

# WHAT IS REDCORD?



# History of Redcord

- Invented in 1991 in Norway
- Used in more than 30 countries worldwide
- Over 75 published scientific studies involving Redcord



P. Linek et al. The Effect of Specific Sling Exercises on the Functional

Movement S G. Jull and D. Falla. Does increased superficial neck flexor activity in the craniocervical

Human Kine flexion test reflect **H.S. Roh et al.** The change of pain and lumbosacral sagittal alignment after sling exercise 2016:25:43-7 therapy for page 15.5.

therapy for p 2016;28:2789. **L. Chen et al.** Effect of Sling Exercise Training on Balance in Patients with Stroke: A Meta-Analysis. PLoS ONE 2016;11(10):e0163351, 13 pages

**Beinert K. et al.** Neck muscle vibration can improve sensorimotor function in patients with

Oh B.-W. et a) neck pain. The Spine Journal 2015;15: 514–521

of stabilizing a patient with chronic low back pain.

**Park M.-H.** et allournal of Physical Therapy Science 2015; 27: 3655–3658, 2015.

bridge exercise with sling by shoulder joint angle in healthy adults. Journal of Physical

Rodríguez-Jiménez S. et aTherapy Science 2016;28: 945–950.

muscle activity. European Journal of Applied Physiology 2015;115: 1305–1312.

### How does it work?

- Neuromuscular activation (Neurac)
  - Identify dysfunctions and muscular imbalances
  - Aims:
    - Restore pain-free movement pattern
    - Improve function
    - Reduce aches and pains
  - Focuses on what is causing the problem...not just the symptoms



### But what is Neurac treatment?

#### Main elements:

- 1. Suspension exercises
  - Closed kinetic chain (CKC), weight bearing exercises
  - Unsteadiness, controlled instability provided by the ropes and slings

#### 2. Perturbation

Manual perturbation increases unsteadiness

#### 3. Workload

- Precise grading of exercises
- Neuromuscular challenge is gradually increased

#### 4. Pain free approach

- No provocation of pain
- No increase of existing pain

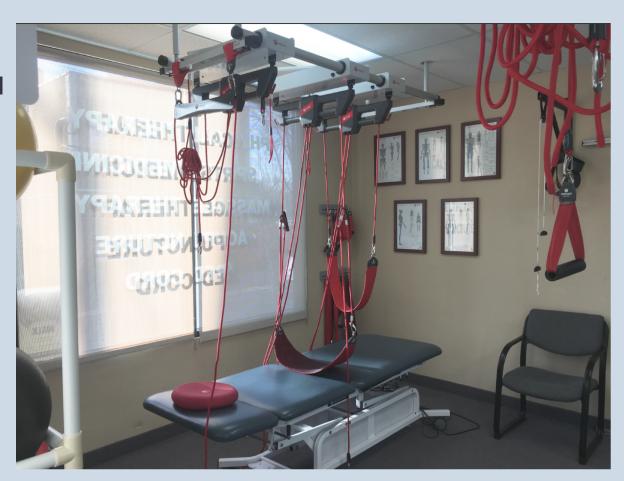
### Indications for Redcord

- Low back pain
- Pelvic girdle pain
- Neck pain
- Upper extremity dysfunction
- Lower extremity dysfunction
- Neurological disorders
- Balance and gait dysfunction



## Goals of Redcord

- Reduce/eliminate pain
- Enhance/optimize neuromuscular control
- Restore range of motion
- Increase strength



### Exercises

- On the table:
  - Supine bridging
  - Side-lying bridging
    - Hip abduction
    - Hip adduction
  - Prone bridging
  - Cervical retraction
  - Kneeling scapular protraction
  - Supine scapular retraction

And many more!!!!

- Standing:
  - Planks
  - Squats
  - Rows
  - Bridges
  - I's, Y's , T's



### Evidence



- Chang et al. (2015)
  - Sling-based CKC knee extension exercise produces the highest VMO activation
  - Sling-based exercise had beneficial effects on PFPS
- You et al. (2015)
  - 6 weeks of sling exercise training as effective at reducing pain intensity and improving trunk muscular strengths for individuals with low back pain (LBP)
- Lee et al. (2015)
  - Hip exercises for chronic LBP individuals are more effective than conventional therapy at decreasing pain and levels of disability
- Linek et al. (2016)
  - Sling exercise improves the outcome on the Functional Movement Screen
  - Sling exercise is considered effective for injury prevention in teenage athletes
- Kim et al. (2015)
  - Pain and function scores were significantly lower after using the Neurac intervention for individuals with acute-phase subacromial impingement syndrome
  - Also, shoulder range of motion (ROM) was significantly greater