

Employee Safety

## Love Your Beard—Avoiding Toxic Particulates When Wearing a Tight-Fitting Respirator

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A 5 o'clock shadow may look good, but that stubble can break the seal of a tight-fitting respirator. Tight-fitting respirators need to tightly seal around the face or neck to provide clean breathing air to the user. Small gaps caused by facial hair can compromise that seal. However, stubble isn't the only offender – beards, moustaches, sideburns, and any other hair can cause gaps in the seal, too. That tiny space allows contaminated air to pass through the seal, going straight into the lungs instead of being filtered through the respirator cartridge. Someone using a tight-fitting respirator with a bit of facial hair may think they're protected from the harmful air, but their respirator is unable to perform its basic function to clean the air they are breathing in.

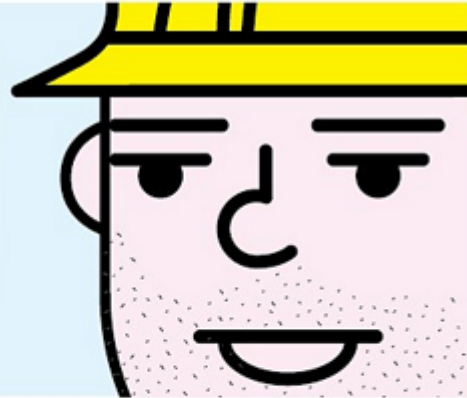
### What's the Danger?

NIOSH, the National Institute for Occupational Health and Safety in the United States, declares "facial hair under the sealing surface causes 20 to 1,000 times more leakage compared to clean-shaven individuals." Toxic particulates vary within each work environment, but they remain poisonous all the same. Toxic particulates from dust, gases, vapors, smoke, and fumes can be undetectable, leaving workers without proper respiratory protection when exposed to hazardous chemicals. Some particulates such as silica dust, beryllium, and welding fumes are tinier than the thickness of a human hair, meaning they can slip through a tight-fitting respirator seal broken by the growth of said human hair.

Check out the *infographic* below to see the ramifications of facial hair when wearing a tight-fitting respirator and an option to keep you safe when working around dangerous materials, such as silica:

# DID YOU KNOW YOUR 5 O'CLOCK SHADOW CAN BE DANGEROUS?

The growth from a single shift could be enough to break the seal of your tight-fitting respirator!



A tiny bit of stubble can break the seal of a tight-fitting respirator, meaning you and your lungs are no match for the toxic particles that can slip through.

OSHA and other international standards allow those wearing respirators to have facial hair if it does not interfere with the seal. Unfortunately, a clean-shaven face in the morning can break the seal before quitting time, so shaving each morning can't guarantee to keep you safe.



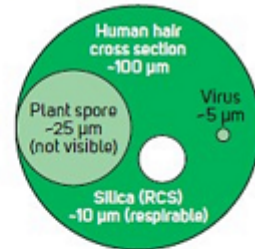
MOe starts his day with a razor shave at 7am to begin his shift clean-shaven at 8am.

MOe breaks for lunch - but look at that stubble starting to show! That means the seal on his tight fitting respirator will be broken and won't protect him.

By the time MOe clocks off at 5pm, his stubble has caused him to breath in harmful dust all afternoon.

According to NIOSH, "facial hair under the sealing surface causes 20 to 1,000 times more leakage compared to clean-shaven individuals".

Particulates that can cause cancer and other respiratory diseases - like silica dust - can make their way into your breathing air as soon as the seal is broken. These dangerous particles are much smaller than the size of an average human hair, shown by the diagram to the right.

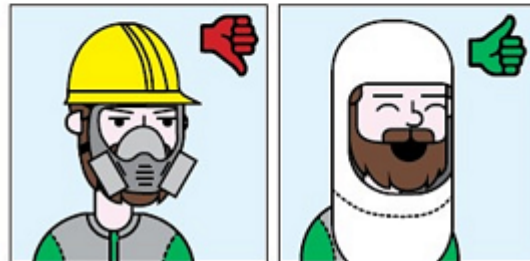


## NOW FOR THE GOOD NEWS!

Have no fear, you can keep your hair. Loose-fitting respirators with powered or supplied air can provide a higher level of protection, as they form the seal around the user's neck and maintain positive pressure. This option gives more space for facial hair and allows users to groom (or not groom) as they please.

OMIT-Fit testing is important with any respirator you choose, so it's important to make sure your seal is tight before beginning work.

To shave or not to shave? The choice can be yours. For more information on how you can protect your lungs without shaving off that great beard or mustache, contact RPB® Safety.



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