# Chemical Equity - Silicosis

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## What is Silicosis

Silicosis is a lung disease caused by inhaling silica dust from stone, sand, or concrete. Exposure occurs during tasks like cutting or grinding these materials. It leads to lung scarring, causing symptoms such as coughing, breathing difficulties, and fatigue. Though preventable, silicosis remains common in construction, mining, and stone manufacturing industries.

## Our Work

After being formed in the Fall of 2024, our group began familiarizing itself with the issue of Silicosis in Georgia and across the United States. We have decided to focus our efforts on educating different stakeholders on safety practices, symptoms, and potential outcomes. We created a first draft of an informational pamphlet targeted at Medical Professionals likely to encounter Silicosis. In the future we plan to adapt the pamphlet for manufacturers, employees, and consumers. Most recently, our group has applied for IRB approval from the university to conduct a survey amongst foremen at engineered stone companies to collect data on safety practices and attitudes in the workplace.

## Sponsors

GT CTL Sustainability Grant

## Impact

**Physical and Emotional Consequences:** Silicosis disease leads to premature death, long-term health complications, and significant emotional and financial burdens on families.

**Education is Critical**: By informing workers, employers, and policymakers about the dangers of silica exposure and the importance of protective measures, we can drive early detection and implement safer work practices.

**Importance of Increased Awareness**: Increased awareness not only helps in reducing the number of new cases but also fosters changes in workplace regulations and safety standards.

## Why it matters

**Preventable, Yet Common:** Silicosis is a preventable disease, yet it continues to affect thousands of workers, especially in industries like stone manufacturing where exposure to silica dust is widespread.

**Devastating Health Effects:** Silicosis causes irreversible lung damage that leads to chronic respiratory issues, disability, and even death. This has a profound impact on workers' overall health and their quality of life.

**Prevention Saves Lives**: By improving safety practices and raising awareness, we can eliminate these risks and protect workers' health and livelihoods.

## Majors

All majors are welcome; we appreciate a diverse group of perspectives and backgrounds.

**Our current majors**: Biochemistry, Biomedical Engineering, Chemical Engineering

## Conclusions

Silicosis is a lung disease caused by respiration of silica dust from artificial stone processing. Its long incubation time contributes to a lack of awareness of the disease and often delays diagnosis. Educational and regulatory programs have been proven effective in addressing worker contact and safety with engineered stone in Australia, and we aim to conduct similar initiatives towards workers as well as stakeholders.

## Contact Information

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