

Eddy Anderson, the founder of Rebound Therapy, answers the question:
What is Rebound Therapy?

Summary: The phrase "Rebound Therapy" was coined by the founder, E.G. Anderson, in 1969 to describe the use of trampolines in providing therapeutic exercise and recreation for people with a wide range of special needs.

Participants range from mild to severe physical disabilities and from mild to profound and multiple learning disabilities, including dual sensory impairment and autistic spectrum.

Rebound Therapy is used to facilitate movement, promote balance, promote an increase or decrease in muscle tone, promote relaxation, promote sensory integration, improve fitness and exercise tolerance, and to improve communication skills.

The principles of Rebound Therapy form the basis of all gymnastic movement and teach logical progressions of movement patterns designed to encourage the student to continually develop whilst at the same time experiencing healthy exercise and enjoyment.

For these reasons, the Rebound Therapy training course is widely accepted as the logical starting point for trampoline coach training - even for those who do not intend to work with disabilities.

Most of us have paused when confronted by yet another piece of jargon, "Oh no-Here we go again! What on earth is Rebound Therapy?" In one sense that is a slightly inaccurate question, for the true value of Rebound Therapy lies in the fact that part of what occurs is not "on earth". The essential value of the process is that, for a brief moment, 'earth' is left behind, and a new freedom is found in controlled movement away from gravity's straitjacket, in a sort of relaxed 'poetry of motion' available to all, irrespective of any disability.

The following statements have been culled from a large number of workshops in the U.K. over the past thirty years. The work and its development continue, but the comments remain valid, and, as I refer to them I would like to take the opportunity of expressing my grateful thanks to colleagues, staff and students, parents and clients who have made such a valuable contribution to the development and understanding of Rebound Therapy.

The unique properties of the trampoline offer ample opportunities for everybody to enhance movement patterns.

The work is intrinsically motivating and returns high value in therapeutic terms for the time and the effort involved. Benefit is enhanced considerably when the operator achieves the skill to create variable patterns of movement in harmony with the needs of the user. The two then share the surface of the trampoline with operator adjusting the effect of weight and speed in order to ensure smooth transitions between the phases of movement undertaken.

That sums it up in essence, but let us examine the trampoline and its properties in more detail:

Physical Properties of the Trampoline

- 1) Unique, three-fold effect on body organs, systems and muscles
 - A) weight increases and decreases to the point of weightlessness
 - B) there is acceleration from stillness to varying speeds
 - C) there is deceleration from varying speeds to stillness

- 2) Storage of potential energy - as the trampoline bed is under tension with springs it is a potential energy source
- 3) Output of energy - this varies according to the energy put in; the bed stores the input energy unto output. As in Newton's 3rd Law of Motion. 'for every action there is an equal and opposite reaction'.
- 4) Potential for lifting a body into space - as a result of item (2), the trampoline bed, when energised, has the potential for lifting a body into space. The amount of energy required will relate to the weight of the body to be lifted.
- 5) Potential for initiating movement in a body from a distance - the input of energy can be at any point yet still produce output throughout the trampoline bed. However, that output is most effective from the centre of the trampoline bed. The technique of 'popping' uses this property to initiate control and movement
- 6) Unstable surface - the surface, which is elasticated and under spring tension, is unstable and movement on it acts to energise the bed. Output from this movement causes the bed to offer an active base upon which movement occurs
- 7) Damping - this is the absorption of the energy of the bed by the body. It is achieved by taking up some of the energy of the bed through flexed hips and knees.
- 8) Variable surface - the surface is changeable and can be deliberately arranged to enhance symmetry and to promote symmetrical weight-bearing, thus encouraging balance.

Physiological effects

1) Cardio-respiratory

There is a high demand on muscles to deal with the increased gravity produced on deceleration and in the control of movement required when gravity is in effect reduced, as in acceleration, causing an increase in the respiratory rate and subsequently the heart rate. As a direct consequence there is an upturn in venous and lymphatic drainage. The constant muscle work required to maintain position and balance increases the demand for oxygen.

2) Muscle Tone

In simplistic terms, trampolining generally causes an increase in postural muscle tone, simply to prevent falling over. In Rebound Therapy, the effect on muscle tone hypertonia or hypotonia is variable. Low amplitude bouncing in general causes a reducing effect on hypertonia by bombarding the muscle spindle in much the same way as shaking causes a decrease in muscle tone. High amplitude bouncing can cause an increase in tone by stimulating the stretch receptors. The two properties can be used therefore to increase or decrease tone where required. The effect of the rebound activity on muscle tone can easily be observed in people with spasticity, either hemiplegic or athetoid, or by effect on ataxia where tone can be seen to undergo change.

3) Postural mechanism

Stimulating by bombarding the sensory systems through joints, muscle and skin can improve the output to the important postural muscles.

4) Balance Mechanism

In creating a dynamic movement situation, so challenging balance mechanisms, observable improvement can be achieved. This is particularly relevant when working with adults where a dynamic balance situation is difficult to create in lying, sitting or kneeling.

5) Kinaesthetic awareness

By the multiple stimulation of joints, pressure stretch receptors, skin, muscles etc., kinaesthetic awareness is improved, leading to improved body image and spatial awareness.

Therapeutic effects

On movement:

Movement can be facilitated at different stages of the bounce. The most active movement takes place at the top of the bounce where acceleration of the body equals the downthrust of gravity to allow a momentary "gravity-free" zone. A tiny body movement can produce a large effect with correctly applied bounce. Momentum and rhythm can be added to movement to help teach new movement skills and energise movement. Balance and equilibrium reactions can be achieved through stimulation of postural mechanisms; by creating a dynamic movement situation, protective and saving reactions can be developed. The anticipation of movement occurs because of the effects of timing, rhythm and momentum. An inhibiting or stimulating effect on muscle tone enables active movement to take place. By using good positioning and low amplitude bouncing, good relaxation is easily obtained.

On perception:

Body image, body part awareness and positional sense are enhanced through tactile and joint sensation. Increased perception of body image, spatial awareness combined with rhythm, and movement itself, greatly develop co-ordination. The experience of movement into space with the return to stability, while remaining in control, provides an enriched learning experience, for the motor-impaired person.

Communication:

Due to cardio-respiratory effects, vocalisation is increased - with exclamations and gasps. Eye contact and concentration are enhanced by the "focus effect".

Summary:

- It is fun
- Gives confidence in movement
- Is usually achievable (good target/goal setting)
- Develops fitness
- Gives general confidence and a feeling of well being

What other opportunities exist for lifting someone above eye level and having them look down on you?

Rebound Therapy skills for the operator/physiotherapist

In order to achieve effective results, the operators must have a certain level of skill themselves, particularly in:

- Balance and co-ordination of their own body and movement on the trampoline
- Control of the trampoline
- Being able to control the trampoline for someone else

- Being able to carry this out safely for both client and operator

In addition, they must make a full and accurate assessment, and, from that assessment, use Rebound Therapy to achieve stated goals, which, as in any other learning situation, should be in small, achievable steps.

The official UK body and international consultancy for Rebound Therapy is 'Rebound Therapy.org'. They are responsible for the development and delivery of certificated training courses throughout the UK. They also work with professional bodies and agencies outside of the UK to help set up training centres in their own countries.

For further information on arranging a staff training course, visit www.ReboundTherapy.org or email: info@reboundtherapy.org or telephone 01342 870543.

E.G. Anderson MCSP, Cert Ed

Glossary

BED	The surface of the trampoline for work, i.e. canvas or webbing
BOUNCE	Movement initiated in any position where effect results in motion upwards
CRADLING	Support position given in sitting or lying, giving maximum support to student
DAMPING THE BED	Absorbing the energy of the bed to stillness
DISMOUNTING	Safe ways to leave the trampoline surface.
ENGINE	The person(s) providing the energy for movement whilst support is provided
HANGING	A position whilst bouncing in the upright position with arms above the head, still, and remaining still on landing
HIGH KNEELING	Position on bed which shows right angle at knees - remainder of body upright
KIPPING	Operator presses bed at a precise moment, just before student lands, thereby providing a controlled lift to student.
LONG SITTING	Position on bed in sitting, legs straight, arms straight in support on bed, upper body upright. Head in mid-line
MOUNTING	Safe entry onto bed - care on edges
POGO	Controlled bouncing, arms held by sides, legs together, secure landing each bounce.
POPPING	Gentle, supported kipping (See 'Kipping')
SPOTTING	Good practice all around the trampoline. Tracking the movements of persons on bed and being able to support/assist.
SYNCHRONICITY	Movement as a whole - in concert - in harmony. The elements of movement coming together in time