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**191 SECONDARY EXPOSURE TO MALATHION
IN EMERGENCY DEPARTMENT HEALTH-
CARE WORKERS**

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Background: Emergency Department (ED) staff caring for grossly pesticide-contaminated patients are at risk for developing toxicity from secondary contamination. Objective: To describe the development of symptoms and plasma pseudocholinesterase (PChE) levels in a group of health-care workers providing care to a patient contaminated with the organophosphate compound malathion. Methods: Health-care workers suffering

from secondary exposure to malathion in the ED were studied. The source of exposure was a patient brought to ED by emergency medical services after a large malathion ingestion in suicidal attempt. Despite cardio-pulmonary resuscitation, performed by medical staff, the patient died in the ED 45 minutes after the admission. The body was left in an ED room for 2 hours (as requested by law) and then removed by an undertaker's technician. Health-care workers did not wear appropriate respiratory or skin protective equipment while caring for the patient nor while the body remained in the ED. A questionnaire was given to health-care workers in order to obtain information about health professional category, location in the ED, contact with the contaminated patient (for caring or moving), onset and duration of symptoms if any. PChE levels were measured at the end of exposure and then re-measured after a mean interval of 4.7 hours (range: 4–7 hours). Results: Fifteen health-care workers were on duty when the poisoned patient was brought to the ED: two subjects were physicians, twelve were nurses and one was an undertaker's technician. Ten people (66.7%) were in the same room with the contaminated patient, two (13.3%) worked in the next room and three (20.0%) were somewhere else in the ED. Eight subjects (53.3%) cared for or moved the patient. Fourteen health-care workers (93.3%) were symptomatic and only one was asymptomatic. The most frequently reported symptoms were eye irritation (11 cases), pharyngodynia (7 cases), nausea (6 cases), lacrimation (5 cases), headache (4 cases), cough (4 cases) and excessive salivation (2 cases). Symptoms began during the exposure and lasted for several hours. Mean PChE levels (reference values: 3500–11000 UI/l) were 7620 ± 1592 UI/l (range: 4400–10300 UI/l) at the end of the exposure and 7580 ± 1790 UI/l (range: 4400–11400 UI/l) in the following control. Conclusion: Secondary exposure affected both health-care workers who cared the contaminated patient, and those who did not. Diagnostic reduction in PChE levels was not observed, suggesting that signs and symptoms in health-care workers were local in their nature and did not come from systemic illness.