The Science of Spinal Decompression: R-6 Spinal Disc Treatment System

Charles Burton, M.D.is the former Chairman of the U.S. Food & Drug Administration (FDA) Advisory Panel on Neurological Devices. Dr. Burton spent decades researching the beneficial effects of spinal decompression. Dr. Burton writes,

*"Intermittently decompressing the spine increases the flow of water and nutrients into the disc, reverses the degenerative process and begins to reverse disc protrusion and progressive scoliosis."*1

Using anti-gravitational traction, Dr. Burton and his colleagues at the Sister Kenny Institute in Minneapolis demonstrated that frequent applications of traction with a pull equal to approximately 25% of one's weight for 15 minutes had the following benefits:

1. 85% of the patients reported good to excellent changes. 2, p. 385
2. Reduced the need for surgery in 76% of surgical candidates. 2, p. 38

Using the same anti-gravity traction device described by Burton, A.W. Janke and research colleagues showed radiographic (X-ray) evidence that each lumbar disc had increased an average of 1.5 mm in height after 15 minutes of traction with 25% body weight. 3

Summarizing literature dating back to the 1950's, German spine expert Jurgen Kramer, M.D., has noted that after only 10 minutes of lumbar traction, disc height can increase an average of 1.8 mm due to the absorption of water. 4, p. 27 Dr. Kramer concluded that this short period of lumbar traction was comparable to 8-9 hours of rest in a horizontal position. He also noted that traction helped treat the mechanical causes of back pain by: 4, p. 100

1. Stretching and relaxing paravertebral muscles spasms.
2. Helping restore vertebral joints to their normal position.
3. Helping reduce spinal stenosis and nerve entrapment.

Neurosurgeons Gustavo Ramos, M.D., and William Martin, M.D., at the University of Texas inserted pressure sensitive probes into the L4-5 disc of several patients to determine the effect of spinal decompression on relieving pressure in the disc. Their data showed that a pulling force (applied with a split-traction table) of approximately 50 lbs is required to create negative pressure in the disc. As one would expect, a stronger pull generated more negative pressure (vacuum effect) 5. Treatments designed to more aggressively hydrate the disc are needed since passive diffusion of water and nutrients to the center of the disc while lying down is a slow and incomplete process. Part of the reason for this limitation is because even when we are lying down, there is still approximately 30 lbs to 40 lbs of compressive forces on the low back discs due to normal muscle tension. 2, p. 382 Research shows that stretching the low back with a pull of 35 lbs or more creates negative pressure or 'vacuum effect' in the low back discs. 7 The 'vacuum effect' pulls water into the disc at an accelerated rate and can achieve a similar amount of rehydration in 15 to 20 minutes as reclining for 7-8 hours.

REFERENCES

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