

This Free E-Book is brought to you by [Natural-Aging.com](http://Natural-Aging.com).

**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**

**Sick Building Syndrome and Indoor Climate Control**

**By Simon Fowler**

**Sick Building Syndrome and Indoor Climate Control**

by: **Simon Fowler**

The problem of high levels of CO<sub>2</sub> in ambient air appears to be a modern one. Yet, this is not one of the new fads that crop up from time to time and then disappear again, never to be mentioned again. It is, indeed, a modern problem, caused by the improvements in building standards and especially window manufacture. These improvements, hailed as a triumph over the age-old problem of draughty buildings, have nevertheless created a new negative effect. Ventilation was never a matter for discussion in most cases, it happened naturally as the wind blew and the air in rooms was replaced on a regular basis. With the new, draught-proof buildings this no longer happened, particularly since central heating made it unnecessary to have an air flow for any reason. This has given birth to the concept of indoor climate control.

The result was stale air. Air that has been used and breathed and not replaced, seen as a rising concentration of carbon dioxide, not to mention humidity. These effects had a detrimental influence on the buildings, promoting the growth of mould and other unwanted plant life. This was not the only effect. Slowly, the level of days off for sickness rose and the quality of work sank in these newer or refurbished buildings, leading to something referred to as Sick Building Syndrome, since it appeared to affect everybody in one building. The causes were not known for a long time, but now it is recognised that this is a result of breathing stale air with a high concentration of carbon dioxide over an extended period. Studies have shown that a level of 1000 ppm carbon dioxide will reduce the ability to concentrate by about 30 %, a significant drop by any means.

The obvious solution to this problem of indoor climate control was ventilation, and ventilation or air-conditioning systems were installed in all of these buildings leading only to the next problem: the heating bills in winter rocketed and staff complained of stiff necks and other maladies. Sick Building Syndrome was still here, but in a different form. How to provide adequate ventilation without simply heating the environment in winter? The only viable solution is control of the ventilation to reduce the exchange of air to the minimum required to keep a healthy atmosphere in the rooms, which is where indoor climate control becomes an active instead of just a passive discipline.

The real problem is the carbon dioxide, which is best measured with a NDIR infrared sensor. These are available in one or two channel technology for CO<sub>2</sub>, but the single channel version is quite accurate and stable enough for this purpose today. Older types of sensor used to drift, as do cheaply manufactured ones, but a good-quality single channel sensor today will remain stable over years, only requiring a reference point occasionally to set a relative zero point. Such infrared sensors for CO<sub>2</sub> are now available from a number of manufacturers such as Madur Electronics in Austria. These come complete with an appropriate analogue output to allow the CO<sub>2</sub> level to control the function of the ventilation system. Industry standard for these control functions is the 0...10 V output, but there are other varieties in use. These can be readily accommodated in the construction or calibration of the system to ensure a high quality of indoor climate control. Perhaps we have finally seen the end to Sick Building Syndrome and can now enjoy the benefits of a controlled climate indoors, if not outdoors.

Simon Fowler studied mechanical Engineering in London and now work for an electronic company in Vienna, Austria manufacturing flue gas analysers and infrared sensors.

### **Indoor Versus Outdoor Tanning**

**By Angela Maroevich**

The benefits of indoor tanning versus outdoor tanning are widely discussed in the cosmetic and health industries, It is ultimately up to you to decide which method is healthy and convenient for you.

When you visit an indoor tanning facility, your skin produces a tan in the same way that it does when you bask in the sun — through the absorption of ultraviolet light.

However, one of the dangers of outdoor tanning is exposing yourself to too much ultraviolet light. Climate changes in the atmosphere that has many of us slathering on sunblock and sunscreen before we step outside in the hot sun.

One of the benefits of indoor tanning is that it allows you to control the amount of UV light that you are exposed to, so that you do not get a sunburn or prepare your epidermis for a predisposition to skin cancer.

You cannot control harmful UV rays from the sun anymore than you can control the weather.

Compared to indoor tanning, outdoor tanning is actually one of the most unreliable ways to achieve that perfect tan. It is, however, a reliable way to achieve a sunburn. Waiting for a reddish burn to fade to a brown accelerates the aging process.

Indoor tanning equipment utilizes the same two kinds of ultraviolet light, UVA and UVB rays that are emitted by the sun. Indoor tanning procedures are highly regulated by government agencies in both Canada and the United States and the equipment is designed to mimic the effect of sunlight.

At a professional indoor tanning salon, exposure times are determined by equipment and trained

professionals that take into account previous tanning sessions as well as the tanner's skin type. This minimizes the possibility of the kind of skin damage that is common with outdoor tanning.

Convenience may also be a consideration when it comes to deciding whether indoor tanning versus outdoor tanning is best for you. Depending on weather conditions and government warnings that are issued about the strength of harmful UV rays emitted by the sun, it might not be possible for you to achieve that polished bronze look in time for that important meeting.

One of the main benefits of indoor tanning is that safe regular doses of ultraviolet light are prescribed for you in a controlled environment that suits your agenda.

Indoor tanning is also a great help for those suffering from diseases, such as psoriasis or osteoporosis, as UV rays assist the body in manufacturing the Vitamin D it needs to allay such conditions. This is a great benefit to individuals who need to "take their solar vitamins" regularly and are unable to do so on a rainy day.

A session in an indoor tanning facility is an intelligent way to maximize your health while at the same time minimizing your risk of sunburn.

You don't want too much exposure to UV rays, but the many benefits of indoor tanning, which also include prevention against wrinkles, should be carefully considered the next time you are tempted to slather on sunblock and lie out in the sun.

Angela Maroevich

© 2004 Angela Maroevich. All Rights Reserved.

Angie Maroevich (everyone calls her Angie) is a salon owner, athlete, dog lover, and all around nice gal.

Related Content:

[Indoor Versus Outdoor Tanning](#)

[What Is Dry Eye Syndrome?](#)

[Indoor Tanning Beds](#)

[Cultivate Your Own Clean Air](#)

[Why Air Purifiers Are Not Always The Answer To Indoor Air Quality Problems](#)

Read more Content at

Related Products:

[Stretch Assistant Software](#)

[The Ultimate Rose Garden– Neighbors envy, owners pride!](#)

The Buy Impulse  
Natural Pain Management  
Use and Abuse of Steroids

: A genuine resource center for Quality Ebooks and Softwares



This Free E-Book has been brought to you by [Natural-Aging.com](http://Natural-Aging.com).

**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**