TOOLBOX TALK:
Respiratory Health: Dual Threat to Your Health

I. Introduction

- Educate participants on the dual threat of silica dust and tobacco
- Increase awareness on the health impact of both silica dust and tobacco
- Introduce participants to dust control methods
- Introduce participants to tobacco cessation

II. Rationale 2 min

As you probably have heard before, construction workers are especially vulnerable to silica dust because building materials--such as concrete, tile, and rock--contain silica. Dust containing silica is produced when you cut, grind, crush, or drill these construction materials. Additionally, the construction industry has the highest percentage of cigarette smoking; close to half of all construction workers smoke. This Toolbox Talk focuses on the combination of silica dust and tobacco use and how that "dual threat" can increase the damage to your lungs and to your overall health.

III. Group Breathing Exercise 3 min

Before we get started, we thought it would be good to ask everyone in the room today to take a couple of deep breaths with us. We want to try to bring your attention to your lungs and your breathing because the focus of today's toolbox talk is really about "healthy lungs."

[Instruct breaths with workers]

You may notice that it feels really good and you can comfortably breathe in and out OR some of us may feel like it's a little bit more of a challenge.

During this toolbox talk and the follow-up toolbox talk, we will share information that can affect your breathing and the health of your lungs.

IV. Dual Threat 4 min

1. Silica

Question: Before today, have any of you ever received any information about silica dust? Maybe at a Toolbox Talk, or heard about on the job, or from a co-worker? If so, what kinds of information did you learn or have you heard?

Agree with workers as answers come up and fill in what is not mentioned, including:

- What is silica?
    - Silica is a basic component of soil, sand, granite, and most other types of rock.
- Where is silica found?
    - It comes from the quartz crystal in many construction materials, such as concrete, brick, tile, sand, slate, granite, and rock.
- How is silica produced? And like I just mentioned….
    - And silica dust is mainly produced when cutting, grinding, crushing, or drilling construction materials like concrete.
- Silica enters the lungs through breathing and is toxic to the lining of the lungs. When silica and the lining of the lung comes into contact with each other, a strong inflammatory reaction occurs. Over time this inflammation causes the lung tissue to become irreversibly thickened and scarred.
- Long term…
    - Being exposed to silica on the job may be associated with several adverse health effects. These include developing bronchitis, COPD (Chronic Obstructive Pulmonary Disorder), lung cancer, and silicosis.
- What is silicosis?
    - Silicosis is a progressive, disabling, & often fatal lung disease
    - Due to the nature of the work, the construction industry has one of the highest numbers of deaths due to silicosis.

2. Smoking/Tobacco Use

Question: How many of you here are also smokers? Show of hands.

As I mentioned before, the construction industry has the highest rate of cigarette smokers; close to half of all construction workers smoke - so about 40%. That's about twice the rate of the general population.

Question: Does that sound about right for this worksite? Close to half of the workers smoke?

3. Combination

- That "dual threat" related to healthy lungs that I mentioned before is especially high for construction workers due to their exposure to silica dust on the job and the high percentage of smokers.
- Silica dust and smoking can damage your lungs' ability to protect themselves against other toxic substances you breathe in. We just talked about some of the health problems silica can cause; however, the combination of silica and tobacco smoke increases your risk of other health issues. Some examples are an increase in respiratory infections, bronchitis, and asthma.
- Often people who are around silica dust and smoke tend to cough more and/or have trouble breathing.

- The main long-term impact of breathing in silica dust is silicosis and tobacco exposure speeds up this process.

V. Reducing Silica Dust & Tobacco Use 5 min

1. Silica Dust Controls

a. Tasks that make dust:

Question: What kinds of activities have or will generate silica dust at this site?
List some possible answers including:

- Demolition of concrete, brick, or masonry
- Dry sweeping concrete or air blowing sand or rock dust
- Mixing cement or grout
- Abrasive sandblasting, or chipping/sawing/grinding of concrete/brick/rock.

b. Things that you and your worksite can do to reduce dust?

Question: Can anyone share some examples about things you or your employer currently do or can do to reduce dust? As answers come up, fill in anything not mentioned.

So those are some of the activities that could cause silica dust at this site.
There are things that you and your worksite can do to protect your lungs.
One of the main things, which I know your site has in place already, is:

- Use engineering controls (examples include):
  - Wet methods (for cutting, sawing, drilling, etc.)
  - Local exhaust ventilation
  - Vacuum dust collection systems preferably with HEPA filters

Questions: How easy are these engineering controls just discussed to use?
Do they slow down your pace at work?
What are the barriers?

Some more examples workers and employers can do or are doing to reduce dust are:

- Safe working practices while on the job:
  - Don't eat or drink in dusty areas
  - Wash your hands/face before eating or drinking
  - If you use tobacco, don't use it in dusty areas
- Wear protective clothing on the job or change clothes to reduce bringing dust home
- If possible, park your car where it won't be contaminated by silica or other toxins
- Complete air-monitoring to measure silica dust exposure
- As part of a broad approach to silica dust reduction, the use of personal protective equipment (half or full facemask) can also be beneficial, but should not be the first line of defense.

But remember, it's not just about silica dust; the dual threat to your lungs includes tobacco use.

2. Tobacco: If you do smoke or use tobacco, one of the ways you can protect yourself is by quitting. Did you know…

a. Quitting Facts:

- Each year 1.3 million smokers actually do quit.
- If you have unsuccessfully tried to quit, don't give up! It takes most smokers as many as 8 quit attempts before they are able to quit for good.
- We know that for those wishing to quit, research shows that having support for quitting and some form of nicotine replacement gives you the best chance for quitting. Support can happen in multiple ways, including on the telephone with a quit-line, on-line, or in a group setting.

Questions: If you're exposed to dust at work & you smoke, does this make you think about quitting?
Has anything ever made you think you should quit?
What are the barriers to quitting?

[Can include if there are smokeless tobacco users in the group]

b. Smokeless tobacco:

- Additionally, about 6.5% of the general male population use smokeless tobacco products like chew or snuff.
- We don't know about construction workers specifically, but use seems to be growing especially in younger populations.
- There are also toxins in smokeless tobacco including: formaldehyde, arsenic, and fiberglass that can negatively affect the health of your lungs and can lead to cancer.

c. Secondhand Smoke

Secondhand smoke (SHS) is the mixture of the smoke given off by the burning end of a cigarette/pipe/cigar and smoke exhaled from the lungs of smokers. It lingers in the air hours after cigarettes have been extinguished.

If you smoke, you can protect your loved ones from secondhand smoke by limiting how much you smoke near them.

Did you know…

- Over 50,000 non-smokers in the US die each year from secondhand smoke exposure
- Continual exposure to secondhand smoke nearly doubles the chance of heart attack.
- When a pregnant woman is exposed to secondhand smoke, the nicotine she takes in is passed on to her unborn baby.
- Non-smoking spouses or close co-workers of a smoker have a 20-30% greater risk of developing lung cancer and heart disease than if they live or work with a non-smoker.

d. Supporting Others:

Quitting tobacco is difficult, so you can help someone else who's quitting with some of the following suggestions:

- Share things that helped you or someone else you know to quit.

Question: For those of you who have ever quit smoking/tobacco use, can you share with us what helped you quit?

- Suggest that they call a smoking quitline, for help quitting.
- Suggest that they throw away all of their tobacco, matches, and ashtrays – at home, in the car, everywhere – before quitting.
- If you're a smoker, promise them you won't smoke in their presence.

VI. Wrap-up 2 min

This dual threat to healthy lungs – silica dust and tobacco smoke – is serious. Either one alone damages your body. Combined together, it increases the damage to your lungs and to your overall health.