Online Toxicology Resources
From the National Library of Medicine
http://www.nlm.nih.gov/

The Toxicology and Environmental Health Information Program (TEHIP) evolved from the Toxicology Information Program (TIP) that was established in 1967 at the National Library of Medicine (NLM) in response to recommendations made in the 1966 report "Handling of Toxicological Information," prepared by the President's Science Advisory Committee. The TIP objectives were to:

1. create automated toxicology data banks, and
2. provide toxicology information and data services.

In the mid-1990's, the mission of TIP was expanded to include environmental health.

TEHIP, by creating, organizing, and disseminating toxicology and environmental health information, now serves as a premier information portal for resources in these subject areas. TEHIP maintains a comprehensive toxicology and environmental health web site that includes access to resources produced by TEHIP and by other government agencies and organizations. This web site includes links to databases, bibliographies, tutorials, and other scientific and consumer-oriented resources. TEHIP also is responsible for the Toxicology Data Network (TOXNET®), an integrated system of toxicology and environmental health databases that are available free of charge on the web.[1]

The Toxicology Tutors are intended to provide a basic understanding of toxicology as an aide for users of toxicology literature contained in the National Library of Medicine's Chemical and Toxicological databases. Toxicology Tutor I is the first in a set of three tutorials on toxicology produced by the Toxicology and Environmental Health Information Program of the National Library of Medicine, U.S. Department of Health and Human Services. It covers Basic Principles of toxicology and is written at the introductory college student level. Toxicology Tutor II covers Toxicokinetics while Toxicology Tutor III will pertain to Cellular Effects and Biochemistry. Toxicokinetics is essentially the study of "how a substance gets into the body and what happens to it in the body". Four processes are involved in toxicokinetics.[2]

Absorption	the substance enters the body
Distribution	the substance moves form the site of entry to other areas of the body
Biotransformation	the body changes the substance into new chemicals
Excretion	the substance or its metabolites leave the body

Tox Town is a project of the Specialized Information Services Division of the National Library of Medicine and was launched in October, 2002. As a pilot project, Tox Town has a limited number of locations and chemicals. Tox Town is designed to give you information on:

1. everyday locations where you might find toxic chemicals

[1] http://www.nlm.nih.gov/pubs/factsheets/tehipfs.html
[2] http://sis.nlm.nih.gov/Tox/ToxTutor.html

2. non-technical descriptions of chemicals
3. links to selected, authoritative chemical information on the Internet
4. how the environment can impact human health
5. Internet resources on environmental health topics

You can explore Tox Town by selecting Location links or Chemical links.

1. Locations give selected Internet resources about a location's environment and possible effects on human health. Toxic chemicals that might be found in a location are also listed. Some buildings display an interior view.
2. Chemicals are described in non-technical language supplemented with Internet links about a chemical and its possible impact on human health.

Tox Town An interactive guide to commonly encountered toxic substances, your health, and the environment. It uses color, graphics, sounds and animation to convey connections between chemicals, the environment, and the public's health. Tox Town is designed to provide facts on toxic chemicals found in everyday locations, information about how the environment can impact human health, non-technical descriptions of chemicals, links to authoritative chemical information on the Internet, and Internet resources on environmental health topics. Tox Town's target audience is students above elementary-school level, educators, and the general public. It is a companion to the extensive information in the TOXNET collection of databases that are typically used by toxicologistsand health professionals. Tox Town also offers some resources in Spanish (http://toxtown.nlm.nih.gov/espanol/). [3]

Haz-Map is an occupational toxicology database designed primarily for health and safety professionals, but also for consumers seeking information about the health effects of exposure to chemicals at work. It links jobs and hazardous tasks with occupational diseases and their symptoms. The approximately 1,000 chemicals and biological agents in the database are related to industrial processes and other activities such as hobbies. The linkage indicates the potential for exposure to the agents. The 180 occupational diseases and their symptoms are associated with hazardous job tasks. This association indicates an increased risk for significant exposure and subsequent disease.

Haz-Map® (Copyright © 2000-2002) is an occupational toxicology database designed to link jobs to hazardous job tasks which are linked to occupational diseases and their symptoms. It is a relational database of chemicals, jobs and diseases. The Haz-Map Jobs table is based on the 1997 Standard Occupational Classification (SOC) system. The Industries table is based on the Standard Industrial Classification (SIC) system. The Diseases table is based on the International Classification of Diseases (ICD-9). Information from textbooks, journal articles, and electronic databases (HSDB, ACGIH Documentation of TLVs, ATSDR Toxicological Profiles, NIOSHTIC, and others) was classified and summarized tocreate the database.[4]

[3] http://toxtown.nlm.nih.gov/main.html
[4] http://hazmap.nlm.nih.gov/index.html

The 1149 chemical and biological agents in the database are linked to industrial processes and non-occupational activities. Linkage indicates the potential for exposure to the agent.

The 183 occupational diseases in the database are linked to findings (signs and symptoms of the disease) and hazardous job tasks. Linkage to a hazardous job task indicates an increased risk for significant exposure and subsequent disease. Linkage between job tasks and jobs or industries indicates an increased likelihood for workers in these jobs or industries to engage in the hazardous job tasks. In this database, chronic occupational diseases are linked to both jobs and industries, while acute diseases and infectious diseases are linked only to jobs. Cancers are not directly linked to jobs, industries or findings.

ChemIDplus is a free, web-based search system that provides access to structure and nomenclature authority files used for the identification of chemical substances cited in National Library of Medicine (NLM) databases.

ChemIDplus also provides structure searching and direct links to many biomedical resources at NLM and on the Internet for chemicals of interest. The database contains over 367,000 chemical records, of which over 142,000 include chemical structures, and is searchable by Name, Synonym, CAS Registry Number, Molecular Formula, Classification Code, Locator Code, and Structure.
To use ChemIDplus, you will need a web browser that provides the capabilities needed to accept a structure query into the Chime plug-in which allows you to view the structures. A compatible structure drawing package such as ISIS/Draw will allow custom structure queries to be drawn. There is also a Java-based structure search and display applet. Links are provided to the applications to be able to view the information sought.[5]
http://www.mdli.com/downloads/isis.draw/isisdrawreg.html
http://www.mdli.com/chime/

[5] http://chem.sis.nlm.nih.gov/chemidplus/