

Chalk Dust In Indoor Climbing Gyms: Strategies

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What goes up, must eventually come down. If there is one law of physics that rock climbers are always acutely aware of, it is the law of gravity. This law also applies to chalk—a necessary evil for indoor rock climbing.

Regardless of size, all indoor climbing gyms face the same problem – that of chalk mitigation. The busier the gym, the bigger the issue. Whether it's a cloud of chalk dust that hovers over bouldering areas, loose chalk spills on the carpets and mats, excessive amounts of chalk on climbing holds that make them harder to grip, or just a chronic film of chalk dust on all surfaces and spaces in the gym – chalk impedes indoor climbing almost as much as it helps us.

Article At A Glance

- **Writer:** [Ashley Routson of Planet Rock](#). She has a specialty in technical writing and management-related topics.
- **Who Should Read / What You Will Learn:** Mostly, this article is for managers and owners; but it could be for anyone who struggles with this issue in their gym and wants quick ways to help.
- **Tie-Ins, Resources, or Further Reading:** This article revisits [our 5-year-old article on chalk dust mitigation](#). That piece complements this article nicely.

There is a huge debate over the health risks of loose chalk particles in the air. Unfortunately, there is not enough scientific evidence to support the claims that regular inhalation of and

exposure to chalk particles causes any disease or health risk.

This article is not going to address the claims of potential health risks regarding chalk usage and exposure. I am not a doctor, and I encourage anyone with genuine concerns to seek advice from medical professionals.

For this article, I want to focus on the customer and staff experience. From the customer's perspective, overly chalky climbing environments can be uncomfortable. The more chalk in the air, the harder it is to breathe. Chalk-covered surfaces and floors appear to be dirty and unsanitary. Optics-wise, dirty gyms are not desirable.

Sure, we may call ourselves dirtbags – but, that doesn't mean everyone wants to climb in a "dirty" gym.

When customers notice neglect, they turn to the internet to complain. I would be shocked to learn if any indoor climbing gym in the country hasn't received some sort of negative feedback, in the form of a Google review or Yelp review or social media comment, about chalk dust. Too much chalk dust in the air, poor ventilation, dirty mats, dusty surfaces–these complaints come in all different shapes and sizes.

Resources, especially monetary, limit our ability to keep our gyms free of chalk dust. Air filtration is a particularly large expense. We are limited by information, there is no 'one best practice' or one 'best tried and true method' of chalk mitigation. And we are limited by options, only a few manufacturers are focused specifically on the needs of indoor climbing gyms.

Because this issue can be overwhelming, let's start small. First, I'm going to provide a list of simple and cost-effective ways to reduce "chalk pollution" in an indoor climbing gym. Then, I will highlight some existing manufacturers that offer products that assist with chalk mitigation. Keep in mind, this article is designed to inspire discussion and collaboration in the industry.

Banning Loose Chalk

We might as well get the most controversial tip and trick out of the way. Preventing customers from using loose chalk and only permitting chalk balls, chalk socks, and liquid chalk can potentially help mitigate the amount of chalk particles in the air. Creating this policy is as easy as making an announcement on social media and posting signage within the gym. Naturally, gym managers and staff are responsible for enforcing this policy.

You can expect some sort of negative reaction from customers and members. Introducing new policies that restrict the use of certain products doesn't always sit well with customers.

In my experience, **the more you can educate customers about "the why" behind the decisions being made alleviates frustration.** Be honest, be transparent. Most people will understand.

Daily Vacuuming & Mopping

What goes up, always comes down. Chalk eventually settles and collects on the flooring surfaces of the gym. When climbers, especially on boulders, fall or step on these surfaces—collections of chalk and dust get aggravated and reenter the air. One way to mitigate this is to clean up chalk spills as they arise.

Vacuuming – yes this is something we all attempt and fail at daily. Currently, there is no perfect vacuum for the job. The CWA has a forum dedicated to this topic—but there has yet to be a consensus on the best brand, model, or practice.

Sweeping is, for lack of better words, futile. Sweeping only results in moving the chalk dust and dirt from one area to another.

Mopping actually helps remove the chalk from flooring, without aggravating it and recirculating it into the air. This only works on hard floor surfaces (like concrete or wood) and vinyl mats.

Mopping is an underrated solution. Unfortunately, this is not a solution for carpeted areas. It should be noted that a wet mop, followed by a dry mop, is the best system. Water should never get a chance to leak through the vinyl into the foam, that is an entirely different problem.

Air Compressors

Now is when we start discussing options that might involve added operational costs. My gym has two air compressors, but I don't know if it is a standard piece of equipment for most indoor climbing gyms. The air compressor is a mini-Godsend for climbing gyms. We use the air compressor to blow out vacuum bags and parts, to blow out HVAC unit filters, and to blow dust off retail items. *(Naturally, there are other uses for it, but those don't fit the subject of the article).*

The air compressor helps prolong the life of air filters and vacuum bags. At the end of the day, it lowers the cost of these items and ultimately pays for itself. But, it has to become a routine to be effective.

The staff needs access to this tool, they need to be trained to use it, and it needs to be a part of the day-to-day for it to be an effective method for chalk mitigation. This requires management oversight and persistence, otherwise, the routine won't stick.

Fans & Air Circulation

I can't write this article without mentioning the importance of ceiling fans or just fans in general. It is important to note that fans only circulate air, they do not clean the air. Eventually, the particles in the air will settle on gym surfaces and flooring.

I'm assuming that most indoor climbing gyms have fans of some sort, so we can skip forward.

Chalk Eaters

Chalk Eaters are a popular solution for gymnastics gyms and bouldering gyms alike. The concept is basic and easy to recreate on a budget (with a box fan and a filter). Chalk Eaters are portable air filtration systems designed to remove airborne chalk and dust. Essentially, these devices suck in the dirty, chalk-filled air, the dirty air flows through a filter system, and the “cleaned” air is recirculated back into the gym. These products can be extremely effective, but they also have limitations.

The caveat? Chalk Eaters typically cover a very small radius and the filters need to be cleaned or replaced daily. They are also relatively expensive, especially when you factor in regular filter replacements.

Electrostatic Filtration

As indoor rock climbing becomes more popular, new systems for air filtration have begun to emerge. Two companies in particular are focused on using electrostatic technology as a method for cleaning chalk and dust particles from the air.

[Per the StaticAir manufacturer website](#), “StaticAir systems work by attracting and capturing fine particulate matter in the environment, using an electrostatic wire, a high positive voltage is applied. The charge from the electrostatic wires ionizes the fine particulate matter which then attracts to a grounded frame on the system, effectively removing dust, pollen, mold, bacteria, and viruses from the air.”

[Per the ClimbLab website](#), “Our electrostatic filters work by electrically charging the chalk dust particles and then catching them on negative collection plates.

To optimize the efficiency, we have tailored parameters as airflow and electrostatic voltage... In addition to low energy consumption, the filter cassettes can be reused year after year. When the cassette is full you simply just rinse it with water and soap and insert it again.”

What's Best For You?

Maintaining the cleanliness and air quality in an indoor rock climbing gym is a persistent and daily challenge for all gym employees, managers and owners. Investing in new air cleaning technologies and upgrading existing HVAC units might not always be possible or in the budget.

Limiting loose chalk usage and creating better cleaning habits can go a long way, as long as gym managers hold customers and staff accountable for these policies and cleaning routines.

About the Author



Ashley Routson is the General Manager of Planet Rock Climbing Gyms in Madison Heights, MI. She is a proud graduate of THE Ohio State University, where she was a member of both the varsity swimming team and varsity rowing team. Ashley came to the indoor climbing industry after nearly two decades of working in the restaurant and craft beer industries. She is also the author of The Beer Wench's Guide to Beer--a comprehensive book detailing all things craft beer. When she isn't pulling on plastic rocks in the gym, Ashley loves moderate trad and sport climbing in the great

outdoors.

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