



## MND Factsheet 5C Getting the Best From Physiotherapy

### INTRODUCTION

Following diagnosis of MND, physiotherapy involvement may be beneficial as early assessment and planned exercise programmes can assist clients to avoid fatigue as well as help people with MND maintain mobility and independence for as long as possible.

### POINTS TO CONSIDER

As motor neurones die, muscles become weaker and stiffer. As a result, someone with MND might become less mobile in terms of moving their head and limbs. When it is difficult to move body parts, the associated joints become stiff which can be quite painful. Therapeutic exercise may help relieve discomfort. Recreational exercise can also help with physical symptoms.

It is important to realise that exercise will not strengthen muscles that have been weakened by MND. Once the supply of motor neurones that control a particular muscle has degenerated, it cannot be regenerated by exercise. Despite this a physiotherapist can be of great benefit.

The physio's tasks may include the following:

- Providing a detailed analysis of abnormal movement (for example, analysis of how you walk,)
- Optimising your strength, function, and comfort;
- Designing and monitoring a therapeutic exercise regimen when

appropriate;

- Assisting with breathing management; providing training in energy conservation and time management techniques;
- Assisting in providing useful specialist equipment;
- Making a home assessment.

In the latter stages of MND, clients might need extensive experimentation with positioning for comfort.

### ASSESSMENT IN CASES OF MND

It is desirable that people with MND have easy and regular access to physiotherapy. With possible rapid changes in functions, prompt reassessment and support is a key issue.

- Careful instruction in simple management techniques such as passive range of movements, positioning and safe handling and moving can benefit clients and carers.
- Regular telephone contact may be very useful in maintaining supportive relationships.

### FORWARD PLANNING

People with MND need to understand their own limitations – and the importance not over-exercising. Although exercise can have therapeutic effects energy conservation and rest periods in daily routines can be important.

**MND Scotland is the working name of the Scottish Motor Neurone Disease Association, the only charity funding research and providing care and information for those affected by MND in Scotland.**

### PHYSICAL PROBLEMS

MND can give rise to altered muscle tone and loss of voluntary movement. Weakness may begin in any group of muscles and rates of progression and distribution of atrophy may be random necessitating regular review. This may result in:

- Prolonged contraction (contractures) of affected muscle groups – particularly the joint muscles,
- Pain in affected muscle groups – and also in joints which have become stiff,
- Loss of head control due to weakened neck muscles,
- Altered trunk control,
- Problems associated with weakened shoulder,
- Impaired arm and leg function,
- Peripheral oedema may occur. (e.g. swelling of ankles, hands and fingers.)

Going from sitting to standing, even if assisted, often achieves a number of aims – including stretching joint muscles, weight bearing, maintaining bladder and bowel function and provision of pressure relief.

### MOBILITY

- Lower limb weakness and falls can sometimes be successfully managed in their early stages by providing lightweight ankle-foot supports (orthoses).
- If falls occur, people with MND and their carers may be taught strategies enabling them to cope physically.
- Appropriate walking aids should be used when needed.
- Provision of wheelchair(s) should be considered in advance of actually becoming essential.

### RANGE OF MOVEMENT EXERCISES

A person with MND needs to move each affected joint through a series of range-of-motion (ROM) exercises every day to prevent joint stiffening. Exercise will help to keep the body as flexible as possible and the joints mobile. ROM exercises are usually done systematically, meaning that the joints of one limb are exercised in a particular order before the next limb is exercised and so on.

The objective of ROM exercises is to move each affected joint through its full range of motion every day. Not every person with MND can do a full set of active exercises.

#### Active Exercises

An active exercise is one the person does themselves without any assistance, when their muscles can perform the full movement. When someone cannot move through a ROM exercise on their own, they can still complete the movement as an active-assisted exercise. A helper may assist the muscle through the movement, or there may be a way to do a self-assisted range of motion exercise.

#### Passive Exercises

Passive exercises are done completely by a helper when muscles can no longer perform any of the movement. The helper moves the joints through their ROM by manipulating the limb. Passive exercises work the joints but not the muscles. Physiotherapists can train carers to do these exercises properly where it is appropriate.

The transition from active to passive exercise is seldom abrupt. Some people may find that they can do some exercises actively, some with assistance and still others only passively.

Each person with MND needs an

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exercise programme tailored to their own individual needs and abilities. GPs and physiotherapists can prescribe the exercises that are right for someone at any given time. The physiotherapist can demonstrate the exercises to ensure that they will be performed correctly. Diagrams of the exercises can help patients and caregivers remember the techniques.

### Moderation in Exercise

It is important that all exercise be performed in moderation. Fatigue will only increase weakness and rob the person of energy they need for their daily routines and the activities they enjoy. If you find that the prescribed set of exercises tires you, you should talk to your physiotherapist in order that changes can be made to eliminate the risk of fatigue.

Similarly, no exercises should cause pain. If someone does experience pain when exercising, they should stop that exercise and talk to their physiotherapist. It may be that they are not doing the exercise correctly, or perhaps some modification to their exercise program must be made. Passive/assisted movements should be performed each day – this can help relieve pain and, for carers, make easier daily tasks such as dressing and washing

- In passive stretching, certain muscle groups, such as the joint muscles, need particular attention. Learning good handling techniques may allow carers to perform effective stretching.
- Deep massage can help loosen tight muscle groups.
- Passive movements can help relieve

### Some Exercising Tips...

Consult with a physiotherapist to design a program.

Exercises should be done daily and should become a routine. You may wish to break up your exercise routine into parts to avoid fatigue. Stop doing any exercise that hurts, and consult your therapist if this happens.

Do as many active exercises as you can. It may be necessary to switch to active-assisted or passive exercises later. Your therapist can help you to make decisions about the correct limits of your exercise. If you experience fatigue, consult your therapist for a change in your programme.

Prioritise your exercises based on how effective they are for you in terms of injury and pain prevention and maximizing the functions most important to you. Ask your therapist which exercises are the most important ones to do if you have a busy day ahead of you to conserve energy.

Find out which exercise position is best for you. Some exercises can be done while you either sit or lie down. Passive exercises are usually performed while you lie down. Your therapist can advise you on best positions.

some pain. TENS can be useful - along with acupuncture, local heat, ice and “complementary therapies”. Hydrotherapy can also be appropriate.

- Regular changes in position may help prevent limb stiffness and ease pain.
- Positioning may also help reduce weakened limbs. This will depend on the wishes, abilities and handling tolerance of the person with MND.

The information in this leaflet is believed to be accurate at the time of production, MND Scotland cannot give detailed medical advice, this leaflet should be regarded only as general background information.

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### Useful Resources

If you have difficulty obtaining aids or equipment check with your MND Care Team Specialist as some items are available on loan through MND Scotland.

Chartered Society of Physiotherapists [www.csp.org.uk](http://www.csp.org.uk)

#### Patient leaflets

##### *MND Association*

Leaflet on Movement and mobility [www.mndassociation.org.uk](http://www.mndassociation.org.uk) (Search for Movement and Mobility)

##### *ALS Society of Canada*

Mobility and Independence -Adapting to changes in mobility and maintaining independence from "ALS Manual – manual for people living with ALS" Available to download online from [www.als.ca/als\\_manuals.aspx](http://www.als.ca/als_manuals.aspx)

*QUEST May/June 2007*– article from MDA journal on exercise and neuromuscular disease, "Exercise your options" by David von Hatten

[www.mdaquest-digital.com/mdaquest/20070506/](http://www.mdaquest-digital.com/mdaquest/20070506/) search contents

#### BOOKS

Chapter 7a – Multidisciplinary care physiotherapy by Ulrike Hammerbeck and Alison Garrett from "Palliative Care in Amyotrophic Lateral Sclerosis. From Diagnosis to Bereavement" . 2<sup>nd</sup> edition edited by David Oliver, Gian Domenico Borasio and Declan Walsh 2006\*

Everyday Life with ALS: a practical guide. *Muscular Dystrophy Association 2005* Available online at [www.als-mda.org/publications/everydaylifeals/](http://www.als-mda.org/publications/everydaylifeals/) Also available in print and CD-Rom \*

#### VIDEO

Wellness in Motion. Activities for Persons with ALS. Introduced by Betsy Lindsey. University of Arizona, Department of Neurology. 40 minutes is available to borrow from our library.

#### Further Reading

Factsheet 5A	Assistive Equipment
Factsheet 5B	Maintaining Mobility
Factsheet 5D	Aids to Maintain Mobility

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