

Worker Respiratory Symptoms and Safety: What are we learning from workers?

This is part of a series of research briefs reporting the findings from the Thoroughbred Worker Health and Safety Study. **The goal of this brief is to describe the respiratory health of thoroughbred farm workers and the work factors that may influence worker exposure to potential respiratory hazards.** All 225 Latino thoroughbred farm workers who participated in the Thoroughbred Worker Health and Safety Study were asked about self-reported upper and lower respiratory symptoms and the occupational characteristics associated with these symptoms.

Worker Characteristics*

Gender



86% Male

Education



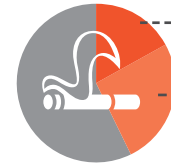
76% < High school

English Understanding



26% Poor

Smoker



Current smoker: 17%

Former smoker: 26%

57% Never smoker

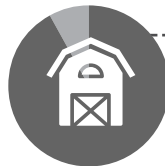
Average Age: 35

Average Length of Time Living in U.S.: 15 years



Avg time working on horse farms:

11 yrs



Work in barns: 92%

Avg time per week working in barns:

23 hrs



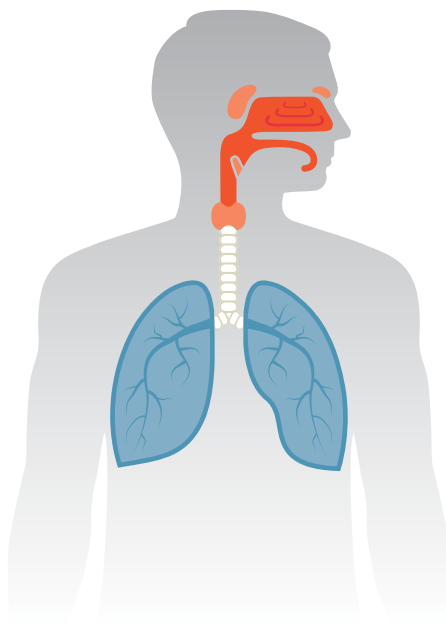
Dust masks available 38%



Infrequently use dust mask 63%

*A more complete list of worker characteristics may be found in Issue Brief #4. Details regarding language and communication on farms may be found in Issue Brief #7.

Respiratory Symptoms Reported by Workers



Upper respiratory symptoms

[% of workers reporting]:

- Nasal irritation41%
- Throat irritation45%
- Sinus trouble24%
- Any of the above 53%**

Lower respiratory symptoms

[% of workers reporting]:

- Cough44%
- Wheezing6%
- Chest tightness9%
- Shortness of breath8%
- Difficulty breathing7%
- Any of the above 52%**

Any respiratory symptoms 62%

Thoroughbred Worker Health & Safety Study

WHO? Researchers at the University of Kentucky and University of Maryland, guided by Industry and Community Advisory Councils, funded by CDC/NIOSH

WHAT? Research study to identify farm safety & health challenges, work organization & farms' best practices

WHEN? 2011-2016

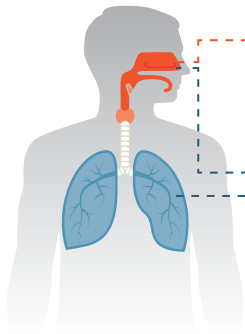
WHERE? Thoroughbred Farms

HOW? Interviews with farm representatives & workers

WHY? To improve worker health & safety & reduce costs for farms



Factors Associated with Respiratory Symptoms*



Workers who used dust masks less frequently experienced 2X the odds of upper respiratory symptoms than those using them more often.



Females experienced 4X the odds of both lower respiratory symptoms and any respiratory symptoms than males.

**Controlling for: age, sex, education, years living in the US, English understanding, smoking status, time working in barns, dust mask utilization, years working at the farm*

It's almost something you get used to, but the dust is terrible in the barns... that is probably our biggest complaint from the guys

-Manager of a medium-sized farm

What do these findings mean?

- Latino Thoroughbred workers exhibited higher rates of respiratory symptoms than the general U.S. Hispanic/Latino population and other Latino farmworkers. One reason may be that dust in barns could include horse hair/dander, endotoxins, beta 1-3 glucans, and hydrogen sulfide.
- Chronic exposure to these toxins may lead to respiratory irritation and inflammation, shortness of breath, asthma, bronchitis, and allergic reactions as has been found among dairy, poultry, and equine workers.
- Females, due to a smaller lung capacity, may be particularly susceptible. However, they may also be more willing than males to report symptoms.
- Having access to dust masks and using them may help to prevent or reduce respiratory symptoms among workers.

Safety & Management Tips

- Provide N95 dust masks in all tack rooms. Store masks in airtight container to prevent contamination or rodent damage.
- Replace masks when they become soiled, wet, or damaged during use. Replace masks with broken straps or curved valves (if mask has an exhalation valve).
- Encourage workers to wear dust masks in the barns and educate them on the importance of regular use and proper fit of masks for maintaining lung health.
- Model safe behavior by wearing masks yourself.
- Incorporate respiratory safety and health topics in regular meetings and trainings.

Resources

N95 purchase link:

[cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html](https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html)

General respirator information:

[cdc.gov/niosh/npptl/topics/respirators/disp_part/respsource.html](https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/respsource.html)

NIOSH bilingual video on fit-testing:

www.osha.gov/video/respiratory_protection/fittesting.html

Caring for your respirator

[youtube.com/watch?v=yBjohHlug45I](https://www.youtube.com/watch?v=yBjohHlug45I)

NIOSH N95 model 8210
Price per mask: \$0.50 - \$1.00



Acknowledgements

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