NHS
University Hospitals Sussex
NHS Foundation Trust

Strength and conditioning

Patient information

What is Strength and Conditioning?

It is improving a person's physical fitness, strength, power and technique through resistance training, cardiovascular activity and sport-specific drills.

How does this apply to me?

You may have been given some specific exercises and advice by your physiotherapist to develop your strength and conditioning. This can help you to rehabilitate after an injury, manage a long term condition such as ongoing back pain, or help you recover after an operation. Please follow the advice and guidance given by your physiotherapist.

What are the benefits?

- Improve bone strength
- Improve muscle size
- Improve muscle strength and power
- Improve mental wellbeing
- Improve sleep
- Injury prevention
- Better recovery after injury
- Manage/improve pain
- Enhance performance
- Improve cardiovascular health
- Improve nerve function.

What are the principles of Strength and Conditioning?

Specificity – the type of exercise has to be specific to the goal of training e.g. lifting heavier weights to get stronger.

Individuality – the exercises need to take into account your levels of pain and include your goals, as well as involve things you enjoy.

Progression – to reach your goals and help you be able to do the things you want to do, your exercises should be changed and/or developed throughout your rehab.

Overload – as you continue to exercise, you will get fitter and stronger. As this happens, it is important that the exercises are made harder for you, to ensure that you continue to progress.

Reversibility – if you stop doing your exercises, you will start to lose the strength and fitness that you have gained.

Recovery – it is important to have rest days to allow your body and mind to recover between sessions.

What are the principles of individual exercises?

The principles of individual exercises can be remembered by the acronym **FITT.**

Frequency – how often the exercise should be done
Intensity – how challenging the exercise should be e.g. lifting more weight, quicker speed
Time – how long the exercise should be performed for
Type – what kind of exercise needs to be done on a given day e.g. strength, cardiovascular, balance.

How many repetitions and sets should I be doing?

When you are exercising to improve strength, the research tells us that you get the most benefit when you are putting in a lot of effort. If it's too easy, you won't get stronger.

So, you could try doing:
3 sets of 8-12 repetitions OR 3 sets of 3-5 repetitions

Both will work if you are putting in a lot of effort.

Remember that by the time you get to the last repetition of the exercise, you should be feeling as though you need to stop. If not, consider doing more repetitions OR increasing the weight.

How long does it take to strengthen muscles?

It can take 6-8 weeks to notice an improvement in muscle strength. It can take 12-26 weeks to notice an increase in muscle size with strength exercises.

How much aerobic activity should I be doing?

Aerobic activity is a period of exercise that increases the heart rate and breathing rate. It has many benefits for the various systems in your body, such as your heart and lungs.

The NHS recommend you do at least 150 minutes of moderate intensity activity a week or 75 minutes of vigorous intensity activity a week. Moderate intensity activity may include things like brisk walking or cycling, whereas vigorous activity may include things like playing football or running.

Who do I call if I have any questions?

If you have any questions or concerns, you can discuss this with your physiotherapist at your next appointment. Alternatively, you can call your physiotherapy department and leave a message for your physiotherapist to call you back.

Royal Sussex County Hospital: 01273 523050
Hove Polyclinic: 0300 304 0118
Brighton General Hospital: 01273 665111

Useful websites
www.nhs.uk/live-well/exercise
www.who.int/news-room/fact-sheets/detail/physical-activity
www.acsm.org

This leaflet is intended for patients receiving care in Brighton & Hove or Haywards Heath

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