

WHAT IS CHOLINESTERASE?

1. Cholinesterase is a substance in the body that is necessary for proper functioning of the nervous system.
2. If the amount of available cholinesterase falls below a safe level, the nervous system can no longer control the messages it sends to muscles.

WHICH PESTICIDES AFFECT CHOLINESTERASE?

3. Two types of pesticides, the organophosphates and the carbamates, reduce available cholinesterase. (*Employer should give examples of commonly used organophosphates and carbamates*)
4. The most dangerous organophosphate and carbamate pesticides are those with the words “DANGER” or “WARNING” on the label.
5. Exposures to these pesticides may occur while mixing, loading, applying and other pesticide handling activities.

WHAT ARE THE SYMPTOMS OF EXPOSURE?

6. Symptoms of overexposure may occur from single large exposure, such as spilling the pesticide, or from small exposures over a period of time, such as applying these products over an entire growing season.
7. Symptoms of overexposure to these pesticides include headache, dizziness, blurred vision, stomachache, diarrhea, drooling, sweating more than usual, tightness of the chest, muscle twitching, pinpoint pupils, and difficulty breathing.

WHAT IS THE TREATMENT FOR OVEREXPOSURE?

8. Organophosphates and carbamates do not permanently reduce cholinesterase. New cholinesterase is made in the body.
9. The most common treatment for overexposure is to temporarily stop handling and other exposures to organophosphate and carbamate pesticides until cholinesterase returns to its usual level.

HOW DO YOU AVOID OVEREXPOSURE?

10. Follow the pesticide worker protection program and instructions on the pesticide label.
 - Always use personal protective equipment
 - Always wash skin and clean equipment as directed
 - Always respect restricted entry periods

CAN CHOLINESTERASE LEVELS BE MONITORED?

11. Yes, cholinesterase levels can be measured through simple blood tests.
12. Each person's usual cholinesterase level (baseline) is determined prior to handling organophosphate and carbamate pesticides.
13. Periodic tests taken throughout the application season are compared to the baseline to identify changes in cholinesterase levels.

WHY MONITOR CHOLINESTERASE LEVELS?

14. Benefits of cholinesterase monitoring include:

- Prevention of overexposure
- Safer workplace
- Improved medical care

WHO SHOULD BE MONITORED?

15. Workers who handle the most dangerous organophosphate and carbamate pesticides for 50 or more hours in any consecutive 30-day period.
16. In 2005 this will change to handling for 30 or more hours in any consecutive 30 –day period.

HOW WILL CHOLINESTERASE MONITORING BE PROVIDED?

17. You will be sent to a physician or clinic to discuss your option to participate in a cholinesterase-monitoring program.
18. Cholinesterase monitoring will be provided to you at no cost.

WHAT WILL HAPPEN IF OVEREXPOSURE IS DETECTED?

19. (Your employer) may be directed to look at the worker protection program to try and eliminate the cause of your exposure.
20. You may be temporarily removed from exposure to organophosphate and carbamate pesticides until your cholinesterase levels return to close to baseline.
21. Your pay and benefits will be protected (for up to 3 months) if you are temporarily removed from handling organophosphate and carbamate pesticides.
- 22.

QUESTIONS?

23. The physician or clinic can answer any question that you have about cholinesterase testing.
24. For questions about the Cholinesterase Monitoring Rule you can call the department of Labor & Industries at 1-800-4BE-SAFE (1-800-423-7233)