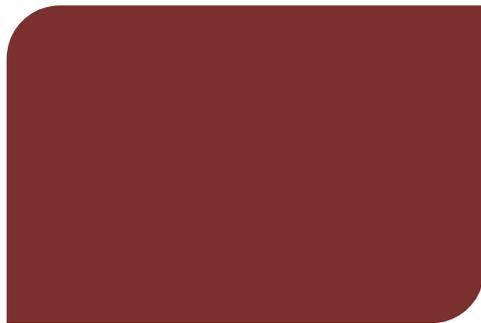


Allergies and Your Home Heating System



WHITE PAPER





We all know someone with allergies. In fact, 20 percent of the United States' population suffers from a form of allergy. An allergy is a hypersensitivity disorder with a host of symptoms ranging from a runny nose, red eyes to full blown asthma. Allergies affect our immune systems through a number of ways including dietary reactions, medications, and insect and wasp stings to name a few. But a major contributor to allergy symptoms comes

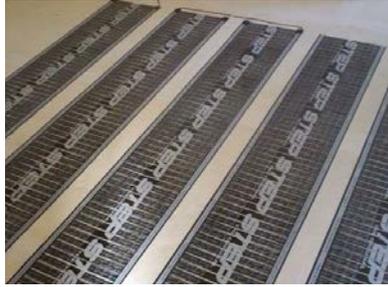
our way as airborne allergens, such as the common hay fever. And for many homeowners, being home with a forced air heating system constantly recirculating these airborne allergens is among the worst places to be.

Not being in your home is not practical for obvious reasons. In fact, today's Americans spend an average of 90 percent of their time indoors including work and leisure. It is not surprising that one form of ailment often caused by airborne allergens or pollutants – sinusitis, often referred to as a sinus infection - brings 10 to 30 percent of the US and European population to the doctor's office annually with a cost in the US alone at more than 11 billion dollars.

There are a few practical ways to reduce allergens at home. Washing your hands and face often helps. Showering before bed will remove most allergens from your skin and hair so you are not turning your face in to them on your pillow while sleeping. Yet, airborne allergens come in your home through windows and doors, your shoes and clothing and pets where the allergens eventually settle on floors and surfaces throughout the house. It is this scenario that worsens when the forced-air heating systems activates. Allergens are brought in to the cold air return ducts and pushed out the warm air vents throughout the entire house. Furnace filters are needed to reduce pollutants in the air but there is a "Catch 22" with their use. A very good furnace filter reduces air particles. Its effectiveness is due to its density, which strains the furnace blower, shortening its lifespan. Using a less effective filter has little to no impact on the furnace blower but it is not very effective at removing allergens. A forced air furnace system is convenient for many as it handles the heating and cooling of the home. But there is a better, more efficient way to heat your home while dramatically improving air quality.

Radiant heating systems, such as the STEP Warmfloor® radiant heat system, efficiently and silently heats with no blowers stirring the air. Instead of heating from the ceiling down to the floor as a forced air system, since warm air rises, electric radiant heating systems turn the home's floor into a radiator, heating your feet first. A forced air system has to use a considerable amount of energy to heat the entire space of a home to eventually heat your feet. But heating from the floor warms all the objects in the room. And while the temperature at your head is less than at your feet you feel comfortable, even your bare feet resting off the floor.

An electric radiant heating system also reduces damp areas prone to growing mold and fungi, which are among the top contributors of discomfort for allergy sufferers. Other biological contaminants such as bacteria and viruses can grow in damp conditions which are often found in homes. These damp conditions may be a result of a slow plumbing leak in a wall or under a sink, a humidifier installed in a



STEP Warmfloor does not blow around dust and allergens, improving indoor air quality

forced air heating system or rain or melting snow leaking its way in to walls. Pollen, too, often has no season. There are many different pollens impacting allergy sufferers throughout the year.

Radiant heating systems can even be installed in a room-by-room approach to complement an existing forced air system. The heat registers in the bedroom of an allergy sufferer can be closed, for example, and electric radiant heating installed to reduce airborne allergies circulating while sleeping. Installation is easy and can go under carpet, wood, tile, vinyl and other flooring materials.

The comfort and reliability of electric radiant heating provides health benefits to the millions of people suffering from allergies without maintenance. There is no high-temperature stress or wear on materials. A furnace room or boiler room is not needed. No pumps or valves to maintain. No annual furnace or duct cleaning. And from a safety aspect, there is no need of storing propane or fuel oil, or having a gas line installed in your home. And its low voltage makes it perfectly safe.

If you have someone in your family who suffers from allergies look into the benefits of radiant heat, either as a whole house installation or as a room-by-room installation to complement your existing heating systems.

About STEP Warmfloor: STEP Warmfloor is a US manufacturer of electric radiant underfloor heating, roof deicing and snow melt systems located in Saint Louis, Missouri. Its 35,000 square foot LEED-registered building is a “living laboratory” as proof of the comfort properties and energy efficiencies of STEP Warmfloor. For more information on residential or commercial STEP Warmfloor systems visit <http://www.warmfloor.com/enus>.