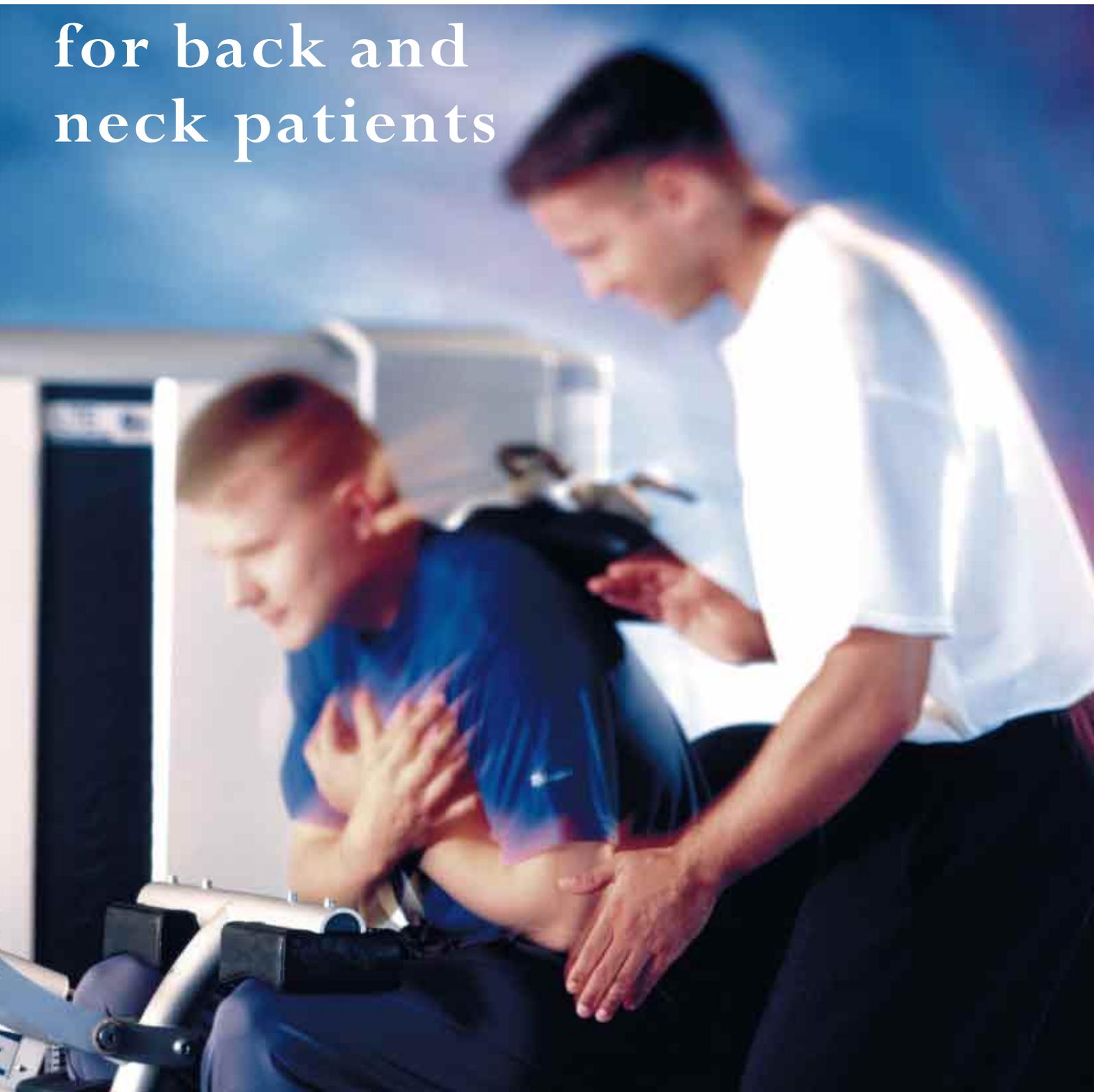


# documentation based care for back and neck patients



# why DBC?

Today we are seeing a revolution in the treatment strategies of spine disorders. An active approach is now widely recommended, whereas bed rest was the treatment method of choice for lower back pain only a decade ago.

DBC International has been a leading developer of methods and technology for the assessment and active treatment of back and neck problems since the late 1980s. The mission of DBC is to create evidence-based treatment concepts for experts and specialists in spine care, with the goal of being the leading pioneer of modern technology and treatment protocols for the active treatment of back and neck disorders. Recent research results show that DBC has achieved that status, one which it sustains and improves on a continuous basis.

## A Complete Concept for Documentation Based Back and Neck Care

- Documented treatment protocols
- Validated testing and follow-up protocols
- Patented technology and high-tech measurement systems
- Computerized patient management
- Quality assurance system
- Proven business concept and internationally recognized trademark
- Continuous scientific research to maintain competitiveness



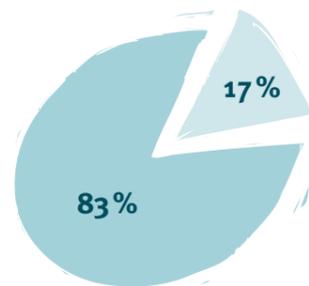
### DBC Benefits

#### • Patients

The ultimate goal of DBC is to improve the well-being and quality of life of the patient by reducing pain and improving function, as well as maintaining the result by activating the patient to take care of him/herself after treatment. This has been verified by independent studies and repeatedly in DBC's follow-up documentation.

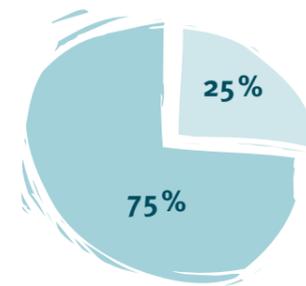
#### • Hospitals and Rehabilitation Centers

A DBC center is set up as a turnkey operation including up-to-date technology, the field's latest medical know-how, as well quality management support. Ongoing research and development and feedback from these units guarantee DBC's continuing success as an international leader in active back and neck care.



- Decrease of pain
- No change

Ref: Spine 24:1034-1042, 1999



- Increase in strength and mobility
- No change

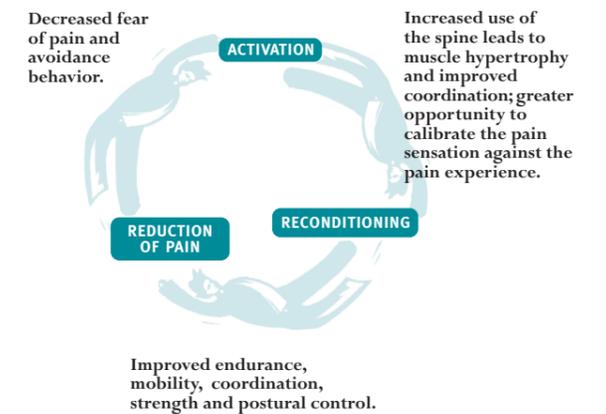
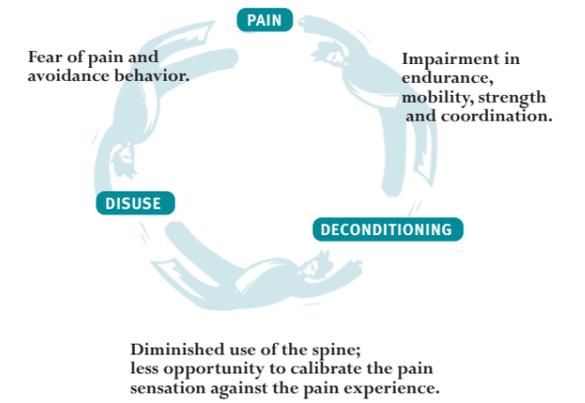
Ref: Journal of Spinal Disorders 9:306-312, 1996

#### • Doctors

The tests and measurements at DBC are validated and reliable, providing a good picture of the patient's problem. DBC treatment programs are safe and efficacious, based on the individual needs of the patients. Being a member in the DBC doctor network provides access to the latest information concerning back and neck research.

#### • Physiotherapists

DBC makes the latest tools and know-how available to the care providers, enabling patients to be treated effectively while increasing their chances of sustaining the



clinical results long after treatment. Ongoing training and support maintain the knowledge base of DBC treatment providers in the rapidly changing world of physiotherapy.

#### • Payers and the Community

Outpatient treatment of back and neck trouble is inexpensive compared to the costs of absenteeism from work, losses in productivity and, in particular, the costs of early retirement. DBC helps to reduce these and other costs. Both follow-up results at DBC and independent reports show that DBC treatment can reduce absenteeism.

# evidence leading to real-life results

The DBC measurement and treatment concept is based on the principles of modern evidence-base and quality management.

Evidence-based medicine promotes the integration of both valid clinical and research-derived knowledge. The best evidence is moderated by individual patient circumstances in order to apply the best available treatment.

Today's back and neck specialists are widely aware of the harmful effects caused by bed rest and inactivity. Active approaches have rapidly become the norm in spine care, and DBC treatment responds directly to that growing demand.

## Scientific Evidence for DBC

DBC leads a network of scientific researchers in different countries. DBC's measurements and treatments have been developed and tested in numerous independent studies. The results have been published in several medical journals including *Spine*, *Archives of Physical Medicine and Rehabilitation*, *Journal of Spinal Disorders* and *Pathophysiology*.

## Clinical Evidence for DBC

Thousands of patients have already been treated with the active DBC method. DBC International collects the results from each

unit as a quality control measure. The method is developed further based on what is learned from the results. Highly convincing clinical results have been achieved, with response rates exceeding 80% in pain reduction and functional gain.

## Why Inactivity Is Bad

- Bones, muscles and ligaments weaken sooner
- The spine stiffens and loses control and coordination
- Overall physical fitness deteriorates
- Sufferers become more prone to depression and sensitive to pain
- Resuming normal activity and daily routines becomes more difficult

DBC treatment is based on guided exercises and activating the patient to reduce – or eliminate – these and the other effects of inactivity.

**There should be a fundamental change in management strategy of chronic low back pain directed towards early active rehabilitation and return to work. It should be based on physical, psychological and social needs of the individual patient.**

Clinical Standards Advisory Group Committee, 1994



## Why Regular Exercise Is Good

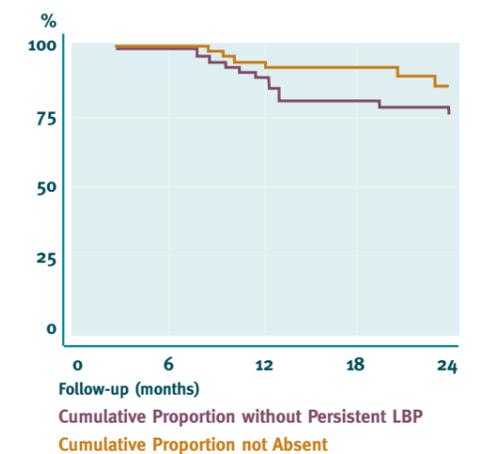
- Promotes a feeling of well-being while reducing depression and anxiety
- Releases natural chemicals known to reduce pain
- Improves coordination and control of movement
- Builds fit muscles and stronger bones and ligaments
- Makes one generally fit

## DBC Works in Real Life

The efficacy of DBC has been proven in controlled studies with well-defined diagnostic criteria, as well as standardized treatment methods provided by well-trained professionals.

Impressive results have also been achieved in real-life conditions throughout the international chain of DBC centers, where treatment providers and patient circumstances vary more than in controlled trials. DBC's quality management system includes continuous training and monitoring of the results of each unit in the system.

In the majority of cases, patients who remain active after DBC treatment benefit from years of sustained clinical results.

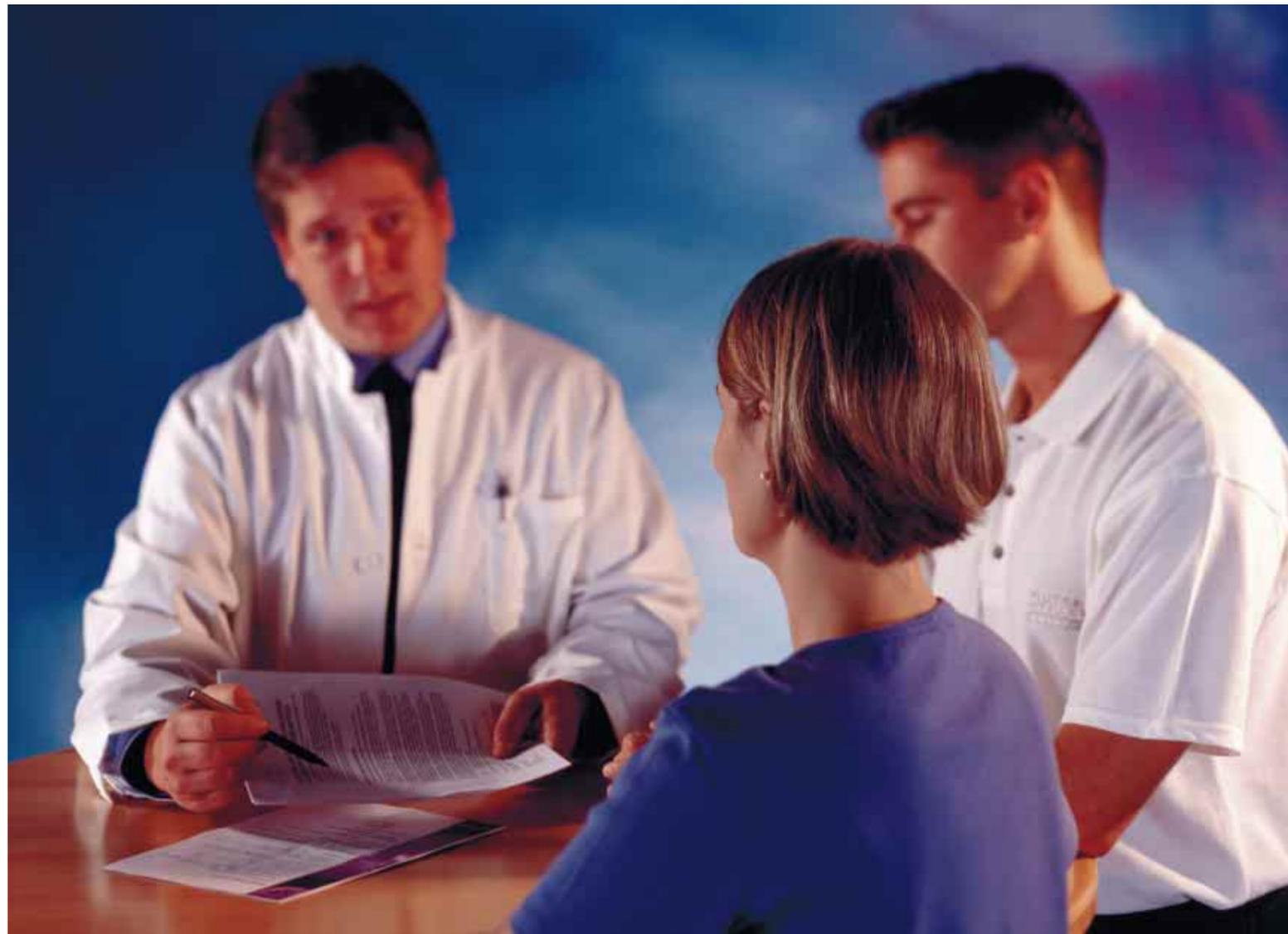


By continuing an active lifestyle with regular exercise after the treatment, the DBC results last for years. This holds true in terms of keeping people at work and free of chronic pain.

# integrated treatment concept

The DBC concept consists of several elements designed to support the critical factors of patient success. Protected, proprietary DBC know-how is integrated into all of the treatment concepts. These are applied in a universal yet localized fashion by all DBC centers, producing consistently good results.

The modular structure of the treatment concepts enables entirely individual treatment programs to be built. Applying the treatment in small groups, however, has proved effective since group members provide motivation and support to one another.



## Ergonomics and Psychological and Workplace Intervention

Psychological and workplace interventions can be added to the program as supplementary modules based on individual needs.

## Relaxation and Functional Exercises

Relaxation between exercises and adequate resting periods are used to relieve muscle tension. The program also integrates functional exercises to improve overall function in daily activities.



## Individual Guidance, Cognitive and Behavioral Support

The support and guidance of our experienced physiotherapists is considered an essential factor in achieving the outstanding results characteristic to DBC treatment.



## Follow-up

DBC produces follow-up reports for patients, doctors and employers based on valid outcomes presented in a clear and transparent manner.



## Technology

DBC continuously develops the program's technology and overall concept. New innovations ensure that each center operates with the most effective methods available today.



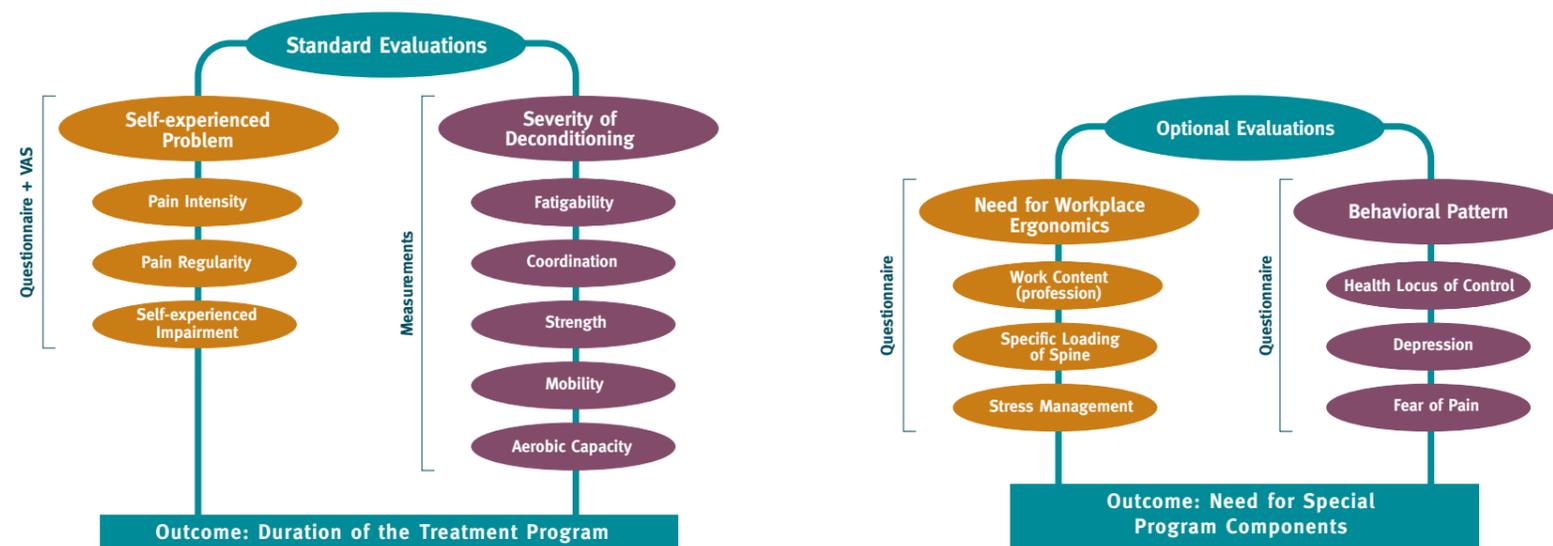
## Assessment

Each patient's treatment is individually planned, based on a thorough evaluation using validated questionnaires and tests.



## Device Exercises

For the main treatment component, DBC equipment is used to guide the patients through planned, controlled exercises. This special equipment makes precise and targeted loading possible.



# proven technology concepts

DBC has developed innovative technology for the assessment and treatment of back and neck disorders since the late 1980s. The latest technology is now applicable for use in the most demanding hospital and rehabilitation settings.



## Active Back Care Devices

### LTE Lumbar Thoracic Extension

DBC's patented hip-lock system safely targets the desired muscle groups of the lower back while simultaneously guiding the correct movement pattern.

### LTF Lumbar Thoracic Flexion

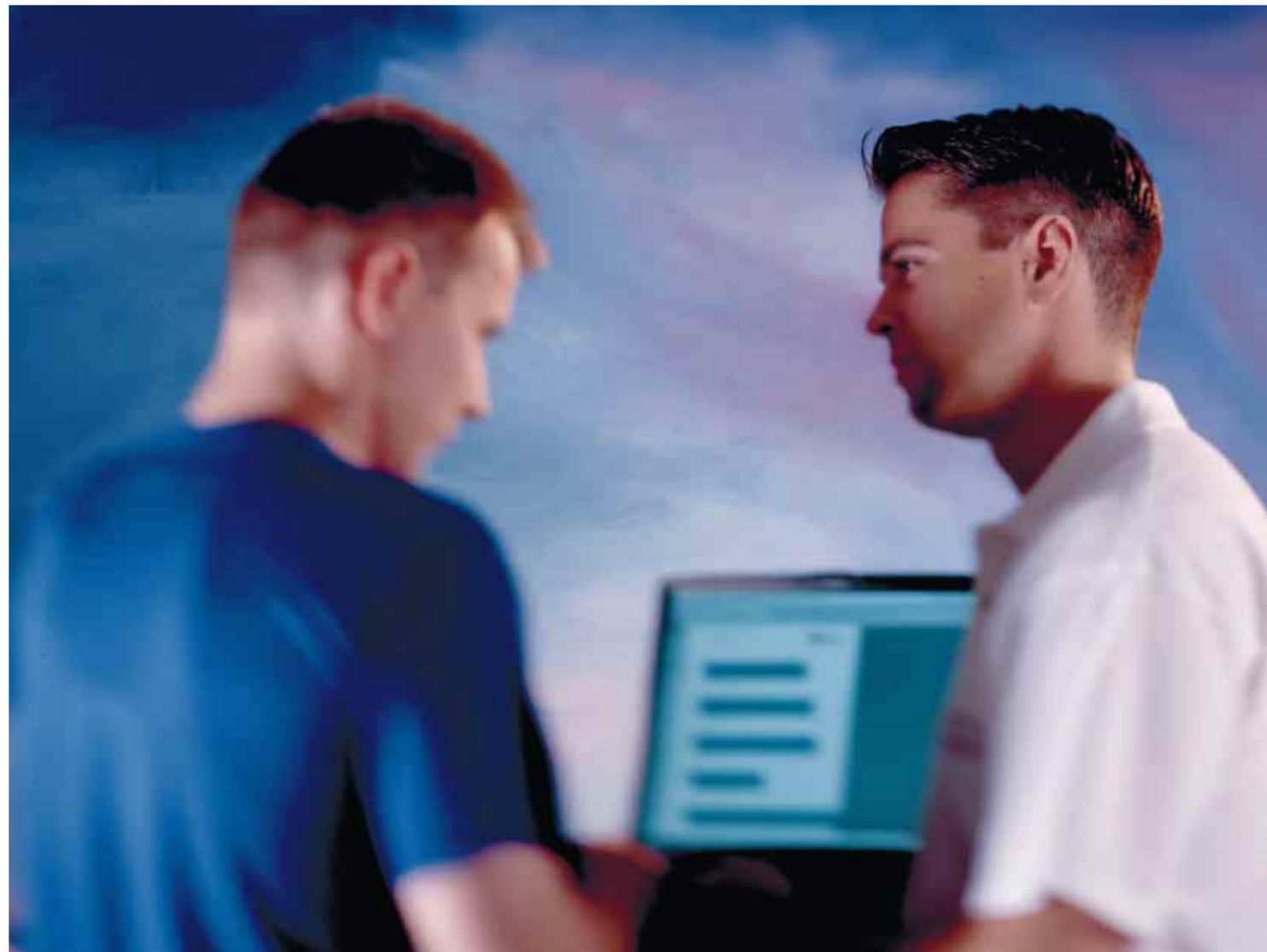
The hip-lock system safely targets the desired muscle groups used when flexing the trunk while simultaneously guiding the correct movement pattern.

### LTR Lumbar Thoracic Rotation

The muscle groups involved in trunk rotation are effectively isolated while correctly guiding the desired movement pattern.

### Lumbar Thoracic Lateral Flexion

The desired muscle groups used in lateral bending of the trunk are effectively isolated while simultaneously guiding the correct movement pattern.



## Active Neck Care Devices

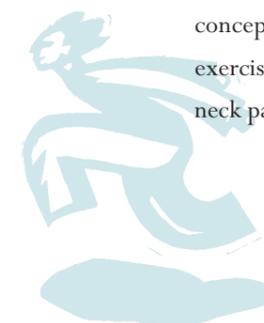
### CEE Cervicothoracic Elliptic Extension

A breakthrough in cervical motion, CEE safely guides the cervical spine through an elliptical movement pattern while targeting the muscle groups involved.



### C3R Cervical 3D Rotation

C3R safely targets the muscle groups involved in cervical rotation while incorporating three-dimensional movement patterns to correctly guide the cervical spine through flexion, lateral flexion and rotation simultaneously, replicating real-life movements.

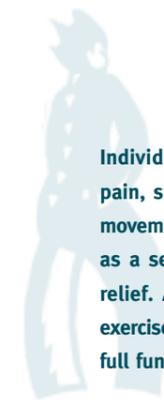


### SBA Shoulder Blade Adduction

The unique SBA device facilitates the adduction of the shoulder blades to improve the function of the stabilizing structures of the upper thoracic area.

### MLU Multipurpose Low-Friction Unit

A multipurpose device incorporated into the concept, MLU allows for a wide array of exercises important in the rehabilitation of neck patients.



Individual back exercises may aim to reduce pain, strengthen muscle groups, and improve movement or posture. They are often prescribed as a second stage of management after pain relief. An active rehabilitation program uses exercises, but its main emphasis is on restoring full function.

Clinical Standards Advisory Group Committee, 1994

## Other Treatment Devices and Equipment

### EMG Measurement System

The EMG (electromyography) measurement system is used to objectively evaluate muscle fatigue of the lower back based on changes in frequency content in muscle activity. The testing is done with a validated evaluation protocol.



In addition to specific treatment and measurement devices, DBC clinics also feature complementary devices and equipment such as leg presses, stationary bikes, steppers, relaxation pillows, and balance training devices – all designed to make the customer's start with DBC as easy and effective as possible.



### Trademark Package

A complementary package of detailed manuals, efficient and user-friendly software for clinical work and business analysis, as well as corporate identity materials are provided to the clinics to round-out the support needed to ensure clinical and operational success.



# business concept and global support

## Clinic Services and Personnel

The DBC Active Spine Care concept is designed for the conservative treatment of prolonged, recurrent and chronic back and neck problems as part of the total services offered by the center. The treatment programs consist of initial assessments and questionnaires, modular active treatments with exercises, behavioral support to activate the patient, and ongoing programs after the guided treatment.

Specially trained therapists provide all care. A DBC unit is typically managed by the assigned physiotherapist together with the responsible doctor. All personnel receive special training for running the DBC center.

## Business Concept

A DBC center is implemented as a turnkey operation, in terms of treatment technology and methods as well as business standards.

The business concept's feasibility and performance have been tested and further developed in various centers and market conditions.

DBC provides a range of important business benefits.

- Proven products
- Experience with compensation systems tailored specifically for DBC taking into account the evidence-base
- An internationally recognized trademark
- Designed clinic interior
- Designed corporate identity
- Administrative tools
- Pricing and budgeting guidelines
- Marketing guidelines and tools

## Licensing Structure

All units belonging to the network have access to the latest developments in back and neck care. The licensing system also provides for each unit to be supported by help-desk guidance, quality assurance, continuous education and a number of other support measures.

DBC has an international partner network of research organizations and collaborating universities which continuously seek optimal care solutions for specific types of back and neck disorders. The most compelling findings



neck disorders. The most compelling findings and innovations are transformed into concept-level applications.

## Quality Assurance System

DBC's unique quality assurance system begins with customer satisfaction surveys, which are collected from each patient. In addition to satisfaction surveys, the medical data of each individual patient is collected into a centralized database.

Further analysis of the continuously growing data and patient outcomes is also a key element in developing the concept and treatment protocols. DBC has experience in treating tens of thousands of chronic and recurrent back and neck patients around the world – giving new clinics the important advantage of starting with evidence-based protocols.

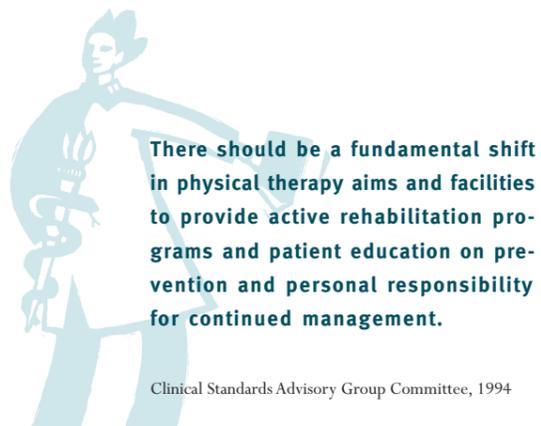
## Ongoing Support

Each country has its own DBC country organization, the principal task of which is to support the operating DBC clinics and to coordinate national activities and development. Ongoing support is provided to help clinic physiotherapists and doctors with treatment-related, medical, administrative and other facilitative support.

## Worldwide Network of DBC

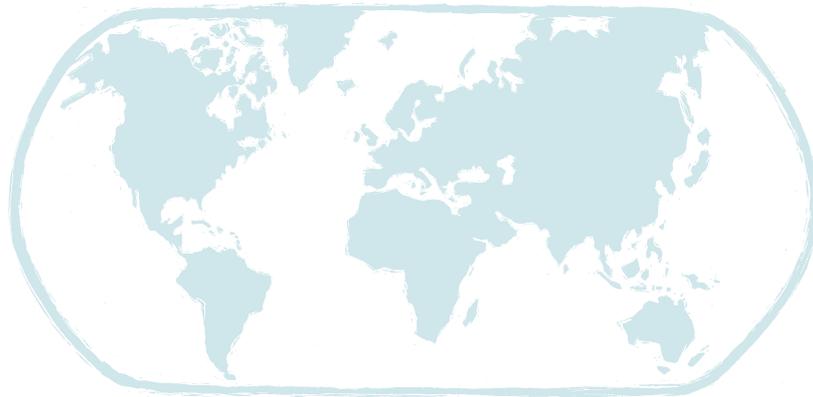
DBC has gained experience in back and neck disorders from five continents of the world. The DBC international network of clinics is growing rapidly. With evidence-based research, documentation-based treatment protocols and sophisticated technology, DBC has become the leading provider of integrated spine treatment concepts for professional use.

For more information about DBC and Documentation Based Care, please contact the DBC organization in your country or DBC International.



**There should be a fundamental shift in physical therapy aims and facilities to provide active rehabilitation programs and patient education on prevention and personal responsibility for continued management.**

Clinical Standards Advisory Group Committee, 1994

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