

# Danish national clinical guideline for non-pharmacological treatment of persistent post-concussion symptoms

January 2021

Quick guide - English version

## How to read the quick guide

This quick guide contains the key recommendations from the national clinical guideline for non-pharmacological treatment of persistent post-concussion symptoms. The recommendations are preceded by the following indications of their strength:

### ↑↑ A strong recommendation for (Green)

A strong recommendation for an intervention is given when evidence of high-quality shows that the overall benefits of the intervention clearly outweigh the undesirable effects. All or almost all patients would want to receive the intervention.

### ↓↓ A strong recommendation against (Red)

A strong recommendation against is given when evidence of high-quality shows that the undesirable effects of the intervention clearly outweigh the benefits. It is also given when the review of the evidence shows with great certainty that the intervention is useless or when the majority of patients would not want the intervention.

### ↑ A weak/conditional recommendation for (Yellow)

A weak/conditional recommendation for an intervention is given when it is assessed that the benefits of the intervention outweigh the undesirable effects or the evidence cannot rule out a significant benefit of the intervention while the harms are judged to be few or absent. This recommendation is also given when there are substantial variations in patients' preferences.

### ↓ A weak/conditional recommendation against (Orange)

A weak/conditional recommendation against an intervention is given when it is assessed that undesirable effects of the intervention outweigh the desirable effects, but where this is not supported by high-quality evidence. This recommendation is also given where there is strong evidence for both beneficial and harmful effects, but where the balance between them is difficult to determine. Furthermore, this recommendation is used, when there are considerable variations in patients' preferences.

### √ Good practice statement (blue)

The symbol (√) stands for good practice statement. It is given when there is a lack of evidence to answer the clinical question and the recommendation is therefore based on the professional consensus in the working group that prepared the guideline. It is given when the working group wants to emphasize particular aspects of established clinical practice. A good practice statement can be either for or against the intervention. Since a good practice statement is based on clinical consensus, this recommendation is weaker than the evidence-based recommendations irrespective of whether these are strong or weak.

### More information

To learn more about the method and the strength of the underlying evidence, visit [the Danish Health Authority website](#).

## Key recommendations of the guidelines

### Information and advice

#### Weak recommendation

↑ Consider offering information and advice systematically within the first 4 weeks after concussion.

The evidence in this national clinical guideline is based on studies, where information and advice are offered immediately after the trauma, e.g. as telephone counseling, mobile phone text messages, written information or physical consultations provided by a relevant health professional.

Information and advice should be provided by a health professional with relevant professional background and experience in management of people with concussion.

Current evidence indicates larger effects of information and advice if provided continuously over several weeks or months.

### Graded physical exercise

#### Weak recommendation

↑ Consider offering graded physical exercise in addition to other treatment to patients with persistent post-concussion symptoms.

Graded physical exercise includes individual or group-based exercise and/or other structured physical exercise. In this national clinical guideline graded physical exercise is defined as individually adapted and gradually increased in intensity and/or complexity over time.

Graded physical exercise can be offered in addition to other treatment, e.g. interdisciplinary and integrated programs combining two or more treatments. Moreover, it can include a focus on everyday activities and advice on how these can be handled.

Graded physical exercise should be provided by a health professional with relevant professional background and experience in management of people with post-concussion symptoms.

### Vestibular rehabilitation

#### Weak recommendation

↑ Consider offering vestibular rehabilitation in addition to other treatment to patients who experience persistent vestibular dysfunction after concussion.

Patients with vestibular dysfunction include all people who show symptoms of vertigo, dizziness and impaired balance after concussion.

Vestibular rehabilitation includes individually adapted training with habituation and adaptation exercises, substitution and balance training. Vestibular rehabilitation can be offered in addition to other treatments as individual or group-based treatment. Moreover, people with vestibular dysfunction after concussion should be examined and, if relevant, treated for Benign Paroxysmal Positional Vertigo (BPPV).

Vestibular rehabilitation should be provided by a health professional with relevant professional background and experience in management of people with post-concussion symptoms.

## Manual treatment of neck and back

### Weak recommendation

↑ Consider offering manual treatment of neck and back in addition to other treatments to patients with persistent symptoms after concussion.

In this national clinical guideline manual treatment is defined as mobilization and/or manipulation of the neck and back. The working group expects that manual treatment is especially relevant for patients with neck pain with or without headache after a concussion.

Manual treatment should be provided by a health professional with relevant professional background and experience in management of people with post-concussion symptoms.

## Oculomotor vision therapy

### Good practice

√ It is good clinical practice to consider offering oculomotor vision therapy to patients who experience persistent visual symptoms after concussion.

Oculomotor vision therapy includes e.g. oculomotor training to treat vergence, accommodative, or eye movement impairment to reduce vision-related dysfunction after concussion.

Oculomotor vision therapy should be provided by a health professional with relevant professional background and experience in management of people with post-concussion symptoms.

## Psychological treatment

### Weak recommendation

↑ Consider offering psychological treatment in addition to other treatment to patients with persistent symptoms after concussion.

Psychological treatment is defined as the informed and intentional application of methods based on established psychological principles. The health professional cooperates with the patient for the purpose of modifying behaviors, cognitions or emotions in a more appropriate direction in relation to the recovery process and that the patient deems desirable.

Psychological treatment should be provided by a health professional with relevant professional background and experience in management of people with post-concussion symptoms.

Persons suffering from mental comorbidities, such as anxiety or depression, need a more focused therapeutic treatment by a psychologist or psychiatrist. Persons with persistent symptoms after concussion should always be examined for concomitant psychopathology.

## Interdisciplinary coordinated rehabilitative treatment

### Weak recommendation

↑ Consider offering interdisciplinary coordinated rehabilitative treatment to patients with persistent symptoms after concussion.

An interdisciplinary coordinated rehabilitative treatment is a treatment provided by health professionals from at least two different disciplines, who collaborate on the rehabilitation of the patient. The treatment includes at least two interventions, e.g. vestibular rehabilitation, graded physical exercise, oculomotor vision therapy, manual treatment, (neuro)psychological and psychotherapeutic intervention, advice on managing everyday activities, and vocational rehabilitation and appears as a comprehensive interdisciplinary approach.

An interdisciplinary coordinated rehabilitative treatment should be provided by health professionals with relevant professional background and experience in management of people with post-concussion symptoms.

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## General recommendations made by the working group

- Most people who experience a concussion will have a fast and spontaneous recovery, however a substantial proportion experience persistent symptoms and may need rehabilitation. Information and advice early in the course of recovery can be beneficial for everyone.
- There should be an increased focus on multidisciplinary assessment early in the course of recovery, if the patient does not get better within the first few weeks.
- Patients with few symptoms may benefit from treatment from individual healthcare providers whereas patients with a high symptom burden may need interdisciplinary coordinated rehabilitative treatment.

- It is essential to consider a holistic perspective when managing patients with persistent post-concussion symptoms in both individual treatments and interdisciplinary coordinated rehabilitative treatments, because recovery reflects a mutual influence between biological, psychological and social factors.
- Training and rehabilitation may lead to pre-injury or near pre-injury levels of functioning for some, while for others it will assist in symptom management and adjustments in everyday life functioning. Early and timely management is important, if the patient experience persistent post-concussion symptoms as this may mitigate symptom chronicity.
- Clinicians should pay attention to which treatments are to be prioritized for those who are unable to participate in more than one intervention at a time.
- It is important to include goals, values and individual preferences of the patient when planning and performing patients-centered care.
- Monitoring and a plan for the progress in symptoms is important in order to measure the effect of the treatment.

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### What is a national clinical guideline?

- This national clinical guideline contains systematically prepared recommendations, which can be used as a support for clinical decision-making regarding patients with persistent symptoms after concussion.
- A national clinical guideline is based on scientific evidence and best practice and has the purpose of supporting a uniform treatment across municipalities, regions and primary care.
- A national clinical guideline includes recommendations regarding selected areas in the management of patients with post-concussion symptoms, where decision support is needed. The clinical decision should be based on an individual assessment adjusted to the patient. A deviation from the recommendation can be done if substantial reasons argues for it, while taking patient wellbeing into consideration.

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### What can a national clinical guideline be used for?

- Evidence-based recommendations can be used as part of individual interventions or as a part of an interdisciplinary coordinated rehabilitative treatment.
- This guideline must be seen alongside other guidelines, process descriptions etc. in the field.
- The guideline can be used as an inspiration, when planning the course of treatment targeting post-concussion symptoms.

The guideline was prepared by the Danish Concussion Center in collaboration with:

- Danish Neurological Society
- Society Danish Neuropsychologists
- The Association of Danish Physiotherapists, including Danish Association of Neurological Physiotherapy and Danish Society of Sports Physical Therapy
- The Danish Association of Occupational Therapists
- The Danish Opticians Association
- Danish Chiropractic Society
- The Danish Concussion Association

The focus of this national clinical guideline is on the treatment of patients  $\geq 18$  years diagnosed with concussion in hospital or primary care, experiencing persisting symptoms  $\geq 4$  weeks after concussion. Only non-pharmacological treatments of patients with persistent symptoms after concussion are included.

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### Further information on [www.dcfh.dk](http://www.dcfh.dk)

A full-length version of the national clinical guideline is available, including a detailed review of the underlying evidence for the recommendations, and can be found at [the website of the Danish Concussion Center](#).

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### About the national clinical guidelines

This guideline is one of the national clinical guidelines prepared in collaboration with relevant professional societies under the auspices of the Danish Health Authority during the period 2019-2020.

Further information about the choice of subjects, method and process is available at [www.sst.dk](http://www.sst.dk).

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