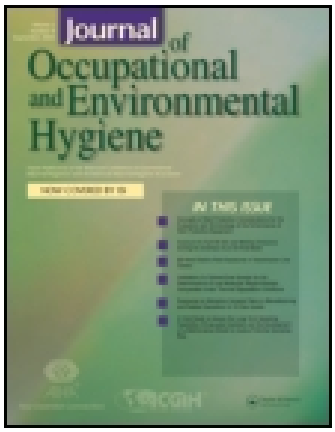

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Letters to the Editor

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Letters to the Editor

SUPPLEMENTAL PERSONAL NOISE SAMPLING DATA

The article, "Exposure Assessment in Auto Collision Repair Shops," in this issue presents personal noise sampling data obtained for body technicians, in four small collision shops, at a time when production was very slow. Data suggest that when shops are busier, noise exposures in excess of 50% dose (85 dBA 8-hr time-weighted average [TWA]) may occur when calculated using the OSHA Hearing Conservation (HC) criteria.

We recently had the opportunity to collect additional personal noise samples in one large collision shop that was very busy. The monitoring was performed on four consecutive days (Tuesday to Friday) using equipment and procedures identical to the ones outlined in the article. In this large facility, employees were assigned to one of the following categories: blueprint technician (these were body technicians performing only vehicle disassembly); body technician; painter helper (performed only activities related to preparation for painting); painter; detailer (interior and exterior car cleaning, frequent use of a power washer) and mechanic (performed light mechanical work). There were 16 people working in the shop at all times during the sampling period.

Using the OSHA HC dosimeter settings, the highest recorded exposure for a body technician was 52% of the permissible noise dose (equivalent of 85.3 dBA 8-hr TWA). The body technician exposures are log-normally distributed, and approximately 3% of the values are likely to exceed the 50% noise dose. Assuming an average of 250 workdays/year/person, the personal exposure of any body technician is likely to exceed 50% noise dose for approximately 8 days per year. These employees would be required to participate in a Hearing Conservation Program (HCP) as mandated by the OSHA standard 1910.95.

Using the ACGIH dosimeter settings, exposures were frequently above the 100% dose for body technicians, detailers, and the mechanic, suggesting that all of these job categories should be included in an HCP.

A summary of the study results is presented in Table I.

While body technicians may have relatively few options for controlling their noise exposure at the source, detailers may be more able to do so. Noise levels generated by pressure washing operations were between 85 and 95 dBA, and drying car mats using compressed air generated noise levels between 95 and 100 dBA. Detailers can decrease their noise exposure by adjusting the pressure of the water jet, standing farther away from the vehicle when using the pressure washer, and by adjusting the compressed air pressure to 30 psi or less.

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TABLE I. Personal Noise Sampling Results Summary

Instrument Setting	Job Category	N	Min (% dose)	Max (% dose)	Mean (% dose)	SD (% dose)	GM (% dose)	GSD
OSHA HC[A]	Painter helper	3	9.6	14.1	11.4	2.4		
	Blue print technicians	3	6.7	10.4	8.2	1.9		
	Mechanic	2	13.7	15.6	14.7	1.3		
	Detailer	5	19.7	33.9	27.3	5.6	26.8	1.2
	Body technicians	7	14.2	52.1	23.6	13.3	21.3	1.6
ACGIH®[B]	Painter helper	3	34.5	83.3	53.2	26.3		
	Blue print technicians	3	23.4	69.8	41.4	24.9		
	Mechanic	2	117.2	132.4	124.8	10.7		
	Detailer	5	63.3	185.9	120.8	45.7	113.6	1.5
	Body technicians	7	49.7	483.5	156.5	148.9	119.9	2.1

[A]Exchange rate = 5 dB, criterion level = 90 dB, threshold level = 80 dB.
[B]Exchange rate = 3 dB, criterion level = 85 dB, threshold level = 80 dB.