

QUESTIONS AND ANSWERS

Cholinesterase Monitoring Rule

Q. What is cholinesterase?

A. Cholinesterase (acetylcholinesterase) is an enzyme that controls the level of the neurotransmitter acetylcholine, at the junctions between nerves cells. Cholinesterase is essential to the normal function of the nervous system.

Q. How do Category I and II organophosphate and N-methyl carbonates affect cholinesterase levels?

A. Active ingredients in organophosphate and N-methyl carbonate pesticides bind with cholinesterase preventing it from controlling acetylcholine. The “cholinesterase level” refers to the amount of active enzyme available to control acetylcholine. What makes these pesticides effective against pests also make them poisonous to humans.

Q. What are the symptoms of cholinesterase depression?

A. Pinpoint pupils, nausea, dizziness, headache, stomach pain, anxiety, muscle twitch or weakness, shortness of breath, diarrhea, convulsions, and coma. There may be other symptoms and these symptoms do not all occur for the same exposure.

Q. What other things affect cholinesterase levels?

A. Some examples are: chronic liver and blood disease, certain medications, genetic traits, and certain chemical exposures.

Q. How do I know which pesticides are covered?

A. The following websites contain information on covered pesticides:

<https://agr.wa.gov/departments/pesticides-and-fertilizers/pesticides/compliance/worker-protection>

<https://lni.wa.gov/safety-health/safety-topics/search-by-topic?query=cholinesteraseMonitoring>

Q. Why have a baseline?

A. Everyone has a different “average” cholinesterase level. By comparing a baseline test (measured at a time when the employee has no covered pesticide exposure) and a periodic test at the time when an employee is actually handling pesticides, the periodic test will show if handling activities are “depressing” an individual’s cholinesterase level.

Q. What information will I be provided for my employee’s baseline test?

A. You must obtain a written recommendation from your medical provider containing the information specified in the rule; however, since it is a baseline test the recommendation would generally be limited to notification that the employee had baseline testing done. Specific test results would not be provided

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unless the employee had given the medical provider specific authorization to provide test results to you.

Q. How often must baseline testing be done?

A. Each handler participating in a cholinesterase testing program must have his/her baseline cholinesterase levels established each year.

Q. How many hours must a worker handled covered pesticides before a test is required ?

A. The “Exposure Threshold” requiring medical monitoring is handling covered pesticides for 30 or more hours in any consecutive 30 day period. Workers who are anticipated to meet this threshold sometime in the year must be provided the opportunity to participate in a cholinesterase testing program, including the establishment of a pre-exposure baseline.

Q. What if a worker accumulates 30 hours of handling time in one week, when is testing required?

A. Periodic testing is required for any 30-day period that handling hours exceed 30 hours. You do not need to provide testing more often than every 30 days. You evaluate the need for testing at the end of each 30-day period, starting from the first day of handling activities.

Q. What if a worker accumulates 20 hours of handling time in one week, when is testing required?

A. Periodic testing is required for any 30-day period that handling hours exceed 30 hours. You do not need to provide testing more often than every 30 days. You evaluate the need for testing at the end of each 30-day period, starting from the first day of handling activities.

Q. If a worker works 8-hour shifts and accumulates 160 hours of work time during a 30-day period, but only 1/3 of that time is spent spraying, should I initiate testing?

A. Yes, the worker has been exposed more than 30 hours in a 30-day period.

Q. We track everything already, must we use Department of Labor and Industry’s suggested form for tracking hours?

A. No, you just need to record hours for each of your employees that handle cover pesticides.

Q. Must we list full name of worker and product when we track hours?

A. Yes, the full name of worker, product, and start and stop times are already recorded for spraying.

Q. Must we count the hours for someone who enters a sprayed field during the restricted entry interval?

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A. Only if they are performing a task listed in the definition of “handler”. The WPS (WAC 296-307-12020) covers this activity and PPE required by the label must be worn.

Q. An employee may start spraying at 8 a.m. and finish at 12 noon but he might have spent 2 hours of that time doing non-spraying activity. The hours we track seem to be “loose” numbers. Do we need to keep track of exact time?

A. No, you do not need to track exact hours but you may if you wish to. In this example the spray record would need to reflect the additional start and stop times to track “exact” hours.

To make the counting process easier, you can estimate hours, as long as you round up. Examples of estimation are to the nearest quarter hour, half-hour, or hour. You don’t have to count breaks, lunchtime, or work other than handling covered pesticides.

Q. If you are sure an employee’s exposure will exceed 30 hours in a 30-day period, why must you track hours?

A. Keeping records of handler hours, both handlers exceeding the 30-hour threshold and handlers that will not exceed the threshold, creates a body of valuable information for scientific team to use in assessing the effectiveness of the rule and the rule’s value in preventing pesticide related illness.

Q. Every day you start a new 30-day period (rolling totals). Do we really have to keep track of rolling totals?

A. In the rule, you have the option to assume that an employee will exceed the threshold, so if you chose to do this, you would just send your employee for testing once every thirty days, during the months when you determine that employee work activities will exceed the hour threshold for testing. How you keep track of the “rolling total” is your business, so long as employees needing a periodic test are identified and tested within the time frames specified in the rule.

Q. Does an owner who also sprays have to see a doctor before opting out of the blood testing?

A. No. However, all employees must see the doctor before opting out.

Q. How much will a blood test cost?

A. The Department of Labor and Industries will pay for all cholinesterase blood testing costs through 2006. However, employer reimbursements for helath care clinic and program administration costs (e.g. training and recordkeeping costs) are no longer available. Clinic service costs are set by the individual medical provider.

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Q. Will medical providers bill us and should we send the bill to the Department of Labor and Industry?

A. Medical providers will bill you directly for the cost of office visits, examinations, and blood draws. The Public Health Laboratory will bill L&I directly for the cost of analyzing baseline and periodic blood tests during 2004.

Q. If we are sure we have washed residue from equipment and later do maintenance or repair on the clean equipment, must we count the time as handling hours?

A. No, clean equipment is not considered to be a source of exposure.

Q. An employee spends one-fourth of his 12-hour day mixing, loading and handling. Must we count these hours or only the 9 hours he spends spraying?

A. All exposed hours, 12 in this case, must be counted.

Q. What if chemical is injected into the soil while disking?

A. This is a handling activity and the hours must be counted.

Q. Does recording of hours handling covered pesticides have to occur, even if a worker will have low exposure all year long?

A. Yes, the rule requires this record keeping even for employees that will not be provided with cholinesterase monitoring.

Q. Is the cholinesterase test result considered confidential medical information?

A. Yes, The only information that the employer needs to take action required under the rule is the percent change in an employee's cholinesterase levels. Any other information, including specific test results, is considered confidential and may not be shared with the employer unless the employer provides specific written consent for the health care provider to provide this information to the employer. In addition, the employer may not share information contained in the written recommendation with other employers or employees.

Q. Where do I send workers for testing?

A. You must choose a medical provider who is familiar with the rule. You may be able to use the same provider you have for respirator evaluations. In general, blood testing and initial consultation will be done at your medical provider's office. Some medical providers have indicated that they can provide these on-site through prior arrangement. You must ask your local providers what they are willing to do (how much it would cost, if there is a minimum number of people, etc.). This would be a good question to ask when you are deciding on a medical provider. L&I maintains a list of medical providers at

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Q. What happens if you make an effort and cannot get the worker tested within 3 days of the end of a 30-day period where the employee has received at least 30 hours of exposure?

A. If you document the fact that you made a reasonable effort to arrange testing for the employee, it will not be considered a violation of the rule provided the employee receives the testing without an unreasonable delay.

Q. Is there a restriction to spraying during the 3-day period or before the test results are received?

A. No, there is not a restriction.

Q. When will medical provider written recommendations be available to employer?

A. This will depend on your medical provider. Results for employees showing a cholinesterase depression should be provided to your medical provider within 3 to 5 days, by the Public Health Laboratory.

Q. Is the employer liable if worker goes beyond 30 hours, gets testing, continues spraying, and employer learns late from the doctor that medical removal should have been done?

A. No, the requirement to restrict employee work activities occurs when the medical provider informs the employer.

Q. Do test results go to employer?

A. Test results go to doctor, who interprets the results and then provides recommendations to the employer.

Q. What information do I get back from the medical provider?

A. This may vary with the medical provider. The rule requires that they:

- Identify workers with test results requiring a work practice evaluation. This would be a depression of 20% or more.
- Identify workers with test results requiring removal from handling activities with organophosphate and carbonate pesticides.
- Provide medical monitoring guidance, for example, when a removed worker should be tested again.
- Provide any other relevant information concerning an employee's workplace exposure to pesticides.
- And that they **do not** provide personally identifiable medical information, incl. specific test results.

Q. Will L&I provide list of providers who have attended training?

A. Yes, a list will be posted on L&I web site and mailed on request.

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Q. How will we know when a worker on medical removal can return to handling covered pesticides?

A. The medical provider will schedule a re-test after medical removal and inform the employer when the worker can return to handling duties (when the employee has returned to within 20% of baseline). The rule of thumb is that cholinesterase levels will increase 1 percent each day the employee is removed from handling covered pesticides. Therefore, in the case where an employee is removed because of a cholinesterase depression of 30 percent from baseline, it should take that employee about ten days to return to cholinesterase levels within 20 percent of baseline.

Q. Can an employee decline both the medical evaluation and the blood test?

A. No, the employee must participate in the initial medical evaluation to ensure that they are allowed to make an informed decision about the blood test. The employee has the right to change his/ her mind later about the blood test, if the first decision was to decline participation in the testing.

Q. Is a complete physical exam required during initial baseline medical visit?

A. No, a complete physical is not required by the rule. A medical provider will likely take a history (medical and work). What constitutes an adequate initial medical evaluation is up to the medical provider.

Q. Must we schedule an appointment and allocate three or more hours away from work for travel and waiting, medical evaluation, blood collection, etc.?

A. Yes. The most time spent will be for the visit where a medical evaluation and, if the employee chooses, a baseline blood sample will be obtained. Exactly how long it will take depends on the clinic, how close your site is to the clinic, and whether or not any special, on-site arrangements can be made.