A Checklist for Choosing a Healthy Mattress

By Mary Cordaro
Certified Bau-Biologist

Look for this article and other contributions by other leading Bau-Biologists in the 3rd Edition of Prescriptions for a Healthy House, Spring 2008.

By Mary Cordaro

Our homes are places for rest, retreat and regeneration. If designed, built and furnished simply, thoughtfully and intelligently, they can help us restore our natural balance and connection with nature. For most of us, however, creating a healthy home environment is often unfamiliar--and sometimes overwhelming--territory. It's hard to know where to begin. Even if you can't design for every healthy detail in your home, make sure your bedroom is as healthy as possible. It's the most important room in the house. And the most important piece of furniture in your home is your bed, where you spend a third of your life. We are most vulnerable when we sleep. Our bodies let down, shed metabolic waste, regroup and regenerate. A healthy, natural and well-designed mattress can provide the right conditions for all the important processes of the body's natural electrical system, internal organs and subconscious mind to work smoothly and without interference.

Our entire body is in close, direct contact with the materials we sleep in and on. And we literally inhale, at very close range, eight hours a night, whatever is in those materials. Most ordinary mattresses are made almost entirely of raw ingredients from the petroleum industry, which are made into synthetic components, such as visco-elastic and polyurethane foams, including Dacron that may be made with formulations containing TDI (toluene discarnate, which OSHA labels as a hazardous material) and other toxic chemicals. To meet the federal flammability regulations, they may also contain synthetic chemical fire retardants, called organophosphate chemicals. Mattresses containing natural materials, such as conventional cotton and wool, may also contain pesticide residues. The older a mattress gets, the more toxic it becomes, if it contains organophosphate flame-retardants and/or pesticide residues, because those chemicals never completely dissipate. Instead, they are released as chemical molecules that never completely "outgass" (which is why you often cannot smell them), and then they bind to house dust, which is then inhaled or ingested. This is why it's important to stay clear of mattresses that are marketed as "natural" but may still contain toxic ingredients. Mattress layers can also be held together with glues, and their fabrics treated with chemicals and harsh dyes. These materials are then wrapped in a quilted surface layer of synthetic fabric stuffed with

polyester. These ordinary mattresses trap moisture, dirt and dust creating a dust-mite haven, which can exacerbate allergies.

But there's good news: thanks to a fast-growing, "sustainable lifestyle" industry, you can now choose beautiful bedding, linens and textiles made from organic, natural materials, and comfortable mattresses that are healthy for the back and great for those who suffer from allergies. Here is a checklist of things to consider when buying your new bed.

First, narrow your search by limiting your choices to mattresses comprised only of high quality, natural components such as organic cotton, pesticide/chemical-free or organic wool, and natural latex, which comes from the rubber tree. Let's look at each of these components in more depth.

Wool

Mattresses and bed systems made with high quality, certified organic wool or "locally produced and 100% pesticide and chemical free" Pure Grow™ wool batting are my preference, because these types of wool are healthy, as well as a highly effective, fire retardant. Mattresses made without chemical fire retardants still have to pass federally mandated burn tests to prove their worth so you can be sure your family is still safe. Furthermore, wool cushions the joints and muscles, wicks and dries moisture away from the body, and is naturally dust-mite resistant, so you don't need synthetic barrier covers to avoid dust-mites. Since the average body loses about a pint of moisture vapor into the bed every night, it's important that the battings used in beds and bedding efficiently and effectively wick and dry, so that conditions favorable for mold and dust mites are eliminated. Wool is also a temperature and humidity regulator, so you'll sleep not only dryer, but also warmer in the winter and cooler in the summer, even in highly humid climates. Except for rare individuals with severe wool allergies, most people who can't wear wool clothing have no reaction to wool inside a mattress, because it is chemical free and encased under the mattress ticking.

Cotton

Some plusher organic mattresses also contain organic cotton batting, placed under the wool layer so that it does not attract dust mites. Organic cotton is best for the environment and your health because standard cotton is farmed with a high level of pesticides and herbicides. Not only is it a toxic burden for the earth and the workers who farm the cotton, but the residue of the pesticides used can remain in the cotton batting throughout the manufacturing process. Even if these residue levels are low, you don't want to spend eight hours a day with your face next to them. Organic cotton batting is a much healthier choice than conventional cotton batting.

Natural fabrics, such as organic cotton sheeting and ticking, are free of chemicals used in conventional fabric manufacturing. Organic fabrics that are un-dyed, or

dyed with natural and low impact pigments, are free of volatile organic compounds, or VOCs, which "outgas" in low levels from the process of fabric finishing, from conventional, synthetic dyes, and from permanent fabric treatments. Natural fabric coverings also eliminate a subtle type of electromagnetic field called "electrostatic charge." The result is a more healing bed, with natural surfaces don't attract as much dust as synthetic ones, because of the absence of static. Organic or sustainable, chemical-free fabrics support your body and the environment.

High Quality 100% Natural Latex (from the rubber tree)

Natural latex is a good, comfortable and contouring alternative to synthetic memory foams or mattresses imbedded with metal coils. Natural latex mattresses avoid the chemical stew found in typical foam mattresses and need no coils, or “inner springs” that might sag, protrude, and can prematurely age your mattress. High quality, natural, sustainably produced latex does not sag over time, does not need metal springs to keep its shape and can offer continuous support for as much as 20 years or longer, depending on the quality of the latex, and an individual’s changing support and comfort needs over time. Make sure that the mattress manufacturer uses only 100% natural latex, and no synthetic rubber blends. Lastly, mattresses with metal coils may pose other challenges for your body. Metal bedsprings (as well as metal bed frames) can act as antennas for man-made frequencies, especially radio frequency from FM radio, providing subtle, long-term exposures to a variety of low levels of electromagnetic fields, or EMF's. Metal also becomes magnetized, which may interfere with our bodies’ natural orientation to magnetic north.

Lastly, pay special attention to the facilities in which the bed is made.

To avoid cross-contamination from other types of materials, your organic bed should be made in a facility that only produces organic beds and bedding, or, at the very least, isolates its organic facilities from areas in which synthetics may be used, and does not run any synthetic or conventional fiber or fabric through machines that are used for organic fiber and fabric.

Ask if the factory making the mattresses does its own sewing, quilting and “garneting” (garneting is a mechanical process whereby short cotton (or wool) fibers are combed into a specific orientation and formed into a thin web, which are then layered to create a batting used in the mattress). If the manufacturer tends to outsource these and other steps in the manufacturing process, the chances greatly increase that your “organic mattress” has been cross-contaminated by synthetic materials in manufacturing plants that make both synthetic and organic products, or both conventional wool and cotton and organic wool and cotton products.

Ask if the raw materials, such as the cotton or wool used in your mattress, are domestically produced. If they have been transported from other countries in containers, they may add to the cost and will certainly open the materials to contamination from pesticide sprays and other synthetic materials. Transportation from other countries also greatly increases the product's environmental "footprint".

Ask if the manufacturer has had its mattresses pass the federal "open flame test" tested by a 3rd party, without the use of synthetic materials or highly processed, non-sustainable materials such as fiberglass mesh. Although wool is a highly important component, it's not the only ingredient necessary for a mattress that meets the federal flammability regulations. Natural wool, in the right weight and properly garneted, along with correct construction of organic and natural materials, will be an effective fire retardant, providing that there are no synthetic materials in the mattress.

If the mattress and bedding products are certified with an environmental label, make sure to inquire what that label actually certifies. Check that the certification process includes testing not only for VOC's, or volatile organic compounds, but also SVOC's, or semi volatile organic compounds, including from pesticides, flame retardants, biocides (chemicals that kill bacteria and mold) and plasticizers.

There are many beds on the market today that claim to be made of "natural" materials and offer significant health benefits. Because your health and the health of your family is so important, and because you have so many natural beds to choose from, make sure to do your homework and take this checklist with you when shopping for the right mattress.