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Brookings Institute:

Protecting Buildings from Biological Attack:

The air intake systems of many large buildings are an Achilles heel for this nation. Many are accessible and exposed to a terrorist armed with even small amounts of a biological or chemical agent. And most buildings lack good filters to clean up any biological contamination that gets into the system.

Air intakes on major U.S. buildings should be made as inaccessible as possible. In some cases, this may require little more than locking doors. In others, protective housing may need to be constructed. Still others may entail relocating air intake systems, particularly when they are being replaced anyway. Most existing large buildings could be protected at a modest cost, typically no more than tens or hundreds of thousands of dollars per building. (Insurance companies could provide incentives for buildings' owners to take the more costly approach of relocating or replacing existing air and heat systems.) Adopting such measures for all of the nation's 4.6 million commercial buildings, 99 percent of which house fewer than 250 workers, would nonetheless be prohibitively expensive and unnecessary, so such measures should be concentrated on the nation's 500 or so skyscrapers, each with an average occupancy of perhaps 5,000 people. Information from Michael Janus of Battelle indicates that air filtering systems for such buildings might cost about \$1 billion. Replacing filtering systems as needed thereafter, as well as routine maintenance, might cost several hundred million dollars a year nationwide.

Another avenue of protection, especially in new commercial buildings, is tougher building safety codes that focus on structural integrity, minimizing the probability of collapse even after an explosive attack, and making the buildings more resistant to fire. Given the costs of "hardening" new buildings and the trade-off between risk and cost, any such "antiterrorism" building codes should probably apply only to the largest new structures, those that would hold thousands of people.

Similar precautions should be taken at the nation's roughly 250 major sports arenas and stadiums. Protecting the air intake systems and otherwise hardening these structures could cost about \$1 billion.

Source: <http://www.brook.edu>