

Shaw Floors and Airmid: Studies Show Carpets Can Support Indoor Air Quality with a Thorough and Effective Cleaning Regime



Overview

[Shaw Floors](#) partnered with Airmid Healthgroup to conduct groundbreaking studies comparing the impact of carpet and hard flooring on indoor air quality. The research revealed that effectively cleaned carpets can trap allergens and particles, reducing airborne bio-contaminants and maintaining indoor air quality. These findings challenge long-standing assumptions about carpet and allergen exposure, emphasizing the importance of proper cleaning regimes over flooring type for asthma and allergy management.

Background

About Shaw Floors:

Shaw Industries Group, Inc. is the world's largest carpet manufacturer and a leading provider of flooring solutions,

known for innovation and commitment to quality.

About Airmid Healthgroup:

Airmid Healthgroup specializes in allergen research and indoor air quality testing, using advanced methodologies to assess the health impact of products in real-world environments.

Context:

Carpets have often been associated with higher allergen levels due to their role as bio-contaminant reservoirs. As a result, hard flooring is frequently recommended to people impacted by asthma and allergies. However, evidence suggests that airborne allergen levels—critical to respiratory health—may not be higher with carpeting when cleaning is properly conducted.

The Challenge

Indoor allergens such as dust mite allergen, bacteria, and fungi accumulate on flooring surfaces, posing potential risks to occupants. While carpet retains more allergens than hard floors, the key concern is whether these allergens contribute to airborne exposure in the breathing zone, which affects people impacted by asthma and allergies the most. Shaw Floors sought to:

1. Evaluate how carpet and hard flooring compare in terms of airborne allergen and particle levels.
 2. Assess the impact of cleaning on allergen and particle reduction in carpets.
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Goals

- **Primary Goal:** Determine whether carpeting impacts airborne allergen levels compared to hard flooring.

- **Secondary Goal:** Quantify the effectiveness of cleaning in reducing allergen and particle levels on carpets and in the air.
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Solution/Approach

Airmid Healthgroup conducted a series of controlled studies in environmental test chambers, comparing the effects of carpet and hard flooring on allergen and particle levels:

1. Allergen Aerosolization and Room Disturbance Testing:

- Test dust containing allergens was aerosolized into environmental chambers with either hard flooring or carpeted flooring.
- Simulated activities such as walking and ball bouncing disturbed the floors to measure the release of allergens and particles into the air.

2. Allergen Accumulation and Airborne Levels:

- Allergen levels on the floor surface and in the air were measured under both flooring conditions.
- The extent of allergen accumulation in carpet bases versus hard flooring surfaces was analyzed.

3. Cleaning Effectiveness Testing:

- Carpets were subjected to cleaning, and changes in allergen levels on the surface and in the base were measured.
- Airborne allergen and particle levels were also monitored post-cleaning.

4. Used Carpet Analysis:

- Three carpets from US homes were tested to assess allergen content and airborne particle counts before and after cleaning.
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Key Results

- **Lower Airborne Particles with Carpets:**
 - Airborne particle counts were consistently lower in the presence of carpeting compared to hard flooring during disturbances.
 - **Allergen Levels on Carpet vs. Hard Flooring:**
 - Allergen levels on carpet surfaces were higher than on hard floors, but airborne allergen levels were comparable.
 - **Cleaning Effectiveness:**
 - Cleaning reduced allergen levels on carpet surfaces and within the carpet base.
 - Cleaning also led to significant reductions in airborne particle counts.
 - **Used Carpet Findings:**
 - Allergens in used carpets varied, but cleaning consistently reduced surface allergens and airborne particles.
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Impact

Rethinking Flooring Recommendations: The findings challenge the assumption that hard flooring is always better for asthma and allergy sufferers, emphasizing that effectively cleaned carpets can support indoor air quality.

The Importance of Cleaning: Regular and thorough cleaning plays a critical role in minimizing allergen exposure, regardless of flooring type.

Supporting Healthier Choices: Shaw Floors' research provides evidence-based guidance for consumers, focusing on cleaning practices over flooring material.

Lessons Learned

- **Airborne Allergens Are Key:** Allergen exposure in the breathing zone, rather than allergen presence on surfaces, is the critical factor for asthma and allergy management.
 - **Carpets Can Support Air Quality:** Properly maintained carpets can trap particles, reducing airborne exposure compared to hard floors.
 - **Effective Cleaning Matters:** Cleaning reduces both surface allergens and airborne particles, underscoring its importance in maintaining healthy indoor environments.
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Conclusion

Shaw Floors' collaboration with Airmid Healthgroup highlights the complex relationship between flooring, allergens, and air quality. The studies reveal that carpets, when effectively cleaned, can contribute to healthier indoor environments by trapping allergens and reducing airborne particles. Instead of choosing one flooring type over another, people impacted by asthma and allergies should prioritize maintaining a thorough and effective cleaning regime.

Contact Us

Interested in validating your cleaning technology or other products? [Contact Airmid Healthgroup](#) to learn how our comprehensive testing services can help you achieve impactful results and consumer trust.

Related Links

[Floor Coverings Overview](#)

[Allergen Laboratory Overview](#)

[Testing Facilities](#)