LEAD CONCN OF 30-50 UG/DL. /INORGANIC LEAD/ [Gilman, A.G., L.S.Goodman, and A. Gilman. (eds.). Goodman and Gilman's The Pharmacological Basis of Therapeutics. 7th ed. New York: Macmillan Publishing Co., Inc., 1985. , p. 1608] **PEER REVIEWED**

HUMAN TOXICITY EXCERPTS

Blood lead values in **children** ranging from 40 to 80 ug/100 ml seem to be associated with adverse neuropsychological effects. Landrigan and coworkers ... compared a group of 70 **children**, aged 3 to 15 years (mean **blood** lead 48 ug/100 ml). They found that higher lead levels were associated with decreased intelligence and slowing in a finger wrist tapping test. /Inorganic lead/ [Landrigan PJ et al; Lancet 29: 708-12 (1975) as cited in NIOSH; Criteria Document: Inorganic Lead p.XI-56 (1978) DHEW Pub. NIOSH 78-158] **PEER REVIEWED**

679 OCCURRENCES IN 390 RECORDS
SS (2) PSTG (390)

[HSDB] SS 3 /cf?
USER:
same (htox) blood

Search in progress
1745 OCCURRENCES IN 949 RECORDS
SS (3) PSTG (949)

[HSDB] SS 4 /cf?
USER:
same (htox) 2 and 3

Search in progress
91 OCCURRENCES IN 61 RECORDS
SS (4) PSTG (61)

[HSDB] SS 5 /cf?
USER:
1 and 4

Search in progress
SS (5) PSTG (1)

[HSDB] SS 6 /cf?
USER:
prt hits indented cont

1 - HSDB
NAME OF SUBSTANCE **LEAD**
CAS REGISTRY NUMBER 7439-92-1
HUMAN TOXICITY EXCERPTS

EXPOSURE TO LEAD OCCASIONALLY PRODUCES ... PROGRESSIVE MENTAL DETERIORATION IN **CHILDREN**. THE HISTORY OF THESE **CHILDREN** INDICATES NORMAL DEVELOPMENT DURING THE FIRST 12-18 MONTHS OF LIFE OR LONGER, FOLLOWED BY A STEADY LOSS OF MOTOR SKILLS & SPEECH. THEY MAY HAVE SEVERE HYPERKINETIC AND AGGRESSIVE BEHAVIOR DISORDERS & A POORLY CONTROLLED CONVULSIVE DISORDER. THE LACK OF SENSORY PERCEPTION SEVERELY IMPAIRS LEARNING. CONCN OF LEAD IN **BLOOD** EXCEED 60 UG/DL OF WHOLE **BLOOD**, & X-RAY MAY SHOW HEAVY, MULTIPLE BANDS OF INCR DENSITY IN THE GROWING BONES. ... AN INCREASED INCIDENCE OF HYPERKINETIC BEHAVIOR & A STATISTICALLY SIGNIFICANT, ALTHOUGH MODEST, DECREASE IN IQ HAVE BEEN SHOWN IN **CHILDREN** WITH **BLOOD**

HUMAN TOXICITY EXCERPTS

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Nurse Margaret will share this information with David's mother.

II. COMMAND LINE SEARCH

To duplicate the GRATEFUL MED Search in COMMAND LINE requires a sophisticated level of understanding of the SAME command, as shown here.

[HSDB] SS 1 /cf?
USER:
(name) lead

Search in progress
SS (1) PSTG (1)

[HSDB] SS 2 /cf?
USER:
same (htox) child or children

Search in progress

After experimenting with combinations of search terms, Nurse Margaret finds these produce useful data.

INPUT YOUR SEARCH HSDB-HTOX
FILL IN ONLY THE LINES YOU NEED FOR YOUR SEARCH.
PRESS HOME FOR HELP; ESC TO RESTART.

ENTER CHEMICAL NAME(S) AND/OR REGISTRY NUMBER(S)
CHEM NAME/RN **lead**
and ENTER TOXICITY TERMS FOR A CONCEPT.
SUBJECT WORDS **child or children**
and ENTER TOXICITY TERMS FOR THE NEXT CONCEPT, IF ANY.
2ND SUBJECT **blood**
and ENTER TOXICITY TERMS FOR THE NEXT CONCEPT, IF ANY.
3RD SUBJECT
ENTER TOXICITY TERMS FOR THE NEXT CONCEPT, IF ANY.
4TH SUBJECT
PRESS F10 FOR ADDITIONAL RETRIEVAL OPTIONS.
ALSO RETRIEVE
ENTER ANY CHARACTER TO LIMIT TO PEER REVIEWED DATA.
PEER REVIEWED

OK TO GO ON TO SEARCH ? (**Y**/n/v/s)

1 - HSDB
NAME OF SUBSTANCE **LEAD**
CAS REGISTRY NUMBER 7439-92-1
HUMAN TOXICITY EXCERPTS

EXPOSURE TO LEAD OCCASIONALLY PRODUCES ... PROGRESSIVE MENTAL DETERIORATION IN **CHILDREN**. THE HISTORY OF THESE **CHILDREN** INDICATES NORMAL DEVELOPMENT DURING THE FIRST 12-18 MONTHS OF LIFE OR LONGER, FOLLOWED BY A STEADY LOSS OF MOTOR SKILLS & SPEECH. THEY MAY HAVE SEVERE HYPERKINETIC AND AGGRESSIVE BEHAVIOR DISORDERS & A POORLY CONTROLLED CONVULSIVE DISORDER. THE LACK OF SENSORY PERCEPTION SEVERELY IMPAIRS LEARNING. CONCN OF LEAD IN **BLOOD** EXCEED 60 UG/DL OF WHOLE **BLOOD**, & X-RAY MAY SHOW HEAVY, MULTIPLE BANDS OF INCR DENSITY IN THE GROWING BONES. ... AN INCREASED INCIDENCE OF HYPERKINETIC BEHAVIOR & A STATISTICALLY SIGNIFICANT, ALTHOUGH MODEST, DECREASE IN IQ HAVE BEEN SHOWN IN **CHILDREN** WITH **BLOOD** LEAD CONCN OF 30-50 UG/DL. /INORGANIC LEAD/ [Gilman, A.G., L.S.Goodman, and A. Gilman. (eds.). Goodman and Gilman's The Pharmacological Basis of Therapeutics. 7th ed. New York: Macmillan Publishing Co., Inc., 1985. , p. 1608] **PEER REVIEWED**

SCENARIO - SCHOOL NURSE

A part-time secretary, Emily K. became concerned about her seven year old son David's increasing unruliness and poor academic performance. She attributed it to their recent move to a new neighborhood and school, and the marital difficulties that led to a separation from her husband. Emily set up an appointment with the school counselor, Nurse Margaret, a psychiatric nurse by training. The nurse said that cases such as David's could typically be handled by a period of twice-weekly counseling sessions. She did proceed, however, to gather more information from Emily about the boy's home life. When she heard that Emily's estranged husband worked in an automobile radiator repair shop, Nurse Margaret's ear's perked up. She recalled reading about a study of automobile radiator repair workers in another city and their exposure to lead, largely as a result of soldering operations. She became even more interested when Emily admitted that the shop owner, a family friend, let their son stay in the shop with his father after school, during the three days she worked as a secretary. This had been going on for a year and was continuing even now, while she and her husband lived apart. Although the study Nurse Margaret had read was based on a worker screening program, it did speculate on possible hazards to family members by workers who bring lead dust home on their hands and clothes. Nurse Margaret went to the school's computer lab where, with the help of the lab's director, she used GRATEFUL MED and the school's account with the National Library of Medicine to search TOXNET's Hazardous Substances Data Bank (HSDB) for information on lead toxicity in children, and its detection in the blood. Nurse Margaret found enough clues in the family history and enough data in HSDB to recommend that David be taken to his family physician for blood lead screening, as well as begin psychological counseling at school.

I. GRATEFUL MED SEARCH

Nurse Margaret chooses to search HSDB - Human Toxicity from the screen below.

SELECT THE DATABASE YOU WISH TO SEARCH

HSDB-HTOX	**Hazardous Substances Data Bank - Human Toxicity.**
HSDB-TOXB	Hazardous Substances Data Bank - All Toxicity.
HSDB-SAFE	Hazardous Substances Data Bank - Safety & Handling.
HSDB-ENEX	Hazardous Substances Data Bank - Environmental Aspects.
HSDB-EMT	Hazardous Substances Data Bank -Emerg. Med Treatment.
IRIS-CAR	Integ. Risk Info. Sys. - Carcinogenicity Assessment.
IRIS-NCAR	Integ. Risk Info. Sys. - Noncarcinogenicity Assessment.
CCRIS	Chemical Carcinogenisis Research Information System.
RTECS	Registry of Toxic Effects of Chemical Substances.
TRIC	Toxic Chemical Release Inventory (Current Year).
TRIALL	Toxic Chemical Release Inventory (All Years).

USE THE ARROW KEYS TO HIGHLIGHT YOUR CHOICE AND PRESS ENTER.