

ERGOSITTER

X2 OFFICE



The worldwide innovation
that relieves back strain by **over**

100%

ERGOSITTER™
BPS TECHNOLOGY

Ergositter is the worldwide innovation that will change your view on sitting from the moment you sit down.

Ergositter is the name of the unique strain reduction system for the back that is different from traditional flat seats on regular chairs.

This **world-patented seat** consists of a stationary front section and a vertically adjustable rear section,

100% back pressure



0% back pressure



which when in the folded position eliminates pressure on the back. Sitting in a regular chair with a flat seat causes 100% strain on your back, which can lead to painful back problems. **If you choose the Ergositter, back strain is reduced to 0%!** Actually, it's even less because the spine is stretched instead of compressed.

We claim that the Ergositter is the chair of the future. Try it and you will undoubtedly agree.



Science



Sitting with Adjustable Ischial and Back supports: Biomechanical changes

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INTRODUCTION: Sitting may induce posterior rotation of pelvis, reduction of lumbar lordosis, and increases in muscle tension, disc pressure, and pressure on ischium and coccyx, which may be associated with low back pain (LBP) [1-2].

- A device (Fig. 1) that reduces ischial load and maintains lumbar lordosis may help increase seating comfort and reduce LBP.
- Objective: To investigate the biomechanical effects of adjusting ischial and/or backrest supports during sitting.

METHODS: 15 healthy office workers

- Sitting conditions: sitting with & without ischial support & with adjustable back support
- Sacral inclination, Lumbar lordosis, Intervertebral space (Fig. 2)
- Muscular activity in stabilizing the trunk
- Contact pressure distributions (Fig. 3)
- Reaction forces between buttock-thighs & seat between back and backrest
- Load carried by seat pan and backrest

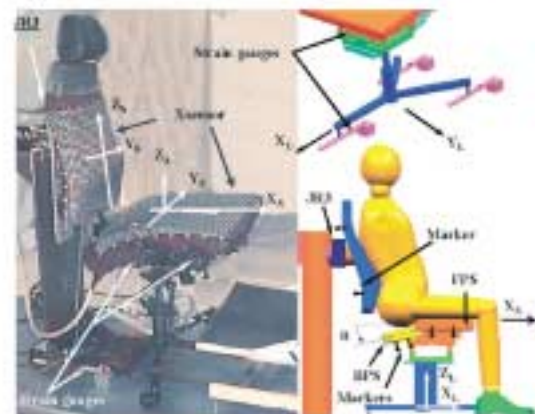


Fig 1. The seat of the chair consists of two parts, i.e. FPS, which is fixed and BPS, which can be tilted downward or upward by $\theta = 18^\circ$. The shape of the low back support can be adjusted for individual subject using an inflatable air-filled cushion.

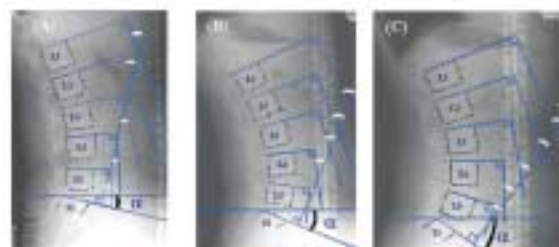


Fig 2. Representative sacral inclination (θ), total and segmental lumbar lordosis from one subject for sitting 'Upright with fully fitted Backrest' with the BPS at level ($\theta = 0^\circ$) (A) and tilted down ($\theta = 18^\circ$) (B) position, and at the standing (C) postures.

References: [1] Andersson GJB, et al. The influence of backrest inclination and lumbar support on lumbar lordosis. *Spine* 1979; 4:52-8. [2]. Lord MJ, et al. Lumbar Lordosis. Effects of sitting and standing. *SPINE* 1997; 22:2571-4.

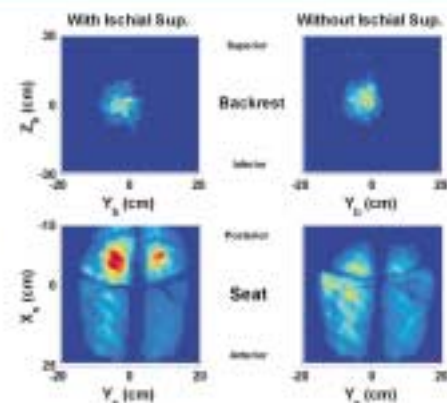


Fig 3. Representative pressure distribution on the seat (the lower row) and backrest (upper row) for 'Upright with backrest' sitting condition.

Left column: 'With Ischial Support' when the BPS was at level = 0° position.

Right column: 'Without Ischial Support' when the BPS was tilted down to $\theta = 18^\circ$.

RESULTS:

When the ischial support was relieved, the center of the force on the seat and on the legs of the chair, and the peak center of pressure on the seat, were significantly ($P < 0.002$) shifted forward towards the thighs.

- The total contact area on the seat pan and on the backrest was significantly decreased and increased, respectively ($P < 0.001$).
- The sacral inclination, total & segmental lumbar lordosis, and lumbar spine disc height were significantly increased for sitting 'Upright with Backrest' with the lumbar curve close to that during standing. (Table 1)

Table 1. The sacral inclination (θ), total (S1-L1) and segmental (S1-L2, S1-L3, S1-L4, S1-L5) lumbar lordosis for standing and sitting postures.

Posture	Sitting Upright with Backrest		Sitting Tilted down		Standing
	Mean (SD)	95% CI	Mean (SD)	95% CI	
Sacral inclination, θ	18.08 (1.38)	16.30-19.87	20.24 (1.57)	18.10-22.37	27.23 (1.67)
P			0.001	<0.001	
Total Lumbar, S1-L1	24.62 (2.17)	20.34-28.90	32.54 (2.27)	28.94-36.14	31.49 (1.62)
P			0.002	0.002	
Segmental Lumbar, S1-L2	20.28 (0.46)	19.35-21.21	21.38 (1.08)	19.64-23.12	21.16 (0.61)
P			0.002	0.002	
S1-L3	22.02 (1.57)	18.87-25.17	26.75 (1.17)	24.27-29.23	24.18 (1.14)
P			0.002	0.002	
S1-L4	16.78 (0.59)	14.52-19.04	21.19 (0.87)	19.58-22.80	17.28 (0.59)
P			0.002	0.002	
S1-L5	11.49 (0.46)	10.39-12.59	11.18 (0.56)	10.14-12.22	10.38 (0.37)
P			0.002	0.002	

SUMMARY & CONCLUSIONS: Sitting with reduced ischial support and fitted backrest to the lower spine

- altered the contact area
- resulted in reduced peak pressure under the ischia
- reduced muscular activity
- maintained total and segmental lumbar lordosis
- forwardly rotated the sacrum
- increased lumbar intervertebral disc heights which could potentially reduce LBP.

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How are you actually sitting? We often think that we are sitting correctly. Not until we feel a twinge in the back do we notice our sitting position. Sedentary work in a chair that provides a poor sitting position is almost a guarantee for problems in the future. It all depends on the amount of pressure on musculature of the back, and the amount of strain on the spinal discs. The higher the strain and pressure on the back, the greater the risk for problems. This is where the Ergositter enters the picture.

Ergositter vs regular chairs. By regulating the rear portion of the seat you can control pressure on the back in an entirely unique way. Lowering only the rear section several times a day will stretch and relieve the back muscles and prevent repetitive strain injury. This principle is unique to the Ergositter. No other chair has this pressure relief system.

For those that don't want back pain. And for those that already suffer. If your work is sedentary the Ergositter will help prevent and counteract the risk of future back problems. If you already have back problems you should definitely try the Ergositter X2 Office. You will immediately feel the difference from your regular chair.

Convincing tests. Scientific testing has been conducted at Chalmers University and the Centre for Biomechanics in Gothenburg, Norway's Sports College in Oslo, as well as the Rehabilitation Institute of Northwestern University in Chicago, Illinois, the United State's foremost institution in the area of physical rehabilitation. This extensive research has completely verified the positive effects.

"We have been able to establish an incredible relief and relaxation of the muscles after only 5 to 10 seconds," says Christian Högfors Ziebell, associate professor at the Centre for Biomechanics. "When this technique becomes more widespread, we will be seeing considerably fewer cases of illness and a striking difference in the strain on the public medical service. From a medical and occupational hygienic viewpoint, this is a true revolution."

This is how it works!



0% back pressure lying.



100% back pressure sitting in an ordinary chair.



<0% back pressure when sitting in Ergositter resting position.



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BPS TECHNOLOGY
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1

High adjustment and chair functionality.

Vertically adjustable and rocking functionality. Turn level forwards to unlock the chair. Lock desired position by turning level backwards. Lift lever to adjust height.



2

Seating adjustment.

Individual seating depth adjustment for five various depths. Turn lever forwards, choose your seating depth and lock position by turning level backwards.



3

Back support.

The back support has six different positions, a hydraulic pump and a pressure release button. To lower the support you raise it to maximum position.



4

Headrest.

The headrest can be adjusted forwards, backwards and vertically.



5

Armrest.

The armrest can be adjusted both vertically and horizontally by using the adjustment knobs below and at the sides of the chair.



6

Adjustable swing resistance for maximum comfort.

Unlock swing function (1) and tip the chair forward all the way. Then turn lever forwards for decreased resistance or backwards for increased resistance.

7

**simple steps
towards the ultimate
sitting position.**



7

Push & Rest.

Sit down so that your back is against the back support. Move the right hand lever forward so that the seat is folded down into Ergositter resting position. Relax.

**PUSH
&
REST[®]**



Technical Data for the Ergositter X2 Office

Ergositter	TAS 501
Seating height (standard)	44-54 cm*
Total height	119-142 cm
Total width	76 cm
Total depth at maximum tilt	80 cm
Back slope	23°
Seat slope	16-23°
Mechanism	24-hour. Advance syncro mechanism Intitution 9000.
Base	Standard: steel with plastic casing. Add-on: aluminium.
Wheels	Locked/unlocked for soft or hard floors.
Colour/Material	Colour: Black (standard). Other colours can be ordered.
Material	100% worsted yarn new wool 50,000 Martindale. Semi aniline leather EN1021-1/2 and California Tech.
Cleaning	Dry cleaning or textile foam.
Swedish quality	2 year guarantee.

*If you are tall, ask for an extra high gas spring.

