

The Father of Necessity The Sleep Angel Pillow

Before co-inventing the Sleep Angel pillow, David Woolfson had to comfort his own daughter who became the victim of an unclean pillow. The result was scabies on the face, a condition marked by itchy skin due to mites that burrow into the epidermis.

“She picked it up from a guest bed pillow in England,” muses Woolfson, co-founder of Dublin, Ireland-based Gabriel Scientific, makers of the Sleep Angel pillow. “Seeing her suffer from scabies gave me a massive motivation to come up with something to prevent that type of thing from happening to someone else.”

As distressing as the scabies episode, it soon became clear to Woolfson and co-founder Billy Navan that so-called “super bugs” were on the rise in various hospitals. Ward closures, infected patients, and even fatalities threatened the quality of care even in top-notch facilities.

Navan supplied textile-based products to hospitals in Ireland, and his customers confirmed that there was a need for new technology to better protect patients from bedding-related equipment. “Billy spoke with a seamstress at a major hospital who reported that every time she repaired a pillow she got an infection in her eyes,” says Woolfson. “Billy knew I was into research, and he asked if I could come up with a solution.”

Armed with know-how, demand, and personal motivation, Woolfson researched literature about the importance of preventing “strike through,” which is essentially the passage of microbes and pathogens to the interior of a mattress. He found a lot of attention devoted to mattresses, but little or nothing about the role of pillows.

“A pillow is just a little mattress for your head where you are most vulnerable, because that’s where you breathe, and it makes contact with eyes and ears—all points of infection ingress,” says

Woolfson. “There was no particular standard or design criteria with pillows, and they were the elephant in the room—not just in hospitals but for people in rehab facilities, nursing homes, and those taking overnight polysomnography tests in sleep labs.”

Woolfson and Navan figured that if they could block the passage of contaminants from getting to the interior, those same contaminants would not be allowed to flourish. “The interior of pillows and mattresses is like a petri dish in that it’s warm and moist,” explains Woolfson. “It’s cellular, and it’s a perfect environment for these pathogens to prosper.”

The solution was a hermetically sealed cushioning device with a bacteriological filter. The filter is also hermetically sealed onto a window on the cushioning device, effectively blocking the route of pathogens into or out of the product. The highly specialized “micro-porous filter composite” is sealed onto an aperture that fits onto a comfortable cushioning device using proprietary processes. “Whether it’s for the home, hotel, hospital, or sleep lab, it has to be comfortable,” adds Woolfson. “You must be able to inhale and exhale so the shape and drape is designed for that.”

The filter composite, its application, and its method of application are either patent granted or patent pending in every primary market in the world. Specifically, Europe and China are patent granted, while the U.S. market is still awaiting an official patent. Woolfson says exports to the far east are going well, and the product is resonating with customers down under in Australia and New Zealand.

The Opposite of Bedding Protection

Sleep Angel is not bedding protection, a common misconception that Woolfson is keen to dispel. “The idea of mattress and pillow protectors is to protect the mattress or pillow from you, whereas ours is the opposite,” explains Woolfson. “Sleep Angel protects

you from the mattress and pillow. It will also protect itself because it's stain resistant and will stop even the smallest of contaminants from getting in. However, its primary benefit is that it reduces exposure to triggers, especially for asthma and allergy sufferers. For the general population, it's a way of having a more hygienic product."

As for Woolfson's daughter, not surprisingly she has an "absolute fear" of Scabies. These days, she brings along her own Sleep Angel pillow for traveling. "The scabies incident really brought it home," he says. "This new technology applies to so many other conditions and situations, so it worked out well in the end."



Irish Innovation: A Conversation with the Co-Inventor of Sleep Angel

Sleep Diagnosis & Therapy: Why would hospitals and sleep labs be interested in the Sleep Angel Pillow?

David Woolfson, (co-founder of Dublin, Ireland-based Gabriel Scientific, maker of the Sleep Angel pillow):

Hospitals are looking for durability—something that is going to retain its shape as long as possible and provide support when patients are sitting up. When they buy our pillow, they are looking for something that is a significant improvement in terms of infection prevention and control.

How has Sleep Angel performed as a cash/retail item?

We're in some of the main retail outlets in Ireland and the UK. They are looking for different things. The textile has to have more of an appeal, so rather than being medical blue, it's a white color. Rather than having a polyurethane handle, the feeling on the outside is much more like a shell jacket, like a North Face jacket. The potential benefits to the consumer base are significant.

Can you put the proprietary cover over any type of pillow filler?

We now find that if we put our cover over memory foam, then you have a lovely memory foam pillow, but with the added bonus of Sleep Angel hygiene. It won't succumb to that process whereby all pillow products become colonized over time with dust mites, allergens, and sometimes mold or worse. If we put our cover over micro-fiber or synthetic down pillow or pillow filling, you've got a really comfortable fluffy soft pillow. Its whatever your comfort preference is plus the added bonus of our scientifically proven cover with a filter.

How would you describe the pillow in a line or two?

It's the pillow with a filter. That's the best way to explain it.

How heavily have you explored the consumer market?

In the United States, we have now presented to three leading retailers. The response has been overwhelmingly positive. We have purchase orders from two major retailers in the United States. If that comes to fruition, which I fully expect it will, then it will be in multiple stores in the last quarter of this year. Ahead of that we have a start with the Denver Mattress Company.



What type of improvements and/or changes do you plan to make?

We have been given homework—as in we need to have a range of options. You can't just have one pillow. We need various sizes and descriptors on our packaging. We need more sizing and comfort options. We have a great story to tell. You have a villain, the contaminants. You have the victim, the sleeper. And you have a hero, which is the filtered pillow—the item that will solve the problem.

The next thing is to offer mattresses and mattress tops with our cover technology. Further down the road we have a kind of travel pillow cover. It has a re-sealable closure that is air tight. So you take your hotel pillow, put it inside this, seal it closed. It is healthy and hygienically guaranteed, and you then take it with you the next day.

What do you hope the company will look like in 5 years?

The best-case scenario is to cement a reputation as a trusted technology and functional brand. I'd like to see Sleep Angel be recognized for its important functionality and consumer benefit in hospitals, hotels, sleep labs, and in the home. Hotels are really important. You're really vulnerable because you are sleeping on whatever the other person left there the night before.

What do you say to skeptics who may question the claims you have made?

There are so many iffy claims made that are not provable. The difference with our product is that it is backed by sound science. We've just gone through the most stringent testing probably ever devised for bedding products in conjunction with a global leader in home environment testing—an organization with a license from the Asthma/Allergy Foundation of America. They have never tested something that is as effective as our product in this category. This is the first time they have come across a product that is a 100% barrier with air flow. These are not just claims. It is not hocus pocus. It is a scientifically proven product.

How competitive is this product category?

At the moment there are no direct competitors in terms of our proprietary design and functionality of the product. There is a category, and it is the fastest growing one in the bedding industry, and with the most added value—probably because it offers the most in terms of comfort to the consumer—and that is called specialty sleep. The global leader in specialty sleep is Tempur-Pedic.

What are consumers willing to pay in the specialty sleep category?

When it comes to specialty sleep, the price range for a specialty sleep pillow, whether it's latex, gel, memory foam, duck down, or goose down—you're in for \$80 to \$120 per unit. That is our competitive landscape. You get pillows that retail for more than \$200 if you want to go into Hungarian goose down or the gel pillows. There is major demand amongst consumers for products that provide a special benefit, or added features, in the price bracket between \$80 and \$100 at retail.

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