

PROGRAM DIRECTIVE

Program Directive A-10
Issued January 1, 1979
Revised May 8, 2000

SUBJECT: Lead: Guidance for Prophylactic Chelation

AFFECTED CODES/

DIRECTIVES: OAR 437-02-1910.1025(j)(B)(4)(i)(ii)

PURPOSE: To transmit instructions to compliance officers concerning the appropriate action to be taken with regard to evidence of prophylactic chelation therapy among lead exposed workers.

BACKGROUND: Chelation is a therapeutic practice whereby chelating agents such as EDTA (ethylenediamine tetracetate) are administered to reduce blood lead levels among exposed workers. The chelating agent provides polar groups which bind to lead forming a complex which is then excreted by the kidneys. Chelation therapy should be practiced by a qualified physician only when he/she decides blood lead levels are dangerously high and that it would be more dangerous for a worker not to undergo chelation therapy.

Prophylactic chelation, however, is both the routine use of chelating drugs to prevent elevated blood lead levels in workers who are occupationally exposed to lead and the use of these drugs to routinely lower blood lead levels to predesignated concentrations believed to be safe. This practice is harmful to health and can produce serious side effects. An employer may be practicing prophylactic chelation as an alternative to providing adequate controls of lead in the air or otherwise overexposing the worker to lead. Health hazards reported with prophylactic chelation include: removal of vital trace minerals from the blood; increased absorption of intestinal lead; hypocalcemia; kidney damage; reduction in WBC count; nausea, exanthamate and fever; and exposure to a suspected carcinogen. Common chelating agents include:

1. EDTA, also known as edathamil, edatate. Administered intravenously.
2. Calcium disodium EDTA. Administered orally.

3. Pentacillamine. Administered orally.
4. Calcium gluconate. Administered intravenously.

Under appropriate circumstances a citation for violation of 1910.1025(j)(B)(4)(i)(ii) may be issued to an employer whose employees receive prophylactic chelation therapy.

ACTION:

- A. Compliance officers shall be instructed that during the course of any inspection or investigation involving employee exposure to lead, the following information should be obtained if there is any evidence of chelation therapy. This information will help determine extent of the therapy and resulting health hazards.
 1. How many employees are chelated?
 2. How often and over what period of time?
 3. What is the generic and brand name of the drug?
 4. Who administers the drug, i.e., foreman, plant doctor, private physician?
 5. Where is the chelation therapy administered: on or off the plant premises?
 6. If a doctor administers the chelating agent, what is his/her relationship to the employer:
 - a. Is he/she employed by the employer full time or part-time?
 - b. Does he/she have a contract with the employer?
 - c. If he/she is not employed by the employer, does the employer pay his/her fee for chelation therapy; or
 - d. Does employer provide insurance which pays the physician fee for chelation therapy?
 7. If not administered by a doctor what medical surveillance is provided to employees during and after chelation therapy?
 8. Are employees instructed to obtain chelation therapy by the employer?

9. Are employees tested for lead exposure? How often?
 10. What were airborne lead exposures prior to treatment? During treatment? After treatment?
 11. Does employer keep records of employees blood levels.
 12. Does employer keep records of employees who receive chelation therapy?
 13. Is the employer aware that chelation therapy might be harmful? If so, how does the employer know?
 14. Is the administering physician aware that chelation therapy may be harmful? If so, how?
 15. Are any of the employees aware that chelation therapy is harmful? If so, how do they know?
 16. Are any employees exposed to lead in violation of 1910.1025(j)(B)(4)(i)(ii)?
 17. Has the employer ever been cited for violation of 1910.1025(j)(B)(4)(i)(ii) for lead exposure? Have these citations become a final order?
- B. Any evidence of chelation therapy, whether deemed prophylactic or not by the compliance officer, shall be forwarded to the Administrator of the Oregon Occupational Safety and Health Division.
- C. The compliance officer will not issue citations for prophylactic chelation therapy unless directed to do so by the Administrator of the Oregon Occupational Safety and Health Division.

**EFFECTIVE
DATE:**

This directive is effective immediately and will remain in effect until cancelled or superseded.