Cholinesterase Testing for Monitoring Workers in the California Medical Supervision Program

1. **SCREEN THE WORKER** on the initial visit to be sure he/she can work with cholinesterase inhibiting pesticides.

2. **ESTABLISH BASELINE** cholinesterase activity levels *before* follow-up testing.
   - One test is required by regulation and consists of measuring RBC cholinesterase **AND** plasma cholinesterase (*not one or the other*).
   - Average of two tests is recommended by OEHHA. Details in Guidelines.
   - **Do not use lab normal values for baselines.**
   - Always put blood samples on ice or store at 4°C immediately after drawing.

3. **LAB.** Only use a California Department of Public Health certified lab listed at: http://www.cdph.ca.gov/certlic/labs/Documents/CHE%20LAB%20list%2001012007.pdf

4. **INDICATE PURPOSE OF THE TEST** on the lab slip when ordering a cholinesterase activity test for this program. Use one of the following terms:

   *Baseline, Follow-up, or Recovery*

5. **FOLLOW-UP TESTS** as required.
   - Once every 30-day qualifying period for first 3 follow-up tests.
   - If no problems detected, then at least once every 60 days (two 30-day qualifying periods) unless otherwise recommended by the physician.
   - More frequent testing is at the discretion of the physician.

6. **COMPARE FOLLOW-UP RESULTS TO THE BASELINE LEVELS** to evaluate for inhibition of cholinesterase and make recommendations, including:

<table>
<thead>
<tr>
<th>Percent of Baseline Activity</th>
<th>RBC ChE</th>
<th>Plasma ChE</th>
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</thead>
<tbody>
<tr>
<td>&lt;80%</td>
<td>Prompt retesting of employee and evaluation of work practices by employer</td>
<td></td>
</tr>
<tr>
<td>≤70%</td>
<td>Immediate removal of employee from further exposure</td>
<td>-</td>
</tr>
<tr>
<td>≤60%</td>
<td>-</td>
<td>Immediate removal of employee from further exposure</td>
</tr>
</tbody>
</table>

   *Provide a copy of test results and recommendations to the employer.*

7. **INFORM WORKER OF RESULTS.** Must ensure that the tested worker receives a copy of the test results and any recommendations from the medical supervisor within 14 days of the medical supervisor receiving the results.

8. **RETURN TO WORK.** Determine when a worker removed from further exposure to these pesticides can resume working with them.
   - When cholinesterase activity levels return to ≥ 80 percent of both RBC and plasma cholinesterase baseline values