Dermal Absorption Safety Stats and Facts



FACTS

1. **Chemical Burns and Irritation:** Direct skin contact with corrosive or reactive chemicals can cause immediate damage such as burns, rashes, or dermatitis.
2. **Systemic Toxicity:** Hazardous substances absorbed through the skin, such as solvents or pesticides, can enter the bloodstream and harm internal organs.
3. **Allergic Reactions:** Repeated dermal exposure to sensitizers like latex or cleaning agents can cause occupational skin diseases and allergic dermatitis.
4. **Improper Use of PPE:** Failure to wear gloves, aprons, or protective sleeves exposes workers to skin hazards during chemical handling or spill cleanup.
5. **Contaminated Surfaces or Equipment:** Touching tools, door handles, or work surfaces without decontamination can result in secondary dermal exposure.
6. **High-Risk Tasks Without Barrier Protection:** Tasks involving open containers, spraying, or immersion in liquids pose a higher risk of skin absorption if protection is inadequate.
7. **Delayed Recognition of Symptoms:** Workers may not realize they are absorbing harmful substances, especially when symptoms appear long after exposure.

STATS

- NIOSH reports that up to 90% of occupational chemical exposures occur via skin contact, not inhalation.
- The Bureau of Labor Statistics recorded over 11,000 nonfatal skin disorder cases in 2022, most commonly linked to chemical exposure in cleaning, lab, and maintenance roles. (bls.gov)
- A 2021 study by the American Journal of Industrial Medicine found that industrial workers exposed to pesticides showed a 32% increase in systemic absorption through skin compared to controls. (ajim.org)
- OSHA investigations revealed that 25% of chemical-related violations involved inadequate PPE for skin protection. (osha.gov)
- § WorkSafeBC reported more than 700 accepted claims between 2019–2023 for occupational dermatitis due to chemical contact. (worksafebc.com)
- A 2020 CCOHS briefing noted that dermal absorption is a leading exposure route for solvents, adhesives, and resins in Canadian workplaces.
- In Ontario, the Ministry of Labour recorded 245 workplace incidents over 5 years where skin exposure to chemicals led to medical intervention or lost time.