

Today's Care. Tomorrow's Cure.



The **NeuroRecovery Network® (NRN)** is a cooperative network of cutting-edge rehabilitation centers designed to provide and develop therapies to promote functional recovery and improve the health and quality of life for people living with paralysis. Funded by the Christopher & Dana Reeve Foundation through a cooperative agreement with the Centers for Disease Control and Prevention (Award No. 1U59DD000838), the NRN translates the latest scientific advances into effective, activity-based rehabilitation treatments.

Each center is staffed with a group of dedicated professionals who have received specialized training in order to deliver the NRN's therapies. The staff includes center directors, physicians, administrative and clinical supervisors, data managers, physical therapists, occupational therapists and rehab technicians.

To learn more about key findings from 11 published papers about the NRN in the *Archives of Physical Medicine and Rehabilitation*, please visit **ChristopherReeve.org/NRNhighlights**.

What is Locomotor Training?

Locomotor Training (LT) is the method of physical therapy currently deployed by the NRN. In LT sessions, the body of the patient with a spinal cord injury is suspended in a harness over a treadmill, while specially trained therapists move his legs and body to simulate walking. As the patient regains function, improvements in sitting, standing, reaching, grasping or walking occur.

LT derives from recent advances in scientific understanding about neural plasticity (the ability of the neurons in the nervous system to develop new connections and "learn" new functions) and the role the spinal cord plays in controlling stepping and standing. LT works to "awaken" dormant neural pathways by repetitively stimulating the muscles and nerves in the lower body—allowing

patients whose lower bodies may appear partially or completely disconnected from input from the brain to regain motor abilities and achieve rehabilitation goals.

Data Collection Information

Participants in the NRN become part of a network-wide database that is collecting comprehensive medical information about the progress of each patient. By collecting and analyzing this information, the NRN is able to accurately measure program outcomes. Recent findings from this program evaluation were published in the September 2012 issue of the *Archives of Physical Medicine and Rehabilitation* and provide guidance for clinical decision-making.

In addition to Locomotor Training, NeuroRecovery Network participants work on sitting and balance exercises.



Patients' Frequently Asked Questions

(applicable to NeuroRecovery Network Rehab Centers only)

Who qualifies to participate in the NeuroRecovery Network?

At the present time, the Locomotor Training program is open to individuals with complete or incomplete cervical or thoracic spinal cord injury who have some muscle tone in their legs and a lesion above T12.

What steps does one have to take to receive treatment in the NRN?

Patients must have a referral from a physician to receive this therapy. All potential patients must be seen by the NRN physician and physical therapists at the NRN facility, to be screened for any complicating medical issues that would make this therapy inappropriate. Following this evaluation, if deemed appropriate for this therapy, a plan of treatment will be established.

How long will the course of therapy take?

The average person receives the therapy for three to four months, and will undergo a minimum of 60 sessions. Each patient is re-evaluated every 20 sessions. At that time, the NRN physicians and therapists will make any adjustments needed to the number of days per week the patient receives the therapy and talk about the goals for the next 20 visits.

How much time will each Locomotor Training session take?

Each session generally lasts one and a half hours. When a patient enters the program, he starts five days per week. As he progresses through the phases of recovery, the number of days per week may decline to four days/week and then three days/week.

What is the cost of receiving therapy through the NRN?

Who will pay for it?

NRN sites are committed to working with every patient to secure reimbursement for participating in this program. It is expected that the costs will be covered by the patient's insurance company.

What results can I expect? What long-term improvements to my health will this therapy provide?

A range of results and health improvements are reported in the scientific literature; others are beginning to emerge as we apply this therapy to human patients. What we know is that results will vary from patient to patient. No two NRN patients will respond in exactly the same way, nor is each patient likely to experience the entire range of possible changes and improvements. This therapy may contribute to improved cardiovascular and pulmonary function and blood flow to the arms and legs. In some patients, it may boost the healing potential of the skin, help increase bone density, and improve bladder function. Functional results among NRN patients have ranged from improved trunk stability to recovery of standing and stepping ability.

For frequently asked questions about Community Fitness and Wellness Facilities, please visit ChristopherReeve.org/CFW



The NeuroRecovery Network provides activity-based therapies to individuals living with paralysis with the goal of improved function, health, independence and quality of life.



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NeuroRecovery Network

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Rehabilitation Centers

For information about enrollment, please contact each center:

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Community Fitness and Wellness Facilities

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