

The Health Benefits of the Zero-Gravity Position

The year 1986 saw the birth of the first zero-gravity recliners, based on technology developed by NASA. Scientific research had shown that the zero-gravity position minimizes the huge gravitational stresses astronauts experience during takeoff.

Today, doctors, occupational therapists, and other health professionals recommend this position because of its health benefits to everyone.

The posture the body takes in the zero-gravity position neutralises the effects of gravity and allows for proper heart, back, and leg alignment. By raising the legs at heart level or higher, this posture also reduces pressure on the lower back and on the spinal column(1). Its effects are instantly noticeable: zero-gravity eliminates stress on the body and creates a state of deep relaxation.

On top of getting rid of muscular tension in the lower back, (or lumbar region)(2), the position also promotes better blood circulation, thus making the heart's job easier. It also widens the angle between the torso and thighs, which expands lung capacity. This makes breathing easier and boosts oxygen levels in the blood.

There is no doubt that ergonomically-designed zero-gravity chairs can be the most comfortable recliner experience ever, provided, of course, that users choose a model suited to their body types.

1) Zero-gravity takes pressure away from the vertebrae's discs

Vertebral discs are cartilaginous joints that can be compared to oval-shaped rubber balls: when we stand up, gravity and weight creates pressure that compresses the discs. The more pressure there is, the more compressed our vertebral discs become. The impact of the cumulated pressure and weight created by our daily activities on our spine can compress our discs by up to 20 mms. (Astronauts whose bodies have been in space for a long period of time can experience a 50 mm difference when back on Earth). However, when pressure is taken away, they take back their shape.

Vertebral discs have no direct blood supply. Their health depends on the osmosis of nutrients and oxygen via a lubricating liquid called the synovial fluid. Compression and decompression (or squeezing and relaxing) of the discs favours the movement of this fluid and the transport of oxygen and nutrients.

It's not clear yet how often in a day the spine needs to "squeeze" and "relax" to create optimum fluid movement. But it is certain that movement, be it through exercise and stretching, is essential to this osmotic process. In sedentary industrialized societies such as ours, discs degenerate and back problems happen more often and earlier than in less industrialized countries. Logic points to the need to relieve pressure on our spinal columns and to the benefits of more frequent exercise.

2) Zero-gravity eliminates muscle tension in the lower back

The heart pumps freshly-oxygenated blood to the organs and to the rest of the body. The muscles, in turn, act like pumps themselves, supporting the flow of blood and metabolic waste back to the heart through our veins. Through the muscles' cycles of contraction and relaxation, the veins are compressed, then decompressed. But if the muscles cannot relax, this normal pattern of healthy blood flow is impeded, and sometimes even blocked. Adopting habits and conditions which allow our muscles to relax is a key component to great cardiovascular health (for more information on the skeletal pump system, please consult a basic human anatomy and physiology textbook).

Zero-gravity recliners reduce pressure on the discs in our spinal column and encourage muscles to relax in a number of ways, including by:

*GETTING ALL THE RIGHT ANGLES

- a) Zero-gravity recliners place your back in the correct resting or "neutral" position, which is great for the lumbar region (125 to 135 degrees between the thighs and torso. However, the ideal angle can vary from person to person).
- b) The seated position in a zero-gravity recliner relieves more pressure from the lower back than a more "open" position.

*CREATING THE PERFECT RECLINING POSITION

- a) When the upper body reclines back, pressure is taken away from the lower back. The recliners' ergonomically-designed lumbar support absorbs weight from the upper body, giving the lower back even more relief.
- b) The muscles in the lower back can relax once the body is aligned in the proper zero-gravity posture