

ACTIVE
SITTING





The most innovative concept for sitting in the office is also the oldest: active sitting.

To improve sitting ergonomics even further, we have to be ready to break with established traditions and readdress fundamental questions.

What is human nature? What do we need for our well-being? What potential for healthy sitting have we yet to tap?

Sedus has done exactly this. In a scientific research project in collaboration with Munich Technical University, Sedus has developed and tested a new sitting concept and then transformed it into a new office chair which now allows “natural” sitting for the very first time.

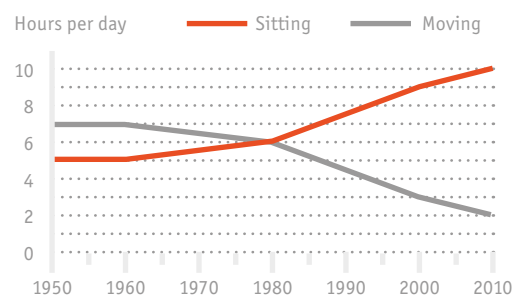


Humans – made for walking

Evolution shaped human beings for movement. We are happiest and healthiest when we move about a lot.

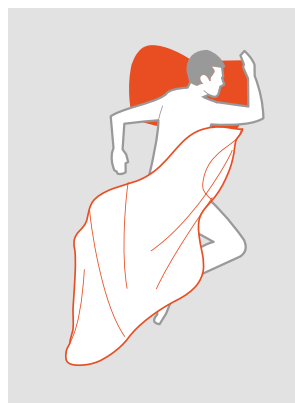
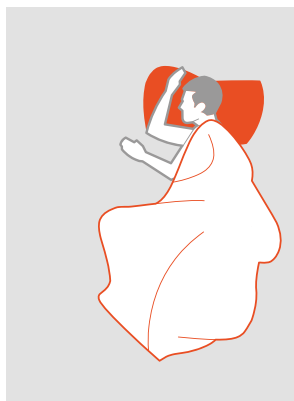
In the modern office environment, humans sit with a body whose physiology has remained unchanged for millions of years. Perfectly built for a life constantly on the move, just like the early hunter-gatherers. However, instead of searching endlessly for food, we now spend most of our waking hours sitting down. In cars, in office chairs, on the sofa. In the meantime, we have discovered just how harmful this can be. So what should we do?

The body itself points us in the right direction with the way it moves naturally. If we let it. For example, when we stand without any support, we are never completely static. "Standing still" is something we force ourselves to do, but a stance that we would never adopt naturally. We move from one leg to the other, shift our weight

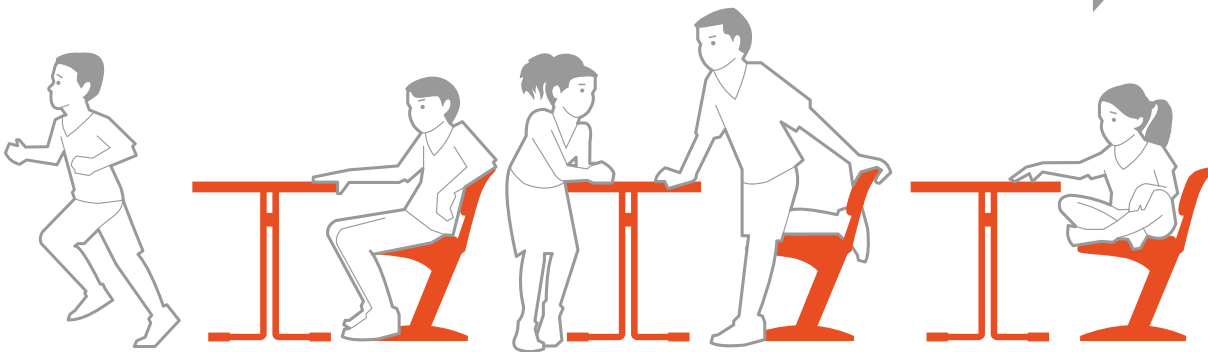


In the past, people spent considerably more time moving.

or steady ourselves by subconsciously moving our pelvis. Even when asleep, we are constantly on the move: we toss and turn up to sixty times every night. Without waking up, completely subconsciously, steered automatically by our bodies.



Children naturally demonstrate what physiologically healthy sitting behaviour really means – constant movement.



Life is movement

Leonardo da Vinci knew it centuries ago: “All life is movement, movement is life.” The science of today confirms it.

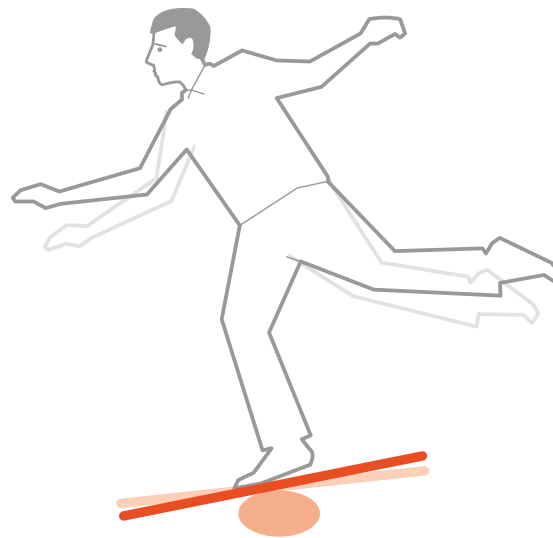
For a long time, “back-relieving sitting” was the doctrine in office ergonomics. However, the latest academic reports show: Relieving is the wrong way. Relief means removing effort. This underchallenges the body, which reacts according to the “use it or lose it” principle by reducing biological functions and productivity. A healthy lifestyle is only possible if the human body is challenged and encouraged in its natural desire for movement. Evolution has transformed homo sapiens into a highly specialised creature,

whose quality of life is based on complex interplays between body, mind and spirit. Regular changes in posture are essential for supporting the most favourable physiological processes. Not just because the intervertebral discs, muscles and locomotor system require alternation between tension and relaxation, pressure and relief. Physical dynamics are also very important for mental activity and emotional well-being.

Movement that makes sense

Sitting motionless puts pressure on body and mind.
In other words: you can only be a mover if you move yourself.

Balancing shows us the complex abilities of the body's own sensory system.



Everybody is familiar with the situation: you are sitting highly motivated and interested in a presentation, but after just half an hour your mind starts to wander and it becomes harder and harder to concentrate on what you're listening to. The cause is not usually the quality of the presentation, but rather the fact of being forced to sit still. It not only causes insufficient oxygen supply to the brain, but the body's system of perception which has been condemned to passivity is also important.

After all, in addition to the familiar five sensory organs (eyes, nose, ears, mouth and skin),

humans also have a number of other sensory systems, which work together with our sense of balance to define body awareness and the sense of self. This so-called vestibular-proprioceptive system functions with sensors, which are distributed throughout our bodies, where they are constantly stimulated and report back to the nervous system and brain. A subconscious, self-controlled process which is highly significant for our well-being and our mental vitality. Rigid posture can "shut down" this important reporting system – with dire consequences for the body, mind and psyche.



Back to nature

The sitting revolution can only happen if we look at evolution and respect human nature.

In light of the recently verified scientific findings about the significance of movement for humans, one thing quickly becomes clear: Office chairs that do not allow sufficient movement are anything but human-friendly. But the same applies to chairs which encourage the wrong kind of movement.

Thus, from an academic perspective, there are considerable calls for the development of a new, trendsetting sitting concept: The functionality of an office chair must offer scope for our natural need to move.

The emphasis here is on “natural”. This means that the movement must not be imposed by the technology; the person must not be dictated to. Movement should be possible without the need to concentrate on it and without any hindrances. Self-controlled and subconscious, trusting in the body’s intelligence.

Thinking from a human perspective

The road to innovation is paved with many questions. So it's good if you have the experience to ask the right ones.

Since the 1970s, Sedus with its patented "Similar" mechanism has been a pioneer in promoting the development of dynamic sitting concepts. The company owner at that time, Christof Stoll, said in an interview back in 1977 that "all the joints should be moved regularly, from the toes up to the highest cervical vertebra". The human body has always been the focus of Sedus's ongoing campaign to optimise healthy sitting in the office.

Based on proven designs, the developers at Sedus are always on the look for an even better solution to find perfect sitting ergonomics. The starting point for the most recent innovation was the need to support movement when sitting even more effectively than with previous solutions.

Where is the untapped potential for healthier sitting? How much freedom of movement do humans need? Which possibilities for movement make sense? Which consequences do greater freedom of movement cause for our sense of safety and support when sitting?

The latest scientific results provide fundamental answers to these and many other questions. A wide-ranging research project in collaboration with scientists at Munich Technical University (TU München) cleared the way for an innovative solution.

The benchmark is high: the impressive range of seminal innovations premièred by Sedus over 140 years.



approx. 1900
Swivel chair with bentwood components made of beech



1925
Federreh: the first swivel chair with a spring column and mechanical adjustment of the seat height



1929
The first swivel chair in Europe with castors



1935
Nereg mechanism: the swivel chair with variable tilting mechanism allows movement in all directions



1973
london 1 with Permanent Contact mechanism: the comfortable backrest and the attractive price make it a best-seller



1973
repose with patented Similar mechanism: the first swivel chair with controlled movement of the seat and backrest

Sedus is synonymous with ergonomics and design, quality and environmental protection.



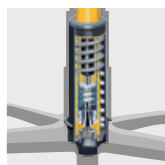
Independent institutions have certified time and time again that Sedus products meet the highest requirements.



1979
london with new Similar mechanism: further developed as a module for many other armchair models



1986
paris with first dorsokinetic mechanism: the first swivel chair with a dorsokinetic backrest joint



1989
Sedo-Lift mechanism: the height adjustment gives particularly gentle cushioning when sitting down, and is extremely durable (30-year guarantee)



2000
open up with new Similar mechanism: the first swivel chair with a reclining angle of over 40°



2006
netwin with Similar mechanism: swivel chair with quick adjustment of spring force



2006
crossline with Similar-Plus mechanism: swivel chair with movement specially synchronised with the back

Basic research

A strong partnership: science and experience go hand in hand. In the cooperation with TU München the latest studies and research insights concerning all aspects of human movement and sitting ergonomics were used.

The institute of ergonomics at Tü München has been researching on the topic of dynamic sitting intensively for a long time. The first step in the cooperation with Sedus was extensive academic research into the requirements, possibilities and limitations of the human locomotor system. In parallel, test persons tried out ten different swivel chair models currently on the market, from both Sedus and other manufacturers, in their normal working environment, in other words: under real conditions.

The results of this basic scientific research showed that no solution currently available offers optimal conditions in terms of natural dynamic sitting. So there was considerable potential for a new development. This particularly applies to the movability of the hip joints. Another important point: the expanded range of movement must under no circumstances result in insecurity for the user, as has been shown. This requires a targeted, limited application of the movement effects, and no extremes which might overwhelm people.



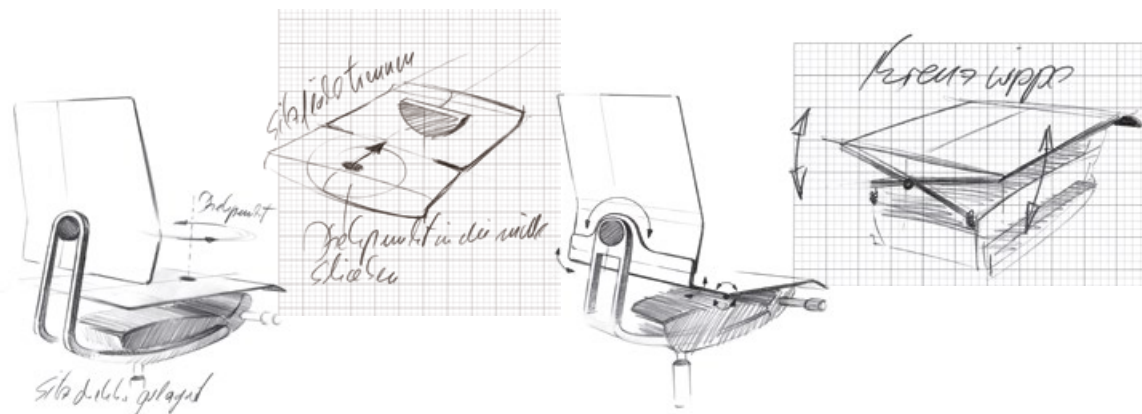
With the insights out of the basic research, Sedus was able to start the development of the new kinematic sitting concept on a sound academic basis. In an extensive development process, a wide variety of ideas and approaches were elaborated, converted into prototypes and carefully tested.

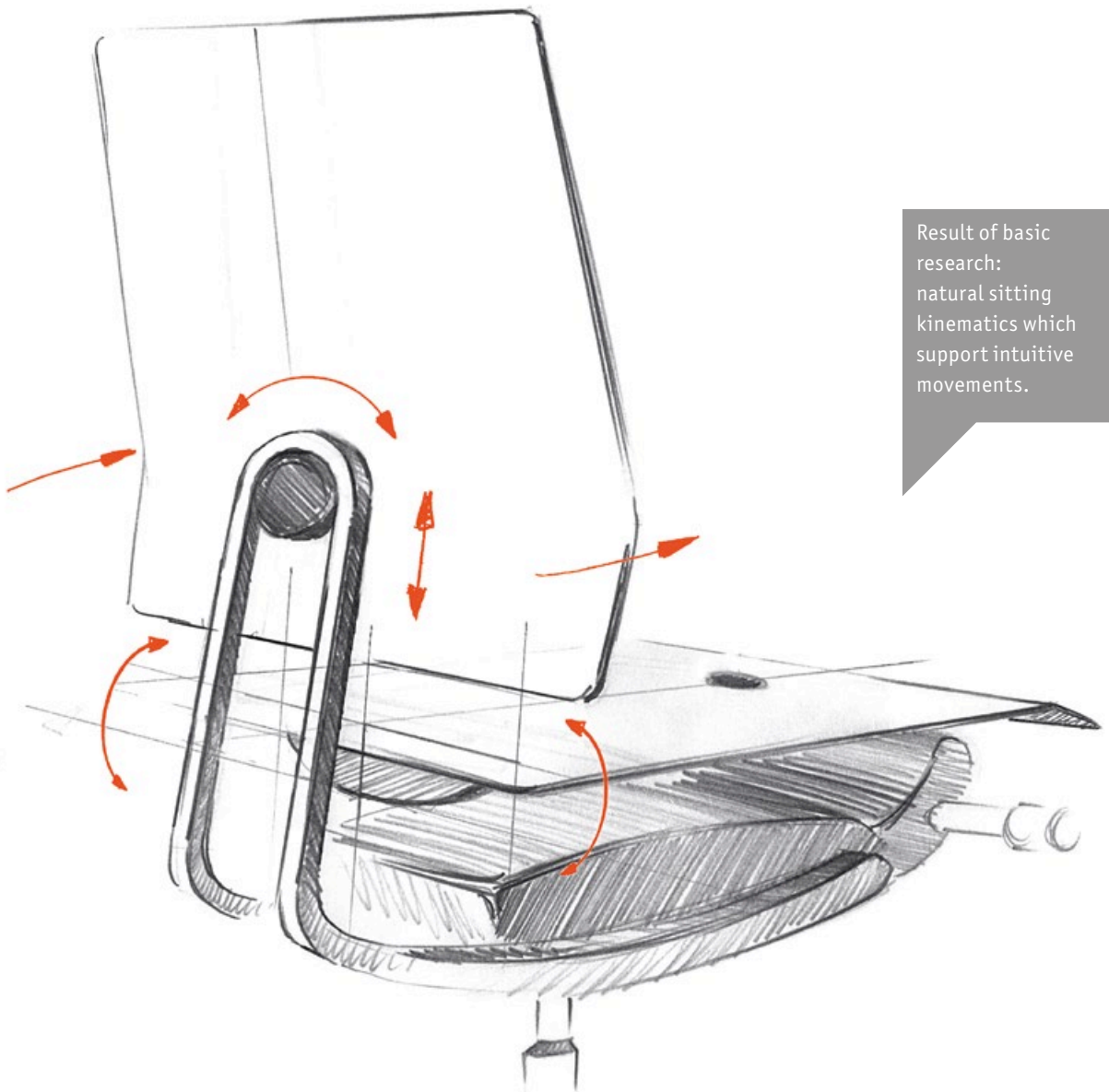
Over a number of stages, and applying meticulous attention to detail, a fascinating end result was created: a new dimension of dynamic sitting.



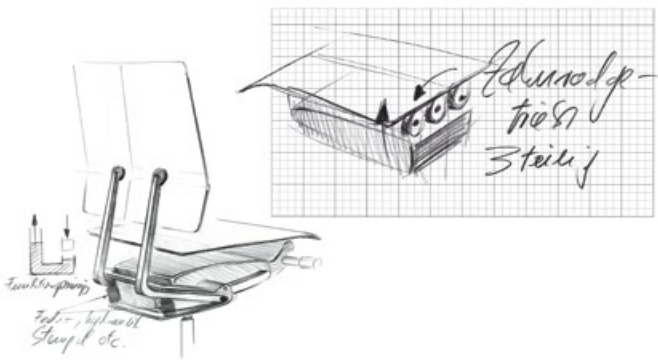
2012

Academic cooperation with the TU München for the development of a new kinematic sitting concept





Result of basic research: natural sitting kinematics which support intuitive movements.



A world first: active sitting

Transforming a great idea into a chair which is ready for serial production involves a lot of work and a lot of people. At Sedus they are united by the desire for excellence and a passion to find a better solution.

Free movement in all directions is the striking characteristic of the new Sedus swing up.



The mobile Similar Swing shell in combination with the "Similar" mechanism allows perfect synchronism with an expanded range of movement.

The task for the developers and designers was to create an office chair which offers the optimal degree of freedom for movement when sitting, while at the same time providing a great feeling of safety and security, combined with a complete comfort experience. Features that are also visible.

All this is incorporated in the new office swivel chair Sedus swing up. It offers the body freedom

of movement, but without imposing it. The right degree of freedom is applied: in other words sufficient, but not excessive. Movement is harmonious and flowing, without any flashy "special effects". Tests have shown that this kinematic concept is perceived as very pleasant and safe. The new freedom of movement is employed intuitively, without having to "learn" it first. The body perceives the stimulation to move and adopts it automatically.



The dorsokinetic backrest and the armrests are not coupled with the flexible seat, allowing the user to feel securely supported at all times.

The (r)evolution of natural sitting:

the new Sedus swing up

Good for body, mind and soul: the first innovative office chair created to be exactly the way humans need it.

The new Sedus swing up is the first chair available for everyday work in the office which optimally corresponds to our natural need for movement, and in doing so ensures better

health, well-being and productivity. It combines proven Sedus technology to create a fascinating, lively sitting experience.



The new Similar Swing mechanism with the swivel-mounted shell allows freedom of movement for the pelvic region in all directions.



Whether upright sitting posture or relaxed lying posture: the degressive seat tilt adapts perfectly.



The dorsokinetic mechanism supports all the user's movements. The backrest can be moved in all directions, so it is always exactly where your back needs it.



The backrest is height-adjustable so that each user can set the profile optimally for their personal requirements.



The 3D adjustable armrests are not integrated in the flexible kinematics and so offer the user stability in every posture.



Animated information on active sitting can be found at www.youtube.com/user/SedusStollAG



The new Sedus swing up will be available from May 2013.



www.sedus.com