Cholinesterase Testing Protocol Algorithm

Worker will handle OPs or OPs and N-methylcarbamates for 30 hours or more in 30 consecutive days?

NO

STOP

YES

Exposure within the past 30 days?

NO

Obtain at least one baseline

YES

Worker exceeds or reaches 30 hours of exposure in 30 days since baseline or last follow-up test?

NO

NO Testing Required

YES

Return to handling ChE-inhibitors

Test >80% baseline?

NO

Repeat testing at scheduled intervals to follow recuperation

YES

Remove from workplace exposure

ACH<sub>E</sub> less than 70% or PChE less than 60% of baseline?

YES

Review pesticide handling practices

NO

RBC or plasma ChE less than 80% of baseline?

NO

Within 1 week conduct follow up monitoring test

YES

Working Baseline - obtain 2 tests that are >3 days apart. Use higher value.

Threshold Exposure Level Definition:
Worker exceeds or reaches 30 hours of exposure in 30 days.

NOTES:

Obtain baseline prior to pesticide work or 30 days exposure free.

RBC ACHe and Plasma PCHe recommended.

Plasma PCHe if only performing 1 test.

2nd baseline recommended for improved precision but not essential.

Carbamates do inhibit cholinesterase but the cholinesterase reactivates quickly making testing an unreliable in predicating overexposure.

Days to repeat test:
- For RBC ACHe: (% depression – 20)/0.83 = # of days to repeat test
- For Plasma PCHe: (% depression – 20)/1.2 = # of days to repeat test

Developed by: