How Individual Fit Testing Can Complement Your Hearing Conservation Program

Jon Baldridge

Many people don't understand the proper roll-down technique to achieve a good seal of the ear to block out harmful noise. Others just don't want to take the time, because they're in and out of noise frequently during the workday. Some facilities provide pre-molded earplugs, but frequently we find workers end up with the wrong size and a poor fit. Even hearing protectors that are easy to understand and use, like earmuffs, can get worn out. We often see people using old earmuffs with bent headbands, flat cushions and cracked seals -- not an effective way to protect against noise!

And unfortunately, all these day-to-day problems with hearing protectors can result in gradual changes in hearing. A shift in hearing means you need to refit, retrain, and follow up with that employee. Individual fit testing can help you meet all of these needs when you find hearing shifts -- and it's a great way to start off new hires right.

Common Problems with Hearing Protectors in the Workplace

Poor fit

Good fit

Here are some of the common pitfalls we see with hearing protectors:

- One-size hearing protectors do not fit all
- Self-fitting can lead to incorrect size and poor fit
- Incorrect insertion/wearing of the protector
- Employee's failure to replace the hearing protector when damaged or worn out
- Inconsistent use when employee not motivated to protect hearing
- Hearing protectors with too much or too little attenuation (noise reduction) for the work environment

How Fit Testing Can Help

CavCom's fit testing service identifies how well a hearing protector is working for each individual. First, I perform a test with the worker's ear unoccluded (no earplug), then I perform the occluded test (with the earplug in place). This back to back comparison allows us to determine the attenuation (noise reduction) for that particular hearing protector as worn by the employee.

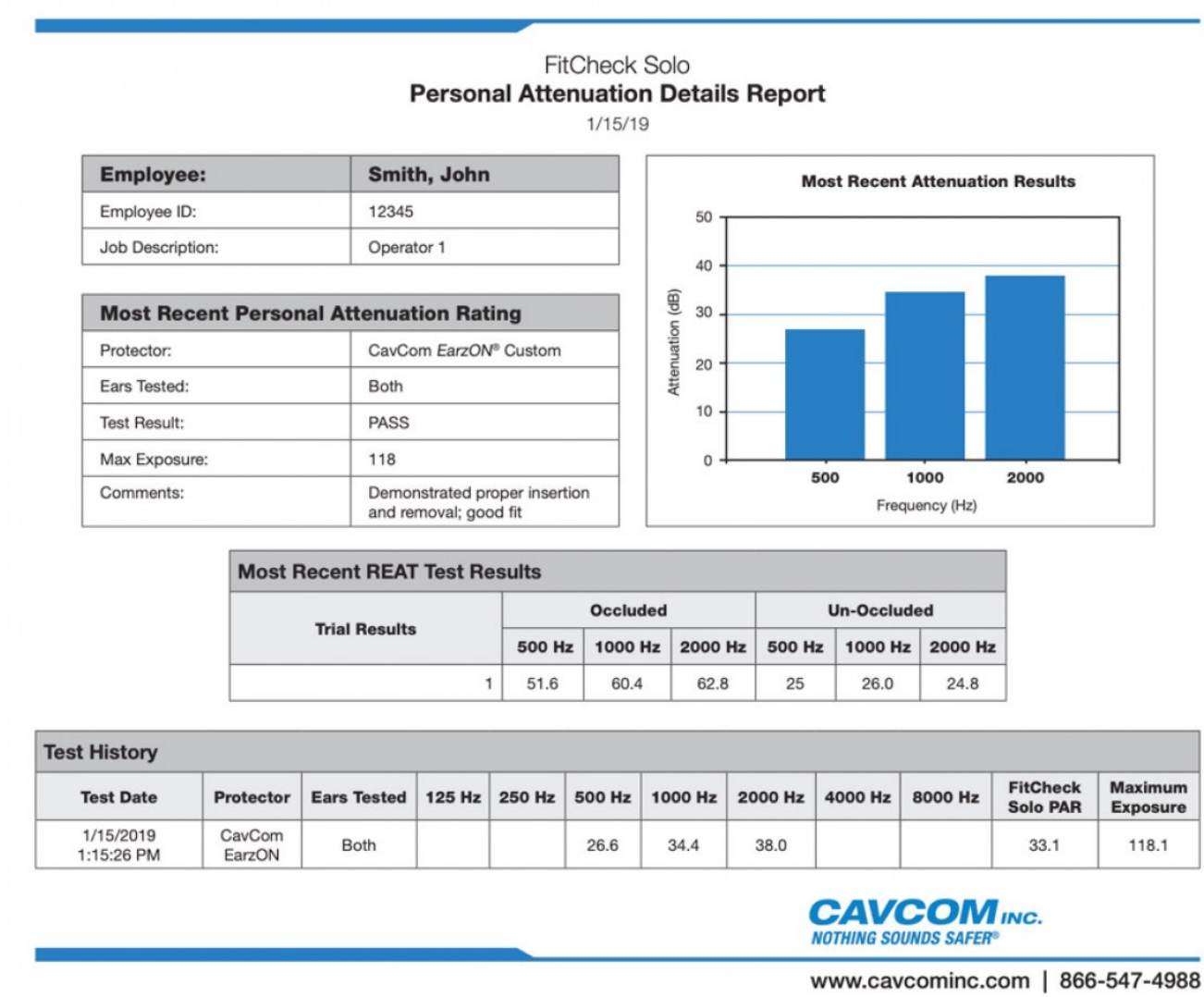
For the occluded test, employees place their hearing protection just like they would normally wear it and then they receive the test. In my experience, it's not uncommon for 50% of the individuals I test to first fail because they're not inserting their hearing protection as the manufacturer intended. Next, I'll actually place the hearing protector in the employee's earcanal using the correct insertion technique. The occluded test is administered again and the majority of the time, the employee passes. And this is a great lesson to show how important it is to insert the earplug correctly. It's really rewarding to see how fit testing can make the difference in motivating people to protect their hearing.

Still, some employees will not pass the fit test even with better placement techniques. This can mean there's an issue with the way that particular hearing protector fits the employee. They may require a different style or size earplug to accommodate the shape of their earcanal. This refitting can be done on the spot -- with the retest documenting success.

A Successful Hearing Protection Program

Hearing protection fit testing is a great way to support your hearing conservation program. It's common for me to meet people who've been working in the field for years and not placing their protectors properly. Until you really sit down with them and perform fit testing, the problem isn't always obvious. Fit testing can be a real eye-opener. In the moment, it's an opportunity to retrain them and show them the difference it makes right away. An intervention like that can make a huge difference.

Another benefit of fit testing is that we provide documentation of the fit tests for the company's record-keeping. This is good for you to document compliance and can help you make future decisions about which jobs or departments need more support in achieving adequate noise reduction. Here's a sample of what our personal attenuation report looks like:



FitCheck Solo

Personal Attenuation Details Report

1/15/19

Employee:	**Smith, John**
Employee ID:	12345
Job Description:	Operator 1

Most Recent Personal Attenuation Rating	
Protector:	CavCom *EarzON*® Custom
Ears Tested:	Both
Test Result:	PASS
Max Exposure:	118
Comments:	Demonstrated proper insertion and removal; good fit

Most Recent REAT Test Results						
Trial Results	**Occluded**			**Un-Occluded**		
	500 Hz	**1000 Hz**	**2000 Hz**	**500 Hz**	**1000 Hz**	**2000 Hz**
1	51.6	60.4	62.8	25	26.0	24.8

Test History

Test Date	**Protector**	**Ears Tested**	**125 Hz**	**250 Hz**	**500 Hz**	**1000 Hz**	**2000 Hz**	**4000 Hz**	**8000 Hz**	**FitCheck Solo PAR**	**Maximum Exposure**
1/15/2019 1:15:26 PM	CavCom EarzON	Both			26.6	34.4	38.0			33.1	118.1

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Ready to get started? Request our NRR/PAR calculator that gives you the information you need to estimate noise reduction without having to deal with complex formulas. And contact us to arrange fit testing for your facility: