



Stephen's Healthy Housing Column

Building Biology An Introduction

Stephen Collette, BBEC, LEED AP

Stephen Collette is a Certified Building Biology Environmental Consultant (BBEC). This lengthy certification analyses the built environment and how it impacts people's health. Stephen was a natural builder for 5 years specializing in straw bale construction. Stephen has an engineering background and training which enables him to understand the various processes occurring within the home and how they can interact. Applying these skills and knowledge to the standard home and small office enables Your Healthy House to find the reasons for poor indoor air quality and to create solutions to help create your healthy house.

Stephen Collette is a Leadership in Energy and Environmental Design - Accredited Professional (LEED AP), which allows Stephen to use the Canada Green Building Council's guidelines and method to ensure a quantitative approach to building

Stephen's Healthy Housing Column

Building Biology: An Introduction

Stephen Collette, BBEC, LEED AP

**“The
underlying
principle
is one
of
balance.”**

For many people whom I have the opportunity to talk with, teach and work with, the first question that comes into their minds is, “What is Building Biology?” I thought I would take the time in this article to actually explain what Building Biology is, what it is about, and how it makes a lot of sense for those who are struggling to find safe, healthy environments in which to live.

The phrase “Bau-Biologie and Ecology” specifically refers to the study of:

- *The impact of the built environment on human health, and the application of this knowledge to the construction of natural homes and workplaces; and*
- *The holistic interaction of human involvement with the environment and the regenerative sustainability of the environment.*

The underlying principle is one of “balance.” Materials that come from the natural environment make up the “living structure” and will promote health. When these materials are returned to the natural environment they will cause no harm. Problems occur for people and the environment when

synthetic materials and man-made pollutants are introduced and the essential balance is lost.

Bau-Biologie® is a multidisciplinary and international movement of concerned individuals who have quantified the environmental factors of the built environment that affect human health. This group of professionals is involved with delivering current information regarding environmentally friendly building systems and materials and improving the indoor environmental quality of homes.

Bau-Biologie was founded in Germany by a group of professionals from a variety of disciplines concerned about the inability of post-war housing to support health and ecology. Their research, work and efforts in the “Work Group Healthy Building & Living” led to the formation of the original institute which is now called The Institute of Building Biology & Ecology Neubeuern (IBN) or Institut für Baubiologie + Ökologie Neubeuern.

Helmut Ziehe brought this study to North America and started the International Institute for Building Bau-Biologie & Ecology in 1987, with a mission to raise awareness that building can abide by the laws of nature. This is where I took my training.



**“Heating
system
based on
radiant
Heat...”**

There are 25 Principles, which help define and explain Building Biology and they are as follows:

The 25 Principles of "Baubiologie" (Building Biology)

1. Building site without natural and human-made disturbances
2. Residential homes away from sources of emissions and noise
3. Low-density housing with sufficient green space
4. Personalized, natural, human- and family-oriented housing and settlements
5. Building without causing social burdens
6. Natural and unadulterated building materials
7. Natural regulation of indoor air humidity through humidity-buffering materials
8. Low total moisture content of a new building that dries out quickly
9. Well-balanced ratio between thermal insulation and heat retention
10. Optimal air and surface temperatures
11. Good indoor air quality through natural ventilation
12. Heating system based on radiant heat
13. Natural conditions of light, lighting and color
14. Changing the natural balance of background radiation as little as possible
15. Without human-made electromagnetic and radiofrequency radiation exposure
16. Building materials with low radioactivity levels
17. Human-oriented noise and vibration protection
18. With a pleasant or neutral smell and without out-gassing toxins
19. Reduction of fungi, bacteria, dust and allergens as low as possible
20. Best possible drinking water quality
21. Causing no environmental problems
22. Minimizing energy consumption and utilizing as much renewable energy as possible
23. Building materials preferably from the local region without promoting exploitation of scarce and hazardous resources
24. Application of physiological and ergonomic findings to interior and furniture design
25. Consideration of harmonic measures, proportions and shapes



**“Building
Biology
has
helped
me with
my own
environmental
exposures...”**

As you can see by this list, it goes a bit beyond the average “Green guidelines.” It takes in quite a bit of items that most people are completely unaware of. All of these points however have an impact upon us, and the environment around us. For most with MCS and other environmental sensitivities, the principles that focus on the indoor environment ring true as a means to creating safe spaces for living within. Building Biologists all over the world work hard to look at buildings using the principles, whether they are looking at new construction and design, trying to determine what is impacting people in their existing homes, or be they doctors, engineers, architects, building managers, real estate agents, running healthy building supply stores, Feng Shui consultants, or are people with MCS or environmental sensitivities and just simply want to know why, and how to move forward.

For me, personally, Building Biology has helped me with my own environmental exposures, and those of my family. We were exposed to mould in a 100 year old rental home and my wife and our first daughter became very ill. We didn’t realize until we went away for 10 days and they both got better. When we came home, their symptoms reappeared. I was building straw bale homes and thought I knew everything there was to know. Then a colleague led me to Building Biology. My life and that of my family has never been the same. We are now in a healthier home, another century home, but a much healthier home. There are still things to do around here, lots as my wife will tell anyone, but we are getting at it bit by bit and each step is chosen for the protection of my family. I am grateful for the knowledge it has given me, and my ability to share it with others and for me to make a business out of creating “Your Healthy House”.

To learn more about Building Biology, please have a look at the International Institute of Building Biology and Ecology’s website at:

<http://www.buildingbiology.net>

