# PubMed Introduction

PubMed (<https://www.ncbi.nlm.nih.gov/pubmed>) is a free resource that provides access to MEDLINE, the National Library of Medicine database of citations and abstracts in the fields of medicine, nursing, dentistry, veterinary medicine, health care systems, and preclinical sciences.

PubMed is a Web-based retrieval system developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine. It is part of NCBI's vast retrieval system, known as **Entrez**.

Most PubMed records are MEDLINE citations. PubMed does not contain full-text articles, but the records might contain links to publishers’ Web sites and other resources.

Only those records labeled "Indexed for MEDLINE" in the abstract display will have MeSH terms applied. Other records may be in process, or may be from journals not selected for MEDLINE.

MEDLINE uses a controlled vocabulary, meaning that there is a specific set of terms used to describe each article. Familiarity with this vocabulary will make you a better PubMed searcher.

**Understanding the Vocabulary**

## The Medical Subject Headings (MeSH®)

MeSH is the acronym for "Medical Subject Headings." MeSH is the authority list of the vocabulary terms used for subject analysis of biomedical literature at National Library of Medicine (NLM). MeSH vocabulary is used for indexing journal articles for MEDLINE and is also used for cataloging books and audiovisuals.

The MeSH controlled vocabulary is a distinctive feature of MEDLINE. It imposes uniformity and consistency to the indexing of biomedical literature. MeSH terms are arranged in a hierarchical categorized manner called MeSH Tree Structures and are updated annually.

## The MeSH Tree Structure

MeSH vocabulary is organized into 16 main branches:

1. Anatomy
2. Organisms
3. Diseases
4. Chemicals and Drugs
5. Analytical, Diagnostic and Therapeutic Techniques and Equipment
6. Psychiatry and Psychology
7. Phenomena and Processes
8. Disciplines and Occupations
9. Anthropology, Education, Sociology and Social Phenomena
10. Technology, Industry, Agriculture
11. Humanities
12. Information Science
13. Named Groups
14. Health Care
15. Publication Characteristics
16. Geographicals

When PubMed searches a MeSH term, it will automatically include narrower terms in the search, if applicable. This is also called "automatic explosion."

Some terms occur in more than one place in the hierarchy. For example, "Eye" appears under the Anatomy branch, but also under the Sense Organs branch. Automatic explosion will include narrower terms from all instances of the term in the hierarchy.

Indexers can also assign **Subheadings** to further describe a particular aspect of a MeSH concept.

* Examples of Subheadings are: diagnosis, surgery, metabolism, pathology.

In addition to assigning MeSH terms that describe the topic of the article, the indexer provides terms that reflect:

* characteristics of the group being studied (e.g., the age group, human or other animal, male or female)
* the material represented (Publication Types) e.g., Clinical Trial, Editorial, Review

The MeSH terms that reflect the major points of the article are marked with an asterisk (\*).

Every drug and chemical MeSH heading has been assigned one or more headings that describe known pharmacological actions (PA).