

# MUSCULOSKELETAL HEALTH

## PHYSICAL WELLBEING TOOLKIT

Inside this toolkit you will find expert guidance and tips on how to take care of your muscles, joints and bones to help reduce the risk of injury, pain and discomfort to help improve mobility and quality of life.

### **How to Make Your Body Happy!**

- Decrease pain and tenderness
- No more strains & sprains
- Reduce the risk of injury
- Improve mobility
- Move more





# MENTAL & *Physical* FITNESS REDUCES THE RISK OF *Injury!*

Action can be taken at any age to reduce the risk of MSK problems.  
Regular, gentle exercise and daily stretching helps to **reduce pain**  
and **improve physical and mental wellbeing.**

## MSK FACTS & FIGURES

1

An average of 9.5 million working days are lost each year within the UK due to MSK conditions.

2

33% of long term sickness absence within UK organisations is attributed to MSK conditions.

3

MSK conditions are the leading cause of pain and disability for NHS England.

### .... THE GOOD NEWS!

The good news for the 1 in 4 people affected by MSK problems every year is that most conditions can be easily treated by you, at home with regular exercises, stretches and healthy nutrition.



# GET STRONG!

## STABILITY, FORM, *Function* & MOVEMENT

The musculoskeletal system (MSK) consists of the skeleton, muscles, tendons, ligaments, joints, cartilage, and other connective tissue. The whole system provides form, support, stability, and movement to the body and supports and binds tissues and organs together.

Musculoskeletal includes over 200 different conditions affecting:

- joints
- bones
- muscles
- and soft tissues

Conditions include those that arise suddenly and are short-lived, such as fractures, sprains and strains, to lifelong conditions associated with ongoing pain and disability.

## Signs & Symptoms

Pain and restricted mobility are the primary features of the range of musculoskeletal conditions. Pain is typically persistent for long-term conditions with localised or widespread pain that can worsen with movement.

An intense 'burning sensation' may indicate a muscle injury, such as a sprain or strain. If this feeling does not get better over time or spreads to several muscles, it may be an indication of a chronic condition, such as fibromyalgia.

MSK pain can affect sleep patterns and the quality of sleep leading to fatigue and low energy. The good news is that pain management programmes have a very beneficial impact on this issue, so if your sleep is affected by MSK then speak to your doctor for support.

### Musculoskeletal conditions include:



**JOINTS** Such as osteoarthritis, rheumatoid arthritis, gout, ankylosing spondylitis



**BONE CONDITIONS** Such as osteoporosis, osteopenia and associated fragility fractures, traumatic fractures



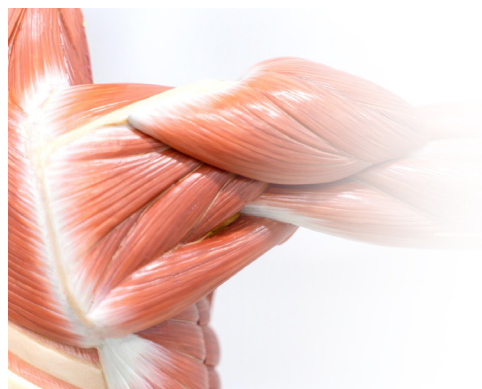
**MUSCLES, TENDONS, NERVES, CONNECTIVE TISSUE** Such as sarcopenia, carpal tunnel syndrome, tendinitis, tenosynovitis and bursitis



**SPINAL DISORDERS** Such as low back pain, neck pain, hip pain, prolapsed disc, sciatica



**REGIONAL WIDESPREAD PAIN** Frozen shoulder, tennis elbow, fibromyalgia



Aches and pains are a normal part of life but if they prevent you from carrying out your usual day-to-day activities, they can make you feel low, worried and frustrated.

Regular strengthening exercises can make a huge difference to pain reduction.



# MASK WELLBEING

## MUSCULOSKELETAL *Strategies*

### 5 *ways* TO BUILD STRENGTH & REDUCE PAIN!

MSK wellbeing is associated with mobility, dexterity, energy and movement and has a positive impact on life at work and at home. It's an upward curve; the better you feel, the more you do, the more you do, the better you feel!

#### HERE ARE 5 STRATEGIES TO HELP YOU GET MSK FIT AND WELL...

##### 1 WEIGHT MANAGEMENT

Obesity is related to the onset of musculoskeletal symptoms and inversely related to recovery from symptoms. Obesity is associated with a higher risk of developing biomechanical MSK conditions, in particular symptoms of the lower extremity. Research shows that people with a higher BMI may experience greater severity (ie more chronic inflammation) and recovery may take longer.

##### ....AND ANOTHER THING!

Maintaining a healthy weight is important as the knees, hips and back support almost all our body weight.

#### Juice the **RAINBOW** for Musculoskeletal Health!



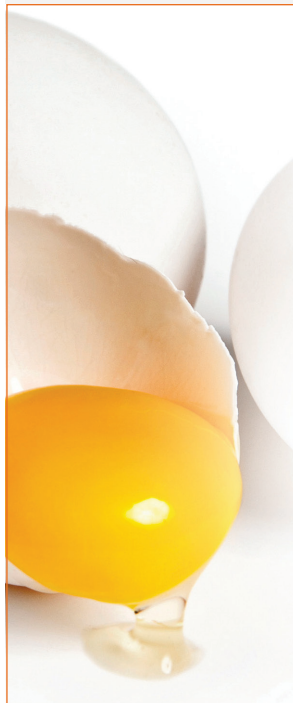
- Juice, steam or stir fry veggies of all colours to ensure a rich supply of antioxidants to help cellular repair. Include lots of leafy green vegetables such as a broccoli, spinach, kale, carrots, and peppers.
- Milk, cheese and yoghurts provide calcium for bone health.
- Eat a good mixture of soya beans, tofu and soya drinks for added calcium too.
- Eggs, walnuts, fortified yoghurts, cereals and juices can be a good source of Vitamin D.
- Eat fish with bones! Mackerel, sardines and pilchards are unlikely superfoods!

##### 2 HEALTHY EATING & NUTRITION

The musculoskeletal system makes up about half of the total bodyweight in healthy individuals. Dietary protein is a key nutrient for muscle and bone health and provides amino acids as building blocks for growth, repair and maintenance of the MSK system. Eating a diet rich in fish, meat, beans, pulses, eggs, lots of veggies, unpasteurised fermented veggies, kombucha, berries, fruit, and healthy fats is the way to make your connective tissue healthy.

##### Calcium, Vitamin D & Phosphorous!

The health of our bones relies on a balanced diet and a steady stream of nutrients, most importantly, calcium and Vitamin D and phosphorous. Vitamin D helps the body absorb calcium and phosphorus from the food you eat.



### 3 EXERCISE & MOVEMENT

Exercise increases the strength of your ligaments and tendons, plus the number and density of the capillaries that supply blood to your skeletal muscles so they are less likely to get tired.

It also strengthens your heart so it can pump blood around your body more quickly and increases the number and the size of the mitochondria (the power plants) in your muscle tissue, which allows your muscle to burn more energy.

Many types of non-weight bearing exercise can help with flexibility, strength and overall fitness including; swimming, tai chi, walking, chair exercises, low impact aerobics, cycling.



#### Bathing can benefit your muscles, joints and bones

Stretching and moving in water has been shown to be low impact on the joints, muscles and bones, but very effective in providing an adequate workout through resistance.

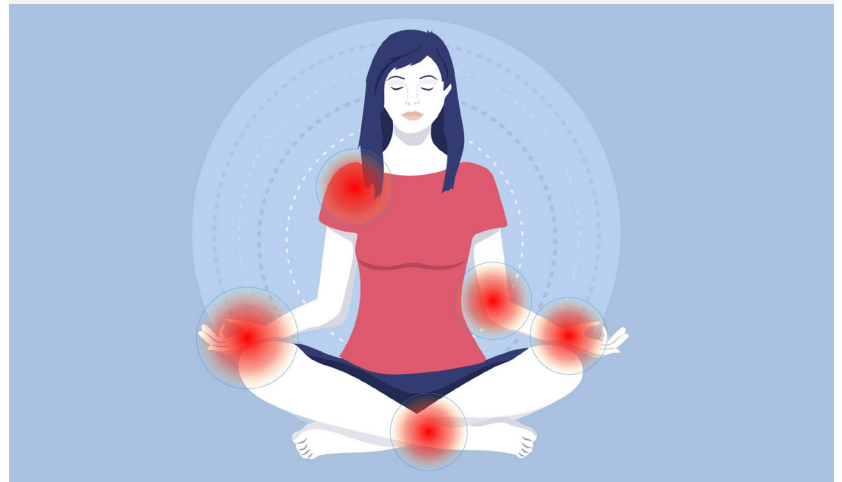
#### REMEMBER!

If you suspect you have an MSK condition then always consult a health care professional before beginning any form of exercise.

### 4 MINDFULNESS

Pain by its very definition attracts our attention, it hurts! Pain 'catastrophising' can be one of the single most important predictors of quality of life. Pain Management Mindfulness Programmes (PMMPs) help people to live with chronic pain by learning mindfulness meditation-based techniques to help with a wide spectrum of pain-related disorders, including fibromyalgia, migraine, and chronic back pelvic pain.

Mindful breathing soothes the circuits that amplify 'Secondary Pain' by reducing the thoughts, feelings, emotions and memories associated with the pain.



### 5 SLEEP & RECOVERY

Persistent pain can sometimes get in the way of a good night's sleep. Gentle stretches before bed and breathing exercises will help to calm the mind and reduce stress induced pain.

Also, a dip in body temperature can help get you off to sleep, so taking a warm bath just before bed will help you drift off. It's not the rise in body temperature, but the subsequent cooling down that tricks the body into thinking you have gone from daytime into night-time. This promotes a stronger sleep urge.

Cooler body temperatures signals our brain to fall asleep. Similarly, higher body temperatures cue our brain to be more alert.



# HIGH PROTEIN *Super Snacks* TO POWER YOU THROUGH YOUR BUSY DAY

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Protein helps us to feel fuller for longer so here are some great snack ideas to help keep you **energised and focused all day**

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## FIRST THINGS FIRST - SOME **IMPORTANT** PROTEIN FACTS

1

Our body doesn't store protein so we need to eat some protein in every meal or snack

2

All neurotransmitters in the brain are made from protein. So if you don't eat protein you don't think!

3

All proteins are made up of amino acids. There are essential and non essential AA's and we need a mixture of them all

4

Protein can be an important source of energy to fuel a long run, cycle ride or a hike.



# ON THE GO

## EGGS

### THE SUPER *snack*

Eggs are a great portable snack and a superb source of instant protein as a large egg can provide up to 10 grams of protein. Boil one every morning, keep it in its shell and crack it open at 3pm every day (wherever you are!) for a mid afternoon super, energy snack.

Eggs contain almost every nutrient that your body needs. They're particularly high in B vitamins and also contain a healthy fat called choline for the brain.

## On The Go Snacks

### ...AND ANOTHER THING!

Turkey roll-ups can be delicious and nutritious high protein snack. Pop some cheese and sliced peppers inside for extra protein and vitamins C & E and they're essentially a sandwich without the bread!

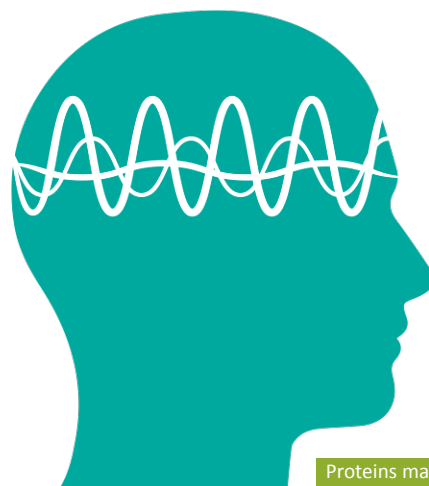
### NO-BAKE PROTEIN ENERGY BALLS

Energy balls are a delicious, high protein snack made by combining a variety of ingredients, such as nut butter, oats, and seeds, and then rolling them into balls (see recipe on page 4).

Beef or chicken Jerky is meat that has been trimmed of fat, cut into strips, and dried. It makes an excellent and convenient snack. It's very high in protein containing an impressive 9 grams per ounce (28 grams)

### KEY MESSAGE

- Look for snacks that are 100 calories or less then you can have one mid morning and also mid afternoon
- Sugar swap; choose low GI (glycaemic index) fruits instead of biscuits as these help to keep your blood sugar levels stable
- Examples of low GI fruits include blueberries, strawberries, cherries, dried apricots



Proteins make great brain foods!

# SUPER ENERGY SNACKS

THESE *Snacks* SCORE AN **A+** FOR **NUTRITION**

Mix and match some healthy protein snacks to multiply the nutrition content, for example Greek yoghurt with walnuts and grated apple (delicious!). Celery sticks with almond butter and raisins, hummus with veggie sticks, sardines or tuna on crackers or oat cakes, or cottage cheese with pine nuts and bread sticks.

Edamame beans make a great high protein finger snack for mid-afternoon munchies. They are naturally gluten free and low in calories, contain no cholesterol, and they are an excellent source of protein, iron, and calcium. Edamame beans are soybeans and you can buy them in or out of the pod in many supermarkets.

**Note: Do NOT eat edamame beans raw they must be cooked thoroughly before consumed.**

## 10 High Protein Snacks

### QUICK & EASY SHOPPING LIST

1. Eggs
2. Turkey or ham to roll
3. Energy protein balls
4. Beef Jerky
5. Greek yoghurt, walnuts, grated apple
6. Celery, almond butter, raisins
7. Hummus, veggie sticks
8. Sardines, crackers
9. Cottage cheese, pine nuts
10. Edamame Beans

## HEALTHY RECIPE APRICOT & DATES PROTEIN BALLS

### INGREDIENTS

- 100g bag of mixed nuts
- 50g pitted dates
- 75g dried apricots
- 1 tbsp. peanut butter
- 1 tbsp. coconut oil
- 20ml coconut water
- 10g of Chocolate Whey Protein (optional)
- 50g desiccated coconut for the outer coating

### METHOD

1. Whizz the nuts in a food processor until they become a fine powder, then empty into a large bowl.
2. Place the dates and the apricots in the blender with 10ml of the coconut water and whizz until smooth.
3. Add the dates, apricots and remaining coconut water to the powdered mixed nuts and mix together.
4. Add the coconut oil and the peanut butter and mix well until all the ingredients are evenly distributed.
5. Add the chocolate whey protein powder and mix together (adding more coconut water if necessary).
7. Roll into individual ball shapes and dip in coconut or nuts for the outer coating, then refrigerate.

