



(<https://therabounce.com>)

Research

Current evidence for Rebound Therapy



Balance and Motor Function

Children with intellectual disabilities are often more sedentary than their peers, which can result in lower balance performance and overall motor functioning. Research has assessed the effect of a 12-week Rebound Therapy program on motor and balance ability of school-aged children with intellectual disabilities. Balance was assessed using double-leg stance with eyes opened and closed, and one-leg stance with eyes opened. Motor performance was tested using a sit and reach test and long and vertical jump tests. Participation in the Rebound Therapy program had significant improvements of participants' performance in all motor and balance tests. Therefore, Rebound Therapy may be an effective intervention for improving balance and motor function for children with intellectual disabilities. Furthermore, it also supports the idea that individuals with intellectual disabilities benefit from enjoyable and engaging intervention programs, such as Rebound Therapy, to remain active and consequently to facilitate their overall development.

Giagazoglou, P., Kokaridas, D., Sidiropoulou, M., Patsiaouras, A., Karra, C. and Neofotistou, K. (2013) Effects of a trampoline exercise intervention on motor performance and balance ability of children with intellectual disabilities. *Research in developmental disabilities*, 34(9), pp. 2701-2707.

Research has been shown that improvement in static and dynamic stability following the use of Rebound Therapy may be due to the following reasons:

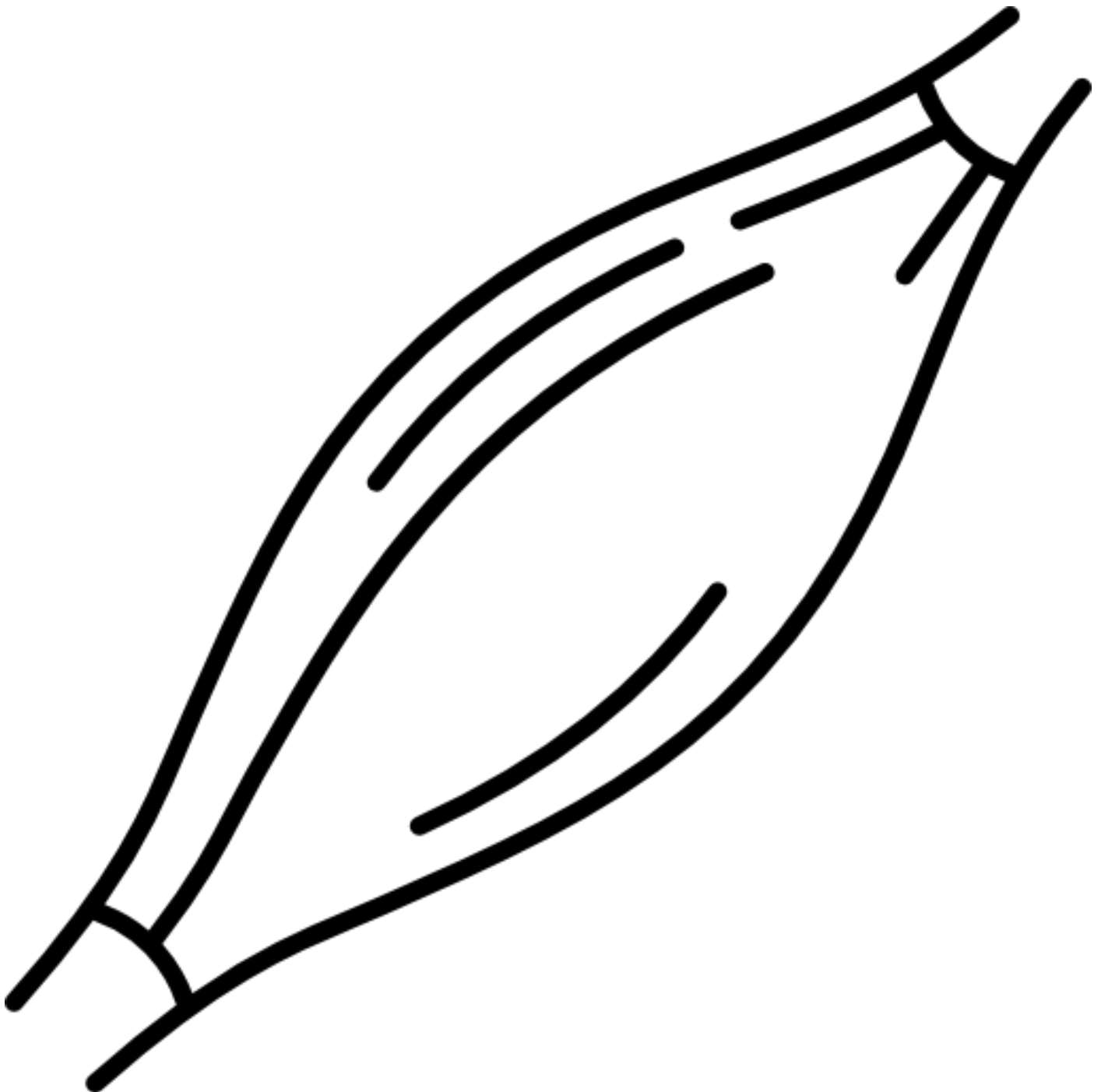
1. Alterations in sensory-motor stimulations
2. Facilitation of the vestibular system
3. Increase in hip extension
4. Improved motor coordination
5. Improved kinaesthetic awareness

Carter, A.E. (1988) *The New Miracles of Rebound Exercise*. Scottsdale, AZ: ALM Publishers.

Graham, E. (2016) *The effect of rebound therapy on muscle tone*. [Unpublished Master thesis]. Leeds Metrop Univ. 4, pp. 1-57.

Sadeghi, M., Ghasemi, G. and Karimi, M. (2018) Effect of 12-Week Rebound Therapy Exercise on Static Stability of Patients With Spinal Cord Injury. *Journal of sport rehabilitation*, 28(5), pp. 464-467.

Shankar, S.U. (2014) Effect of selected trampoline exercises on selected psychomotor variables among college students. *Int J Res*, 1(8), pp. 1432-1436.



Muscle Tone

Rebound Therapy can be used to decrease muscle tone in individuals with hypertonia, as well as increase muscle tone in those with hypotonia. Gentle, rhythmical, and low amplitude bounces can have a reducing effect on tone in individuals with hypertonia. It has been proposed that this is due to the vibratory effect on the muscle spindles which decreases the innervations rate of muscle action potentials. Vigorous, high amplitude bounces can increase tone by stimulating the stretch receptors in individuals with hypotonia. This is suggested to be due to the sensory stimulation which causes activation of the stretch reflex resulting in contraction.

Rollings (2005) Rebound Therapy Handbook: Rebound Therapy for Special Education Needs.

Tortora, G.J. and Grabowski, S.R. (2003) Principles of Anatomy and Physiology. 10th Ed. John Wiley & Sons, Inc. New Jersey.



Behaviour

A individualized exercise program which included a core element of Rebound Therapy was delivered to adults with significant deficits in mobility and independent movement over a 16-week period. A series of positive effects were seen for participants post-intervention including decreases of frequency of challenging behaviors, increases in quality of life and increased alertness.

Jones, M.C., Walley, R.M., Leech, A., Paterson, M., Common, S. and Metcalf, C. (2007) Behavioral and psychosocial outcomes of a 16-week rebound therapy-based exercise program for people with profound intellectual disabilities. *Journal of Policy and Practice in Intellectual Disabilities*, 4 (2), pp. 111-119.



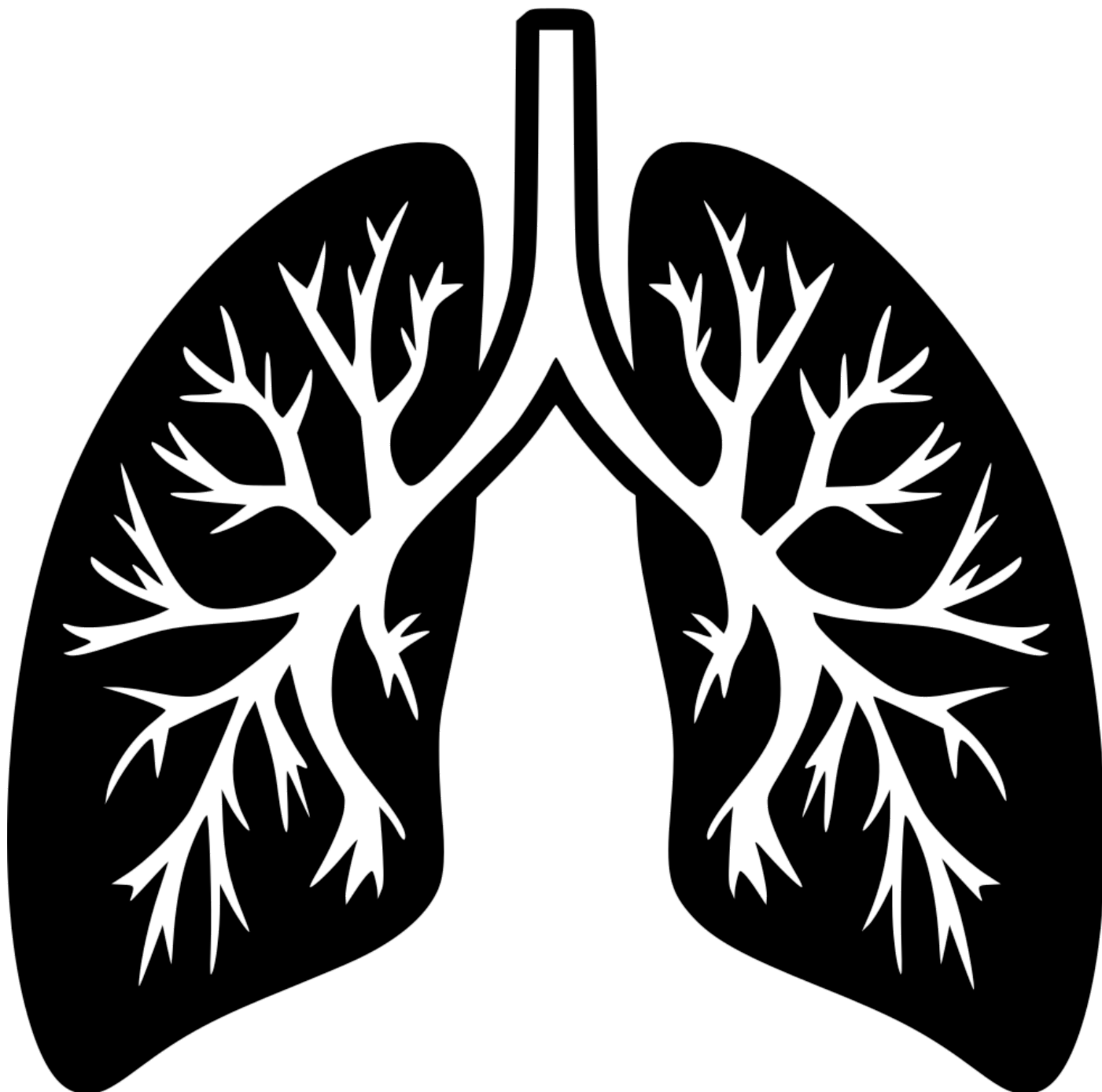
Cardiorespiratory

The aim of this study was to examine the physiological demands of trampolining, compared to treadmill running. The trend-lines for aerobic energy production are similar enough that the statement “trampolining had a similar oxygen demand to treadmill running, at the same intensity” can be considered accurate. Therefore, this validates trampolining as a viable exercise modality with similar benefits to that of running.

Draper, N., Clement, T. and Alexander, K. (2020) Physiological Demands of Trampolining at Different Intensities. *Research Quarterly for Exercise and Sport*, 91(1), pp. 136-141.

Research compared the effects of jogging and rebounding on VO₂peak, Forced vital capacity (FVC), Forced expiratory volume in 1 second (FEV₁), and FEV₁% in participants with asthma. It was shown that effects of rebound exercise not only are equivalent but even better than traditional aerobic exercises. The improvements in VO₂peak, FEV₁, and FEV₁% are more in rebound group. But the improvement in FVC is the same in both exercise groups.

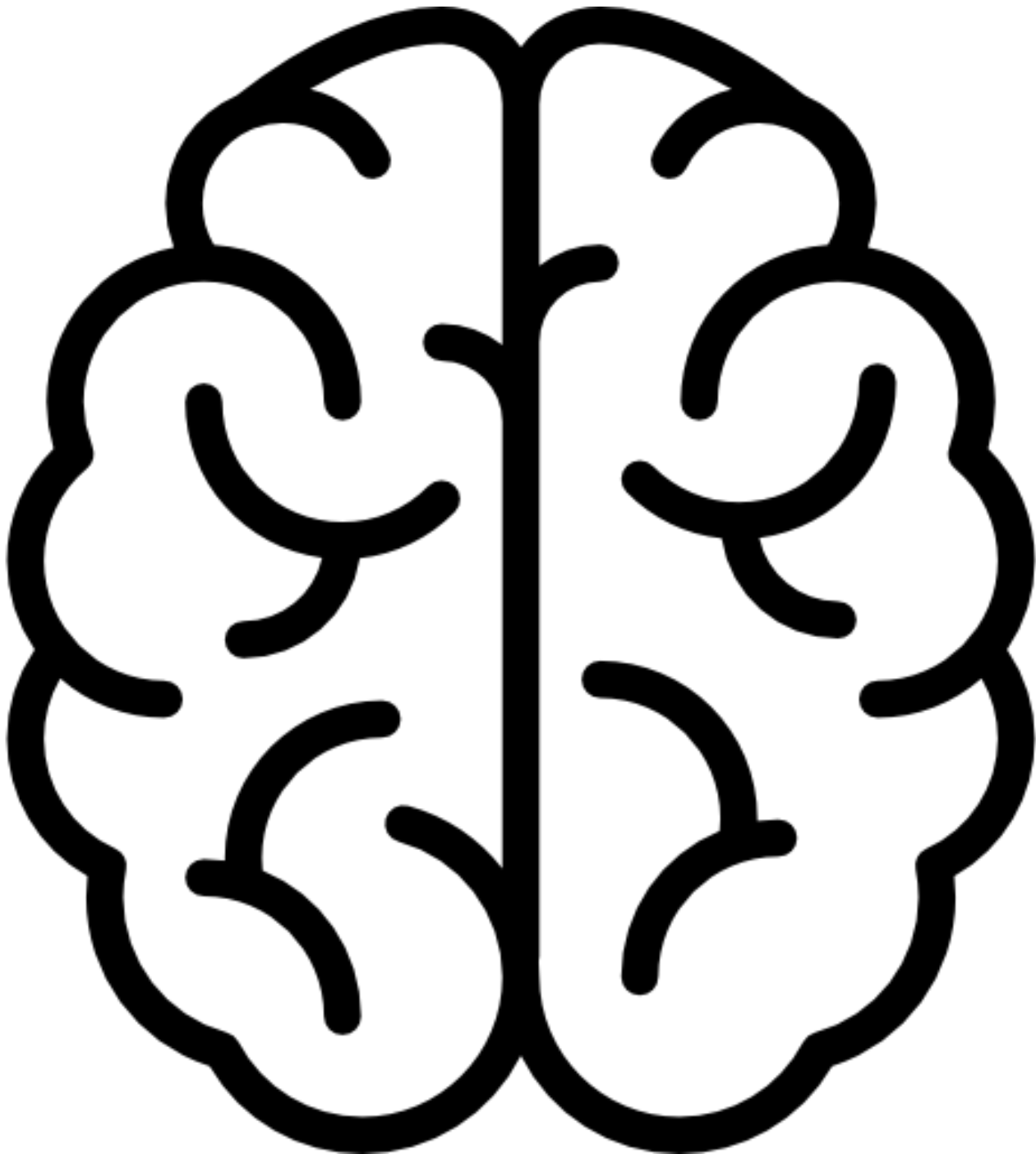
Zolaktaf, V., Ghasemi, G.A. and Sadeghi, M. (2013) Effects of exercise rehab on male asthmatic patients: aerobic verses rebound training. *International journal of preventive medicine*, 4, p.S126.



Cystic Fibrosis

Exercise and chest physiotherapy are integral components of cystic fibrosis care. Research was conducted to determine the short-term effects of either trampoline or cycle exercises, compared to a control group, on sputum production, oxygen saturation and short-term lung function in participants with cystic fibrosis. Sputum expectoration during and after trampoline exercise was significantly higher than the control, and tended to be higher than with and after cycling of similar cardiovascular intensity. The increase in oxygen saturation was significantly higher after both combined trampoline/physiotherapy, and combined cycling/physiotherapy sessions, compared to physiotherapy alone.

Kriemler, S., Radtke, T., Christen, G., Kerstan-Huber, M. and Hebestreit, H. (2016) Short-term effect of different physical exercises and physiotherapy combinations on sputum expectoration, oxygen saturation, and lung function in young patients with cystic fibrosis. *Lung*, 194(4), pp. 659-664.



Parkinson's disease

This study aimed to compare the effect of 8-week Rebound Therapy program and weight-supported exercises on the range of motion, proprioception, and the quality of life in patients with Parkinson's Disease. Results indicated that while both exercise programs resulted in improvements in the tested variables, the improvement was greater for the participants that engaged in Rebound Therapy.

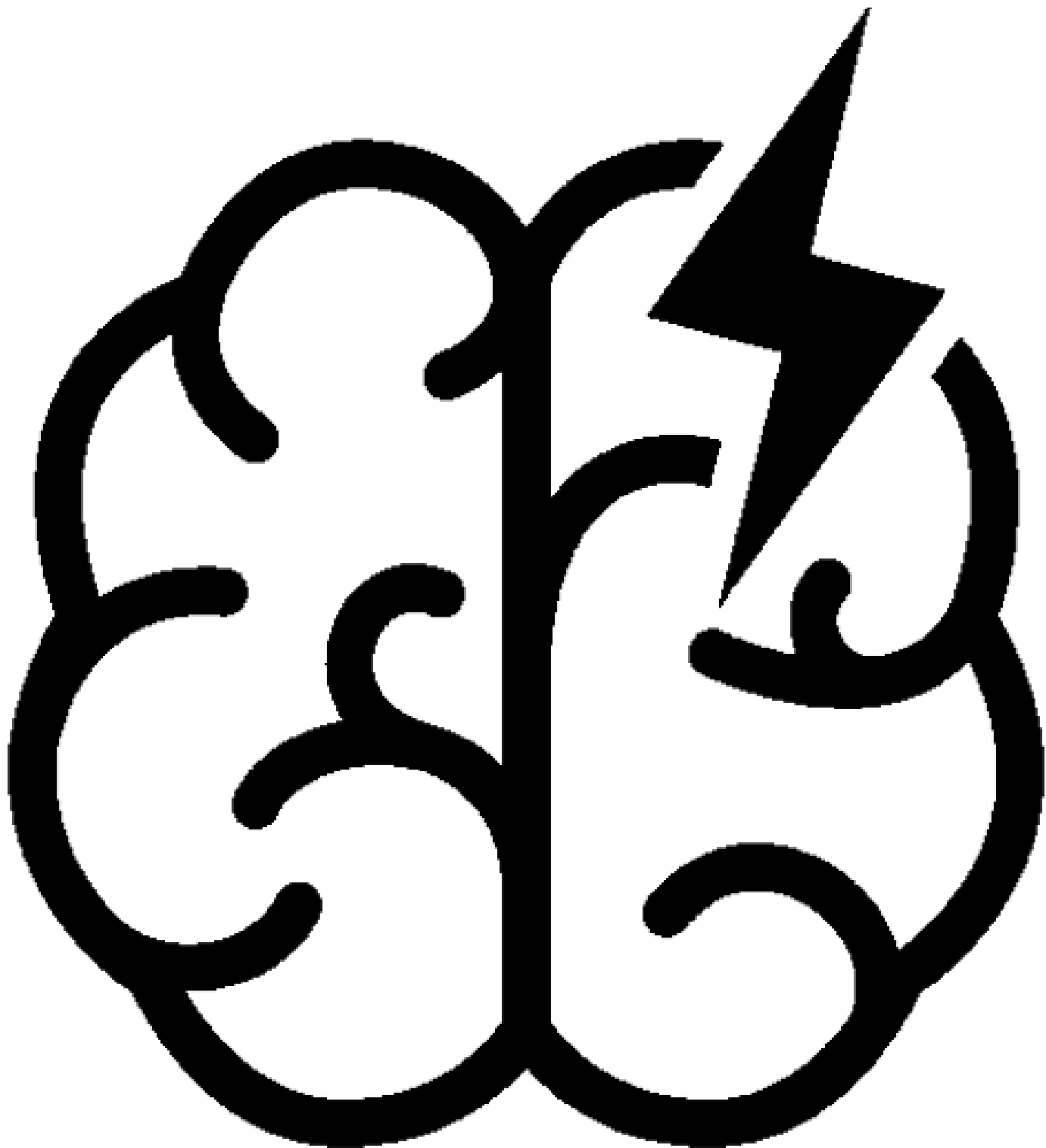
Daneshvar, P., Ghasemi, G., Zolaktaf, V. and Karimi, M.T. (2019) Comparison of the effect of 8-week rebound therapy-based exercise program and weight-supported exercises on the range of motion, proprioception, and the quality of life in patients with Parkinson's disease. *International journal of preventive medicine*, 10.



Cerebral Palsy

Research assessed the effects of a 12-week adaptive bungee trampoline program on range of motion, spasticity, strength, balance, functional mobility, gross motor function measure score, and enjoyment. This study provided evidence that the use of an adaptive bungee trampoline, with appropriate supervision, could be an enjoyable therapeutic alternative to achieve goal-related improvements in lower limb muscle strength and functional mobility for children with various functional classifications. Participants had high adherence to the program and reported high self-rated enjoyment. These results may contribute to an overall increased participation in physical activity, as well as the therapeutic benefits that occurred.

Germain, A.M., Blackmore, A.M., Gibson, N., Newell, B. and Williams, S.A. (2019) Effects of Adaptive Bungee Trampolining for Children With Cerebral Palsy: A Single-Subject Study. *Pediatric Physical Therapy*, 31 (2), pp. 165-174.



Stroke

To investigate the effects of a predefined mini-trampoline therapy programme for increasing postural control, mobility and the ability to perform activities of daily living after stroke. A 10-week mini-trampoline training program resulted in significantly increased postural control in stroke patients compared to balance training in a group. Although not statistically significant, the mini-trampoline training group showed increased improvement in mobility and activities of daily living.

Miklitsch, C., Krewer, C., Freivogel, S. and Steube, D. (2013) Effects of a predefined mini-trampoline training programme on balance, mobility and activities of daily living after stroke: a randomized controlled pilot study. *Clinical Rehabilitation*, 27 (10), pp. 939-947.

Menu

- › Home (<https://therabounce.com/>)
- › About (<https://therabounce.com/about/>)
- › Rebound Therapy (<https://therabounce.com/rebound-therapy/>)
- › Research (<https://therabounce.com/evidence/>)
- › Courses (<https://therabounce.com/courses/>)
- › Photos (<https://therabounce.com/photos/>)
- › Contact (<https://therabounce.com/contact-us/>)

More Information

Rebound Therapy: www.reboundtherapy.org (<https://www.reboundtherapy.org>)

Rebound Therapy Institute: www.reboundtherapy.org/institute (<https://www.reboundtherapy.org/rti/rti>)

Resources: www.reboundtherapy.org/edu (<https://www.reboundtherapy.org/edu/>)

YouTube: www.youtube.com/reboundtherapy (<https://m.youtube.com/c/reboundtherapy1972>)

Search



Partnership



(<https://www.reboundtherapy.org>)