; c2016 [cited 20 May 2016]. <<https://naturalmedicines.therapeuticresearch.com/cecme-center/monograph-based-courses.aspx>>.

8. iTunes. Natural Medicines Comprehensive Database [Internet]. [Cupertino, CA]: Apple; c2016 [cited 20 May 2016]. <<https://itunes.apple.com/us/app/natural-medicines-comprehensive/id512681918?mt=8>>.

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**Omeka.** Roy Rosenzweig Center for History and New Media and the Corporation for Digital Scholarship, George Mason University, 4400 University Drive, MSN 1E7, Fairfax, VA 22030; <http://omeka.org>; open source version free; supported version, see <http://www.omeka.net> for pricing.

## OVERVIEW

Omeka is a free, open-source digital publishing platform from the Roy Rosenzweig Center for History and New Media at George Mason University. Digital collections, archives, oral histories, and essays can be organized and shared as online exhibits, tagged with standard archival metadata. According to the Omeka website, “Omeka is a Swahili word meaning to display or lay out wares; to speak out; to spread out; to unpack” [1]. Archivists, librarians, educators, historians, curators, and others will find the platform user friendly, flexible, and collaborative, while instructors can use Omeka to create class projects and allow students to experience both source analysis and web design. Premade design themes may be used, and custom-

ized themes can be created from scratch or by modifying existing ones. Items can be organized into collections with narrative sidebars. The tool is compliant with section 508 of the Americans with Disabilities Act (ADA) and supports Dublin Core metadata.

Users can download Omeka for free to install on their own servers or use a hosted version on Omeka.net. Hosted options allow users with no technical expertise to use Omeka. Five hosted options are available: Basic (free) includes 500 megabytes (MB) of storage, 1 site, 15 plugins, and 5 themes; Plus (\$49.00/year) includes 1 gigabyte (GB) of storage, 2 sites, 21 plugins, and unlimited themes; Silver (\$99.00/year) offers 2 GB of storage, 5 sites, 28 plugins, and unlimited themes; Gold (\$299.00 per year) gives 5 GB of storage, 10 sites, and unlimited plugins and themes; Platinum (\$999/year) is designed for institutions and includes 25 GB storage and unlimited sites, plugins, and themes. Third-party commercial hosting is also an option. Services like Reclaim Hosting and Dreamhost offer one-click installation with a custom domain name.

## FEATURES

The basic functions of Omeka are uploading digital objects, adding metadata, and organizing objects into collections or exhibits for public display. An object usually consists of an image with its associated Dublin Core metadata, but Omeka can be used to exhibit almost any kind of digital object: image, sound, video, text (such as a portable document format [PDF] file), or others, with a 2 MB size limit per file. Any Omeka item may include multiple files. Files are described by Dublin Core metadata, with elements customizable on a

site-wide basis and by item type. The default item types (image, text, person, physical object, website, data set, and many others) cover most use cases, but new types can be added. Visual elements can be customized, including colors, design, fonts, and header images; using preinstalled themes can simplify the design process.

As with WordPress, Firefox, or Chrome, plugins can extend the functionality of Omeka. For example, plugins can connect Omeka to other sites, allowing you to upload audio files to SoundCloud, import images from Flickr, or auto-post to Tumblr. Other plugins provide additional metadata-related features like controlled vocabulary enhancements, metadata harvesters, COinS data to allow saving items to Zotero, or Dublin Core extended properties. Still others add visual enhancements like slideshow carousels, simple web pages, and more extensive exhibit creation.

Of particular note is the Neatline suite of plugins. These allow Omeka items to be plotted on a map (Google Maps, OpenStreetMap, or custom image-based maps) with geolocation data and entered into a timeline. Neatline-enhanced exhibits can be browsed geographically or chronologically in an interactive display.

## TECHNICAL REQUIREMENTS

Omeka requires a server running LAMP: the Linux operating system, Apache web server, MySQL database system, and the PHP programming language. ImageMagick image manipulation software, also free and open source, is needed for resizing images. Only modest server hardware is needed: 1 GB of RAM and a 1 GHz processor is recommended, with necessary hard drive space depending on the size of the digital exhibits [2].