

Third Party

SLEEP WELLNESS RESEARCH

that **OTHER MATTRESS MANUFACTURERS** don't want you to know

Doctors told us the ideal mattress should properly support your back, relieve pressure on your body, be made from safe materials and last for years and years. Below we'll look at the research we conducted on how different mattress materials provide support.

MATTRESS MATERIAL SAFETY

There are four basic types of materials used in mattresses: steel springs, foam (memory, poly, latex, and soy), cover materials (cotton, polyester, and bamboo), and plastic/canvas in air and water beds. Foam is the common ingredient used in every mattress type. Softer foams are used in the cover and in the top layers of the mattress for cushioning. Firmer foams are used on the sides and either beneath the spring unit or in place of the spring unit.

MATERIALS & HEALTH CONCERNS

The biggest health concern with conventional mattresses and their synthetic materials is off-gassing. Every mattress contains foam, and most foam is petrochemical-based meaning that it is made from oil. As a result, it can release noxious fumes as it wears. But what is that smell in memory foam? It's the off-gassing of toxic chemicals and is noticeably strong for weeks to months. If you sleep on memory foam, you are inhaling these toxins. This has been known to cause headaches and other severe health reactions.

The best mattress materials are not synthetic. The best materials are organic and non-toxic.

Conventional mattresses are filled with synthetic materials, like polyurethane foam. This foam constantly breaks down and releases chemicals. Polyurethane foam is made from chemicals that are known carcinogens.

Another issue with mattresses is fire barriers. Mattresses are required to be flame-resistant by law, so the fire retardant used in mattresses can also be slightly toxic and accounts for some of the "new mattress odor." PBDEs (polybrominated diphenyl ethers) or boric acid is the main ingredient used in mattresses as a flame retardant. PBDEs have been shown to have health effects in animals and are so toxic that Europe is phasing out the use of them completely.

Mattress materials are not regulated or rated for safety, but doctors say the ideal mattress should use natural, non-toxic materials as we spend about one-third of our life in bed. Many sleepers report a sensitivity to the materials commonly used in mattresses. Their complaints range from headaches and rashes to more serious issues. [Read more on our blog at intelliBED.com/blog.](http://intelliBED.com/blog)

THE BETTER WAY TO SLEEP



better support



better durability



better health



better materials



better comfort

How safe are the materials?



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BACK SUPPORT RESEARCH

The most important function of a mattress is to support your back. If your back is not properly supported while you sleep, you will wake up with back pain and stiffness. The core system, or support layer, of your mattress is what supports your back.

If it allows your hips to sag into the mattress it will throw off the alignment of your spine, causing back pain.

SUPPORT INDEX

What is The Support Index? This index seeks to quantify the relative ability of different mattress core materials/systems to properly support the human body, specifically the back. The single most important thing that the mattress core must do is to prevent the hips from sinking too deeply into the mattress. We all know the importance of standing up straight. When standing straight, the hips are centered directly beneath the shoulders. This places the least

amount of stress and strain on the skeletal structure. It is essential that this same posture be maintained when sleeping. After all, each of us has probably felt the pain in your lower back in the morning after sleeping on a bed that sags. But achieving this is not as easy as it sounds.

The lower torso is the heaviest part of the body, so gravity pulls harder there. If the mattress, particularly the core allows the hip to sink too far into the mattress, a misalignment occurs. If one is sensitive to misalignment, lower back pain results, and over time, almost all of us would develop a bad back. In order to prevent this from happening the mattress must push the hips into alignment with the rest of the body so there is no sag in the skeletal structure.

IntelliBED, with its unique combination of a top quality innerspring and advanced cushioning Intelli-Gel, provides the perfect combination of firm horizontal support that doctors recommend for a healthy spine and pressure relief that holds your hips and shoulders in the ideal sleep posture. [Read more on our blog at intelliBED.com/blog.](http://intelliBED.com/blog)

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better support



better durability



better health

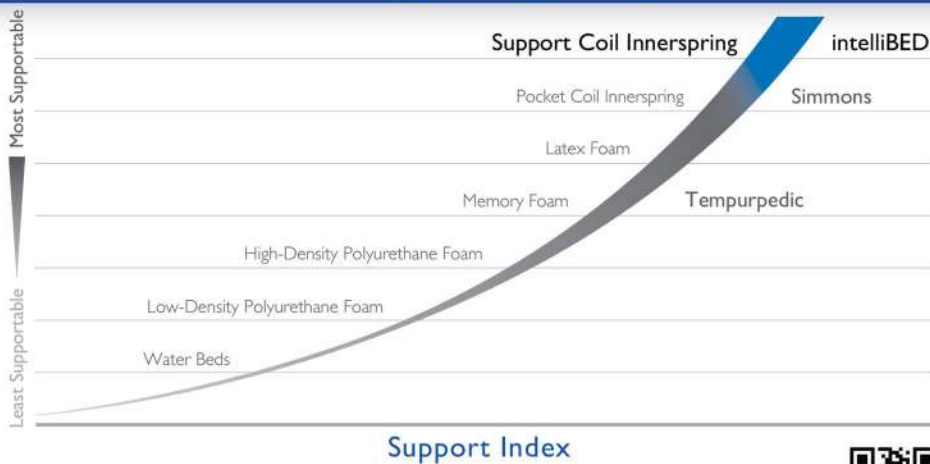


better materials



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How it supports your spine



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PRESSURE RELIEF RESEARCH

Since the primary function of a mattress is to provide proper support for your back, pressure points build on your body where the most support is being given. To combat this, comfort layers are added to mattresses to relieve pressure caused by a core support system, thus allowing you to fall asleep without any aches or pains and tossing and turning at night. This is necessary because when you experience pressure and move during sleep you almost wake up to do it, leaving deep sleep (levels III & IV) which is when your brain actually repairs your body. Good pressure relief translates to better comfort and more importantly more deep, healing sleep.

COMFORT INDEX

What is the Comfort/Pressure Relief Index? This index rates the relative comfort provided by various types of materials. Comfort in its traditional sense is very personal. Some like a firm bed, while others prefer a soft bed, making it difficult to assess or "rate" comfort.

One way to quantify comfort is to consider the ability of the material to relieve pressure. Pressure relief is important whether we like a firm or soft feel. Excessive pressure causes tossing and turning, which can lead to pain, interrupted sleep, and even pressure ulcers (bed sores). Sophisticated computerized pressure-mapping devices measure pressure points and accurately show how effective a mattress is at pressure relief. Over the years, IntelliBED® has mapped thousands of individuals on all the different mattresses available. This data allows us to rate the effectiveness of the materials in the chart below.

One relatively new mattress material, Intelli-Gel®, has been shown in computerized pressure testing to provide up to 80% more pressure relief than any foam. This material was originally used in hospitals for severe wound care like the cure of bed sores. Additionally, endurance testing shows that Intelli-Gel®, a 100% co-polymer gel, wears up to 10 times slower than foams, meaning it will cushion properly for as long as steel springs in leading mattresses.

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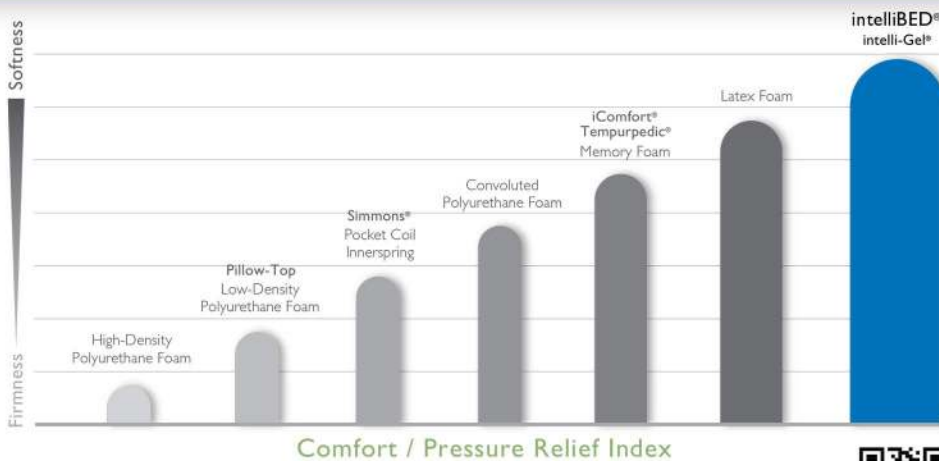


better materials



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How it comforts your hips & shoulders



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