

Are medical evaluations really needed for annual fit testing?

In review, there are four key components to a respirator protection program;

1. A written program that outlines respirator use and all potential exposures for workers covered in the program.
2. Medical Evaluation of the workers that will be using respirators
3. Training on the proper use of each of the respirators they will use in their work.
4. Fit testing for each mask they will use in their work.

The written program must be in-place and is a living document that must be reviewed and updated with changes in the workplace. Fit testing and training are clearly annual (or more frequent) processes.

Medical evaluations however have had some controversy which we will explore. The respiratory Protection Standard, 29 CFR Part 1910.134 clearly outlines that “using a respirator places a physiological burden on employees that varies with the type of respirator worn, the job demands undertaken while wearing the respirator and the general medical status of the employee”. What this is really saying;

- All respirators do not create the same physiologic load on the worker. Full face respirators such as a firefighter SCBA clearly creates more cardio-respiratory loading than a half face grinding or spraying mask.
- Type of work being performed. Environmental conditions such as temperature and humidity play a role, as well as the actual work being done. For instance, two workers are wearing half-face cartridge style respirators with the same P-100 filters. The worker hanging from a harness repairing the fiberglass blade on a wind machine 100’ off the ground will have a considerably higher load than the worker wearing the same mask to blow dust off a construction site.
- The general medical status of the worker. All humans are unique in their size, shape, fitness levels and existing medical conditions (high blood pressure, diabetes, asthma, smoking etc).

As such, at time of hire, it is clearly quite important to have a licensed, well qualified medical provider meet with the worker, review the confidential medical questionnaire, review the job demands, type of mask and existing medical concerns/conditions before clearing the worker *in writing* for mask fitting.

The standard for medical evaluation also clearly states “the employer shall identify a primary licensed health care professional (PLHCP) to provide a medical evaluation to determine the employee’s ability to use a respirator, before the employee is fit tested”. Since the worker will then need to be annually fit tested, logic dictates that the PLHCP, should annually recheck the employee’s ability to use a respirator, before that employee is fit tested.

There is no question that the worker must be annually retrained, fit-tested and cleared *in writing* by the PLHCP using an update medical questionnaire. But a question arises in the standard regarding the need for annual face to face medical evaluation by the PLHCP.

This really becomes a question of “Best Practice” versus “Letter of the Law”.

Letter of the Law: Under the letter of the law, once the worker is hired and screened initially, some employers elect to only use the questionnaire for the annual written clearance (most use the internet based online system) this approach works provided the following rules are met. The standard states that the follow-up medical evaluations shall include any medical test, consultation, or diagnostic procedures that the PLHCP deems necessary to make a final determination. “At a minimum, the employer shall provide additional medical evaluations” if;

- The employer will ensure that a follow-up medical evaluation is provided to any employee who gives a positive response to questions 1 thru 8 on the questionnaire, or whose initial medical examination demonstrates the need for follow-up medical examination.
- An employee reports medical signs or symptoms that are related to the ability to use a respirator.
- A PLHCP, supervisor, or the program administrator informs the employer that an employee needs to be reevaluated.
- Information from the respiratory protection program, including observations made during the fit testing and program evaluation, indicates the need for employee reevaluation.
- A change occurs in workplace conditions that may result in substantial increase in the physiological burden placed on the employee.

Best Practices: Given the three challenges of respirator type, workload / conditions / exposures and the general medical status of the worker, clinically the PLHCP simply cannot make an adequate, informed determination based solely on a questionnaire. Best practices should therefore be based on a combination of employee health-safety and employer risk management.

When balancing employer needs and employee safety, it appears that the best practice approach for respiratory protection would consist of;

- **Worker Screening**: Providing employees with an annual medical evaluation using the confidential questionnaire, face to face evaluation by the PLHCP and including (where needed) objective pulmonary function testing (PFT). This approach provides the PLHCP with the ability to make well informed, good clinical decisions and the employer with objective documentation and early warnings of employee exposure / illness or trends in erosion of lung function over time.



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- **Fit Testing:** Quantitative testing using the Portacount® testing computer provides printed, objective documentation of a good respirator fit. NOTE: Qualitative testing using sprays, oils or irritant smoke is legal and acceptable, but is too subjective in nature to provide and cannot document good protection.
- **Training:** Annual reinforcement on the proper use, fit, limitations, maintenance and how to recognize any medical signs and symptoms that may limit or prevent the proper use of the respirator.

Warmest regards,



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