

# treatment and rehabilitation of prolonged neck problems



Throughout the world, wherever statistics are available, neck pain is increasingly reported as a problem. Epidemiological surveys show that 45-71% of people recall an episode of neck pain that affected their daily life. At any given time 9% of men and 12% of women have neck complaints. In some industries neck complaints are even more frequent than back problems.

There is a strong evidence for the efficacy of exercise-based interventions in reducing pain and improving function among chronic neck patients.



## System Profile

The DBC Active Neck Care system is intended for the treatment and rehabilitation of cervical and thoracic problems providing proven results to patients experiencing prolonged, recurrent, postoperative or post-traumatic problems of the most severe type.

Deconditioning is a phenomenal feature in chronic neck pain. Pain and subsequent muscular spasm, protective guarding and avoidance behaviour often expose chronic neck patients to functional deterioration leading to impairment and disability.

The DBC Active Neck Care system aims at restoring normal function – postural control and coordination, endurance, strength and mobility – of the spine. The patient is prepared for normal life activity in parallel with pain reduction.

## Patient Profile

The DBC Active Neck Care system is suitable for patients with prolonged, recurrent or chronic neck problems with pain and subjective impairment. System suits the needs of most cervical and thoracic problem patterns.

### Cervical

- Inflammatory
- Post-traumatic
- Whiplash-Associated-Disorder
- Postoperative
- Narrowing of spinal canal
- Nerve root or cervicobrachial plexus compression
- Local, non-specific neck pain

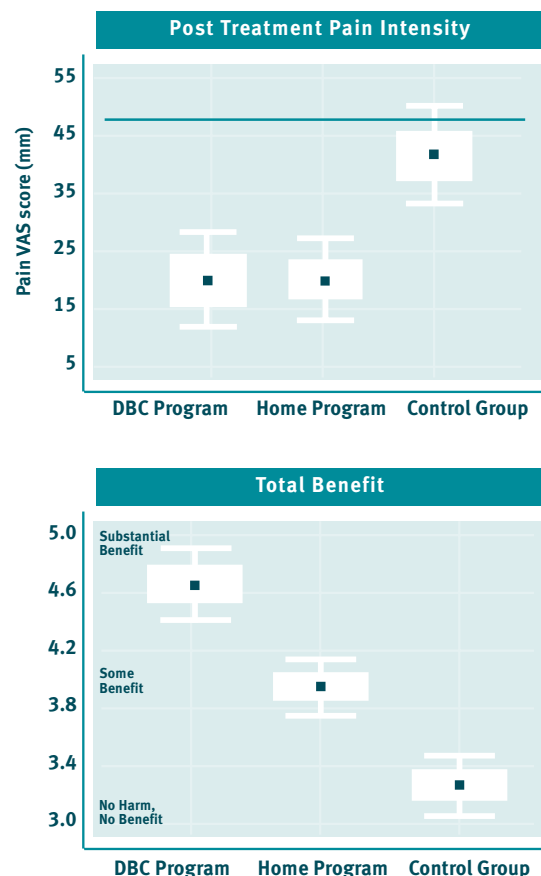
### Thoracic

- Inflammatory
- Post-traumatic
- Postoperative
- Narrowing of spinal canal
- Deformities
- Non-specific pain

## Results

DBC Active Neck Care system relieves pain and restores function in 85 percent of referred patients. Results are clearly seen in the average self-experienced benefit.

By continuing an active lifestyle with regular exercises after the treatment ends, the DBC results are maintained for years. This holds true both in terms of keeping people at work and free of pain.



A clinical trial verified DBC active neck treatment to be more efficacious compared to activated home exercises or the recommendation of exercise in terms of pain reduction and total benefit for the patient. ref. Taimela et al, Spine 2000

## patient evaluation and components of treatment

A patient profile is created on the basis of DBC assessment methods relying on clinical examination and questionnaires. The patient's pain characteristics, physical impairment and associated psychological distress, and categorisation of the pain pattern are documented. The assessment of the severity of deconditioning is based on a combination of standard and optional evaluations.

### Clinical Examination

Patients are typically referred to DBC treatment by a doctor or insurance provider. A physiotherapist may also examine the patient's neurological, functional and musculoskeletal status when indicated.

### Questionnaire

The questionnaire is completely charting the patient's clinical history and present status of the neck, functional status, psychosocial status, general health and working conditions. Validated indexes and measurement tools contain:

- Pain Intensity VAS, Frequency and Pain Drawing
- Physical Impairment Index
- Rimón's Brief Depression Scale
- Fear Avoidance Behaviour Questionnaire
- Physical Activity

The length and design of the individual treatment programme is based on the results of the assessment and the severity of pain and deconditioning. Typical length of the programme is 6 to 18 weeks followed by ongoing programme and follow-up visits.

The program's content is based on pre-selected patterns and relying on proprietary DBC software database on most beneficial previous practices. Pattern-based treatment modes can be employed to focus on correct movements and safety.

### Therapist's Role

The role of the therapists is to target the loading accurately during exercises especially at the early phase of the active treatment as it plays a crucial role in the success of the treatment program.

### Individual Guidance, Cognitive and Behavioural Support

Behavioural and cognitive support is given by using discussions concerning the "benign nature and good prognosis" of neck pain during treatment sessions by the therapist.

### Device Exercises

DBC devices are used to guide the patients through a series of planned, controlled exercises. The natural movements of the cervical spine are reconstructed. With the help of the skilful therapist the targeted muscle groups can be safely loaded and a segmental motion of the cervical spine achieved.

### Relaxation and Functional Exercises

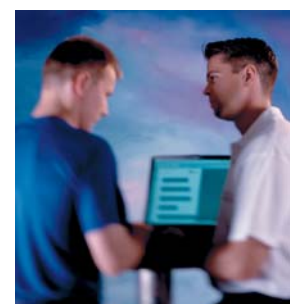
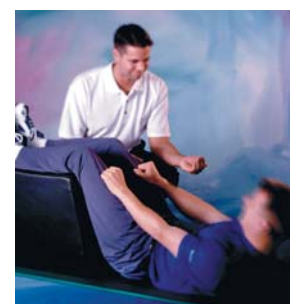
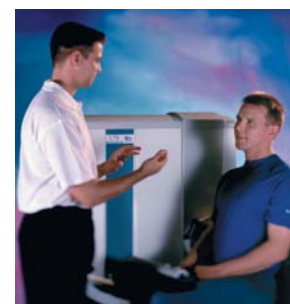
Relaxation between exercises and adequate resting periods are used to relieve muscle tension. Functional exercises are integrated to improve overall function in daily activities.

### Ergonomics, and Psychological and Workplace Intervention

Workplace interventions, individualized ergonomics guidance and psychological support can be added to the programme as supplementary modules based on individual needs.

### Ongoing Programme

Patients are given individual advice and encouraged to stay active after treatment. An individualised continuation programme is designed at the end of treatment.



## system specifications

### Medical Devices

Medical devices produced by DBC represent leading technological innovations in the field of exercise-based rehabilitation incorporating several patented features such as the three-dimensional and elliptic movement patterns. High-tech design, features and materials are employed only with the aim to provide targeted exercise, correct movement patterns and patient safety. Easy adaptability to meet individual program requirements is appreciated by treatment professionals worldwide.

Devices for NeckTreatment are used in challenging treatment requiring special attention in guarantying safety and effectiveness of exercise. Devices for Neck Conditioning are mainly used in continuation and ongoing programmes, and in independent training.

### Software

The DBC software is used for patient management. It enables the systematic collection of data and analysis of patient progress. Specific individual and

group reports may be printed. Feedback on the progress achieved during the treatment also serves as an essential motivational factor for the patient.

### Quality Management

A quality management application is included in the DBC service concept. In addition to software and general treatment quality management guidelines, each clinic has an access to a secured online database to monitor:

- Overview of patient flow
- Intervention type
- Monitored variables
- Treatment length
- Pain duration
- Diagnosis (pattern)
- Patients demographics
- Results: pain
- Results: response rate (pain)
- Results: impairment
- Results: mobility
- Results: absenteeism



### Active Neck Care System

Treatment Concept
Software Questionnaires Manuals
Medical Devices
Neck Treatment <ul style="list-style-type: none"> <li>• CEE Cervical Elliptic Extension</li> <li>• C3R Cervical 3D Rotation</li> </ul> Neck Conditioning <ul style="list-style-type: none"> <li>• CE Cervical Extension</li> </ul> Multipurpose, upper body <ul style="list-style-type: none"> <li>• SBA Shoulder Blade Adduction</li> <li>• MLU Multipurpose Lowfriction Unit</li> </ul> Accessories
Service Concept
Education Helpdesk Treatment Concept Updates Patient Data Analysis