## **Aeron with PostureFit**





Aeron is nu ook leverbaar met PostureFit lendesteun

U kunt uw bestaande Aeron zelf ook upgraden met de PostureFit

Voor prijzen zie onze website

PostureFit represents a major ergonomic breakthrough in seating that delivers custom-fitted support where it's needed most: in the lower back area below the beltline, where the spine meets the pelvis. Available now as an option on the Aeron chair, PostureFit is the next-generation, research-driven ergonomic solution that supports a healthy posture and significantly improves lower back comfort in a work chair.

## How does PostureFit respond to today's office work experience?

Recent Herman Miller research confirms what many of us already know: Today's technology explosion often puts office workers literally on the edge of their seats—sitting upright and forward—during much of their working day.

When you sit this way for an extended period of time, you tend to slouch and your spine loses its natural alignment. The results of slouching? Fidgeting, fatigue and general discomfort, quite often followed by lower back pain, tight shoulder and neck muscles, and headaches.

Unfortunately, office seating today - including chairs with a lumbar feature - doesn't provide the lower back, below-the-beltline support necessary to encourage a good posture and maintain spinal alignment.

PostureFit changes all that. It works with the body's biomechanics to sustain the natural alignment of the spine. By doing so, PostureFit effectively promotes good posture and significantly improves seated comfort.

## **How does PostureFit work?**

PostureFit provides custom-fitted support by filling the void that exists between your lower back and the back of your chair. By filling this void, PostureFit supports the natural forward tilt of your pelvis to promote the alignment of your spine. This enables you to sustain a healthier posture and, as a result, to experience a greater

degree of long-term comfort while you work.

## Why does PostureFit work?

It works because the position of the pelvis determines spinal alignment. Rotating the pelvis forward restores natural spinal alignment - and that's exactly what PostureFit does.

#### Is there any research that looks at how people sit while working?

The study, Office seating behaviors: an investigation of posture, task, and job type, by William Dowell, Fei Yuan, and Brian Green of Herman Miller, Inc., was conducted to determine if there is a relationship between seated postures, seated tasks, and job types. A field study was conducted with 40 office workers, who were observed within their workstations via videotape for approximately 31 hours. Their postures and tasks were coded using software. The job types were categorized as administrative, technical/professional, customer service, and executive. Behaviours were examined according to frequency of occurrence, duration of occurrence, and percentage of working hours that the behaviour was held.

Using these criteria, the following job-specific behaviours were identified: Technical/professional workers spent a significantly greater percentage of their time with the mouse in their hand than the other job types.

Customer service workers spent a greater percentage of their time looking at the VDT (video display terminal) and typing on their keyboard than the other job types. They also looked at the VDT more frequently than the other job types.

In terms of postures, customer service workers sit with their arms in a neutral posture for a larger percentage of working hours than the other job types.

Through the analysis of the total data set, it was determined that the office workers studied spent approximately three-quarters of their time sitting upright and/or forward of upright while in a seated posture.

## What are the benefits of a healthier posture?

Research confirms that slouching and similar seated postures can cause backaches, headaches, fatigue and poor concentration. A healthy posture - when the spine is properly aligned - promotes greater overall comfort, including improved concentration and endurance through long hours of seated task work. PostureFit is designed specifically to support a healthier posture while providing improved lower back comfort.

Why is good posture so important, and what are the drawbacks of poor posture? Good posture balances your body weight on your skeletal structure, as nature intended. This reduces the workload on your muscles, enhances blood circulation throughout the body and relieves pressure on the diaphragm, which improves your breathing and helps prevent fatigue.

When you slouch, your spine goes out of alignment and your muscles are required to work overtime to make up for the lack of skeletal support - that is, they have to hold up the extra weight that is not supported by your skeleton. In addition to wear and tear on the muscles, this also stresses your body's other soft tissues, specifically the ligaments and tendons.

Additionally, poor posture places more pressure on your lower back, notably the

discs that make up your spinal column. This condition results in the backaches, headaches, and other uncomfortable symptoms that many seated workers experience, and can lead to more serious and chronic lower back problems.

## How does PostureFit provide better lower back support?

By filling the void between the lower back and the back of the chair with customfitted support, PostureFit addresses the source of many back-problem symptoms an unaligned spine - rather than the symptoms themselves. PostureFit works with the body's biomechanics to sustain the healthy forward tilt of the pelvis.

### Why is lower back support so essential?

Because your lower back must work so hard: It has to carry your upper body weight while also dealing with the pull of gravity, which is significantly greater on your lower body than your upper body.

It's also a fact that among chronic disorders, lower back pain is the second greatest cause of visits to physicians, the fifth most frequent reason for hospitalisation, and the third most frequent reason for surgery.

#### What about lumbar control?

For years, the lumbar-control concept defined the standard for back support in a work chair, often based on the belief that "more pressure equals better support." We've learned a few things over the years, chief among them that in matters of postural support and seating comfort, quite often "less is more." PostureFit works with the body's biomechanics to gently support the area that needs it the most, the lower back below the beltline.

Rather than trying to address the symptoms of poor posture - the bending outward of the lumbar region - PostureFit goes right to the root cause, allowing the pelvis and base of the spine to sustain a forward position.

Simply stated, PostureFit is to lumbar what Aeron's pellicle is to traditional foam and fabric: a new definition for comfort and support in a work chair.

# How does PostureFit reflect Herman Miller's design heritage and leadership in ergonomic research?

Herman Miller has studied the importance of a healthy posture since the 1970s and is responsible for introducing the first ergonomic work chair, Ergon.

#### Additionally:

Herman Miller created the Ergon chair's seat pan to support the pelvis The Equa chair's criteria included pelvic support and stabilisation The Aeron chair's design set new standards for ergonomic comfort

Today, by offering the PostureFit system option on Aeron, we are setting a new standard for healthy comfort in a work chair.

#### Why was the Aeron chair selected to feature PostureFit?

Aeron and PostureFit are a great match. Both represent advanced thinking in ergonomics. Aeron's co-designer, Bill Stumpf, along with Jeff Weber of Stumpf/Weber + Associates, took part in designing PostureFit. Like Aeron's pellicle material, PostureFit provides custom-fitted support. Like Aeron's Kinemat tilt, it works with the body's biomechanics to support natural movement. Additionally, Aeron's distinctive transparent design and shape provide the ideal setting to showcase PostureFit's unique qualities.

## What are three key words that can be used to describe PostureFit?

Natural - working with the biomechanics of the body Healthful - achieving proper spinal alignment Comfortable - providing unparalleled lower back comfort

## **Ordering information**

PostureFit is available exclusively on all three Aeron chair sizes, and can be retrofitted on previously purchased chairs. List price is the approximate local equivalent of US\$90. Unrestricted order entry begins in autumn 20002

## The PostureFit design story

PostureFit's design story began in November 2000 when Herman Miller contacted Dr Brock Walker, a back care specialist and holder of multiple patents in fields including biomechanics and ergonomics.

Herman Miller wanted to know more about Dr Walker's research and insights. Meetings were scheduled at the company's US headquarters and it didn't take long for both sides to realize they were following similar paths.

"I discovered we had a lot in common, in terms of our respective interests," Brock Walker says. "I recognized a genuine passion and enthusiasm on Herman Miller's part in exploring emerging seating technologies for its customer base."

A former competitive downhill skier, Dr Walker went on to run a successful chiropractic and inter-professional back pain clinic. He soon turned his knowledge of spinal care into the full-time study of human performance, seating and seating environments. Dr Walker eventually established a successful consulting business with a client list of leading corporations, along with military assignments worldwide and projects in the marine, aerospace and motorsport industries.

Dr Walker's expertise in medically engineered seating technology had helped create safer seating environments in jet plane cockpits and racecars, yet until Herman Miller came calling he had never worked directly with the office furniture industry. His growing relationship with the company proved to be a revelation. "At Herman Miller I saw a genuine interest in working together to better help the customers who use their products," he explains, "and that hasn't changed."

Dr Walker began working with Herman Miller engineers as well as Bill Stumpf, codesigner of the Aeron chair, to explore their common vision of a seating solution that could maximize human performance, fit and comfort in the work environment. Walker shared his experience, concepts and prototypes; Herman Miller its research findings and ergonomic knowledge; Stumpf his considerable design expertise. From these collaborative efforts, the PostureFit concept began to evolve.

"Brock's experience lined up nicely with our own observations," says Bill Dowell, Product Research lead at Herman Miller. "Our research shows that workers tend sit in a forward-leaning position, that is, slouch, during much of their day. This contributes to fatigue, backaches, headaches and sometimes more serious health problems on the job. Until we met Brock, I hadn't seen a solution that promotes a healthy posture and addresses what we call the 'void,' that area behind the

beltline between the person and the chair back. Brock's automotive and aerospace work in seating confirmed how critical it is to support this area."

Dr Walker and Herman Miller understood that whether breaking the sound barrier at 30,000 feet or simply racing a deadline at the computer, everyone needs the proper lower back support for optimal concentration, endurance and good health. They developed PostureFit to work with the body's biomechanics to support the natural forward tilt of the pelvis; this in turn enables the spine to maintain its alignment for a healthier posture and improved lower back comfort.

Combining Dr Walker's ideas and Herman Miller's ergonomic expertise with Bill Stumpf's design finesse, the Aeron chair became the obvious focus for the first application of the PostureFit technology. The chair that rewrote the book on healthy, comfortable seating would again introduce a new ergonomic standard.

"Aeron's pellicle material surprised a lot of people who were sure that foam and fabric would always set the comfort benchmark," says Herman Miller Product Manager Randy Brown. "We are convinced that PostureFit will do the same for lower back comfort in a chair, even among devotees of lumbar support. Rather than trying to address the symptoms of poor posture—the bending outward of the lumbar region—PostureFit goes right to the root cause, allowing the pelvis and base of the spine to sustain a forward position."

PostureFit's relatively modest profile lends credence to the old saying that good things come in small packages. The design, reminiscent of a butterfly shape, sits comfortably within the Aeron's familiar contours. "Like Aeron, PostureFit's design reflects what we are learning about the human torso," says Bill Stumpf, who designed PostureFit's application to Aeron with Jeff Weber. "In and of itself, I think PostureFit represents a positive, evolutionary and exciting step forward. It's leading the next wave of ergonomics."

A fundamental Herman Miller principle holds that great design lives on a human scale and is best judged by how effectively it makes people more comfortable and capable. In that respect, PostureFit succeeds on both counts

#### **Brock Walker**

Dr Brock Walker is a specialist in musculoskeletal disorders (MSDs), the injuries that affect ligaments, joints, muscles and the spine. He holds patents in 24 countries in the fields of biomechanics and ergonomics. Herman Miller's PostureFit seating technology is largely based on Dr Walker's patient care experience, research findings, and acknowledged expertise in the emerging field of medically engineered seating technology.

Brock Walker grew up in Michigan in the US, in a area popular for downhill skiing. Typical of many locals, he embraced the sport at a young age - he was ski-racing by the age of seven. A skilled and passionate skier, he competed as both an amateur and a professional on US, Canadian and European tours, even winning a national championship.

A series of back injuries eventually led to Dr Walker's retirement from the sport; however, it focused his attention on MSDs. An early interest in the design and engineering of ski equipment also carried over into his later studies regarding the

connections between technology and human performance.

Following his chiropractic education, Dr Walker opened a private practice in Lansing, Michigan in 1978. The Walker Clinic took a cross-discipline approach to the diagnosis and treatment of MSDs. During his 14 years of practice, Dr Walker earned praise for his inter-professional cooperation, insights, and successful spinal treatment programmes.

A reputation as an expert in spinal problems soon placed him in high demand as a consultant to groups including industry, labour organisations, insurance companies and the Michigan State legislature. His thriving practice and consulting business enabled Dr Walker to pursue his evolving interest in the study of human performance, seating and seating environments.

Following his retirement from private practice in 1992, Dr Walker built a laboratory in Brighton, Michigan, dedicated to exploring the connection between technology and health, medicine, safety, and the human factor. His research resulted in an expansion of his consulting practice to include Fortune 100 companies, the US and foreign militaries, and the marine, aerospace, entertainment, and motorsport industries.

Today, Dr Walker's medically engineered seating designs have helped develop safer cockpit environments, as well as improved safety and success rates in virtually every category of motorsports. Many of his innovations are enhancing lives and seating environments in home, workplace, transportation, and health care facilities everywhere. Additionally, Dr Walker's passion for cultural diversity, international travel and his life's work has enabled him to assemble a global network of scientists that serves as a resource in his numerous business and technology ventures.

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