



THE PROFESSIONAL ASSISTANT LEARN & ADVISE



MODULE 9: JANUARY 2016

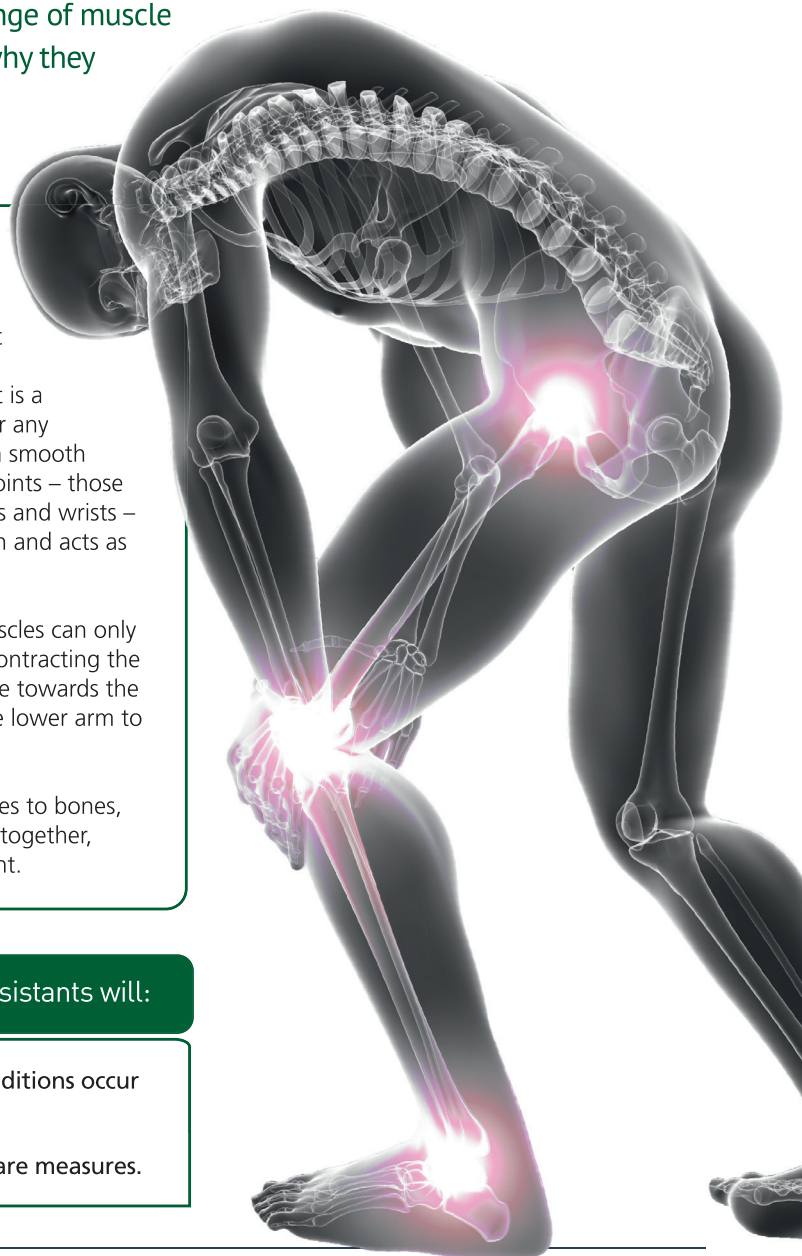
Muscle and joint pain

Topical pain relief products are used for a wide range of muscle and joint conditions, but to understand how and why they are used it is helpful to know a little about what happens below the skin to cause these problems.

Most customers who purchase topical pain relief products in pharmacies are after something to help with a problem that is affecting one or more of their joints. **A joint** is the point in the body at which two **bones** connect. However, at most sites in the body, the two bones are not directly joined because while this would provide the structural support that is a fundamental function of the skeleton, it would not allow for any movement. This is facilitated by the inclusion of **cartilage**, a smooth connective tissue that covers the ends of the bones. Some joints – those that allow the widest range of movement, such as the knees and wrists – also contain **synovial fluid**, which provides extra lubrication and acts as a shock absorber.

Bones move as a result of **muscles** contracting. Skeletal muscles can only pull in one direction, so always exist in pairs. For example, contracting the bicep muscle in the upper arm allows the lower arm to move towards the body, and contracting the opposing tricep muscle allows the lower arm to move away again.

Tendons – tough bands of connective tissue – attach muscles to bones, while **ligaments**, which are similar in structure, hold bones together, in some cases restricting movement in order to protect a joint.



OBJECTIVES After studying this module, assistants will:

- Understand how and why painful joint and muscle conditions occur
- Recognise the symptoms that might warrant referral
- Know the treatment options available, including self care measures.



This module is suitable for all members of the pharmacy team who wish to increase their knowledge of common conditions, treatment options and communication skills. This module has been endorsed with the NPA's Training Seal as suitable for use by pharmacy teams as part of their ongoing learning. This module can also form part of your Team Tuesday training.



DID YOU KNOW?

Warming up properly before exercise means joints are better lubricated and the likelihood of pain or injury is reduced.

Understanding the problem

Customers who ask for a topical painkiller will often be doing so as a result of physical activity having gone wrong. This may be because of an accident, exercising without first warming up, falling over, using equipment wrongly, having incorrect technique, or pushing the body beyond what it can cope with. Any of these can result in an injury, the most common of which are:

- 1** **Sprains** are the result of an abnormal or excessive force being applied to a joint, injuring the ligament. Commonly affected joints are the knees, ankles and wrists.
- 2** **Strains** are stretching or tearing of muscle fibres as a result of being forced to contract too strongly or being stretched beyond their limits. The legs and back are frequently affected.
- 3** **A dislocation** occurs as a result of a joint being moved beyond its normal range of motion (for example, the shoulder) and often results in ligament damage.
- 4** **Tendonitis** is inflammation of the tendon that attaches two bones. It is a common injury in the elbow for those who play tennis or golf.
- 5** **A ruptured tendon** is a serious condition that usually happens suddenly, causing severe pain because of a tear in the tissue. This commonly affects the Achilles tendon in the ankle.
- 6** **Fractures** are breaks in bones. Sometimes these may be tiny cracks, as is the case in shin splints, a painful but self-resolving condition that can affect runners. But the break may be much more severe and serious, causing extreme pain and resulting in the person being unable to use the affected area.

Some customers may also seek advice on topical pain relief because they suffer from **osteoarthritis**. This condition is the result of damage to the cartilage in a joint, most commonly the knee, which results in swelling, pain and stiffness.

When to refer

There are certain red flag symptoms that should ring warning bells. Get your pharmacist involved if a customer reports any of the following:

- A joint or limb that looks deformed
- A joint that is too painful to move or cannot bear weight
- Severe swelling or bleeding
- Persistent joint pain, tenderness or swelling
- Prolonged or severe morning stiffness
- Tingling or numbness
- Sudden or severe pain
- Anyone who is taking any type of medication
- A suspected fracture, dislocation, rupture or other serious injury.

Preventing sports injuries

As is often the case, prevention is better than a cure, in that it takes little effort to implement some relatively straightforward measures and reduces the chance of the individual experiencing pain as a result of an injury.

Warming up properly before exercise can seem like a waste of time, but it serves an incredibly important function in making the body ready for the demands of exercise. It makes synovial fluid less jelly-like and more liquid in consistency, which in turn means the joints are better lubricated. It also increases blood flow to muscles, tendons and ligaments. It should be done before stretching to reduce the likelihood of pain and injury.

Using the right equipment, such as choosing running shoes rather than fashion trainers for jogging, and learning the correct technique for the sport being undertaken by getting advice from a coach or healthcare professional.

Not pushing the body beyond what it can do, and taking rest periods and days to allow the body to recover.

Staying hydrated by drinking plenty of water before exercise, and during, if needed.

Stretching muscles to improve flexibility, before and after exercise.





DID YOU KNOW?

If using a topical NSAID and an oral analgesic, paracetamol should be recommended over ibuprofen to avoid cumulative side effects.



Treatment options

Minor sports injuries often respond well to self care measures, usually referred to as PRICE for ease of remembering:

- **Protect** the area from further injury, perhaps by immobilising it
 - **Rest** by cutting out exercise and minimising daily activities that involve the affected area as much as possible (for example, not walking with an injured knee). Supportive measures such as crutches or a sling may be helpful
 - **Ice** the area for 15-20 minutes every two to three hours, avoiding ice burns by wrapping ice packs in cloth so the skin isn't touched directly
 - **Compress** the area with bandages to limit swelling
 - **Elevate** the injured area above the level of the heart if possible to reduce blood flow and minimise swelling.
- Following these steps for a couple of days is usually enough to resolve many injuries.

Additional treatments

Compression can limit movement and swelling to prevent further damage. Tubular bandages are usually used for this purpose, but the customer's measurements should be checked to ensure the item fits correctly.

Immobilisation is sometimes recommended in order to prevent further damage and to ease pain. For example, using a sling for a sprained wrist, splinting a broken finger to the next one, and putting a cast on a broken leg.

Oral analgesics can be used to relieve pain. Ibuprofen is popular because of its anti-inflammatory effect, which is particularly useful if there is swelling, but there is a risk of cumulative side effects if used with a topical NSAID, so paracetamol may be a better option. NSAIDs have also been found to reduce the healing process, for example in bone injuries.

Physiotherapy is a good way of strengthening the surrounding muscles and improving the range of motion of an injured joint, and can speed up the return of normal functioning. Techniques including massage, manipulation and exercises are likely to be involved.

Corticosteroid injections may be recommended for severe or persistent inflammation. They can be highly effective, but some people gain only temporary or minimal relief and they can cause side effects.

Surgery is sometimes, though rarely, required for very bad injuries, such as torn ligaments or broken bones.

Topical OTC products

- 1 Non-steroidal anti-inflammatory drugs (NSAIDs)** such as ibuprofen (e.g. Ibuleve, Nurofen 5% Gel), felbinac (e.g. Traxam Pain Relief Gel) and diclofenac (e.g. Voltarol Pain-eze Emulgel) reduce swelling and inflammation as well as pain. They act both locally at the site of the problem and systemically (i.e. they are absorbed into the body). This means that side effects similar to those experienced by people taking oral NSAIDs can occur.
- 2 Rubefacients**, sometimes known as counter-irritants, cause blood to rush to the surface of the skin, which makes it feel warm. This distracts the brain from the pain, but means these ingredients can cause discomfort if applied after a hot bath or shower, during warm weather or to skin that is already irritated or broken. Rubefacient ingredients include salicylic acid esters, nicotines, menthol, camphor and capsaicin oleoresin. OTC product examples include Movelat Relief Gel, Deep Heat Heat Rub and Radian B Muscle Rub.
- 3 Heat treatments** increase circulation to the affected area, which helps move away the chemicals that contribute towards the pain. They should not be used immediately after an injury as they can increase the risk of bleeding, nor should they be applied to broken skin. OTC examples include Voltarol Heat Patch, Thermacare.
- 4 Cold treatments** cause numbing and narrowing of blood vessels, which makes it more difficult for inflammatory chemicals to reach the affected area. OTC examples include Deep Freeze Cold Spray, Ibuleve Rapid Cooling Patch.
- 5 Bruise reducers** do just what they say on the pack. Examples include heparinoids (e.g. Hirudoid) and the herbal remedy arnica.



SIGNPOSTING

For more information, you can:

- Use your Counter Intelligence Plus training guide
- Visit NHS Choices: www.nhs.uk/Conditions/Sports-injuries
- Look at information provided by the Chartered Society of Physiotherapists: www.csp.org.uk/your-health/sports-advice.



TEST YOURSELF ONLINE

GOOD PRACTICE KNOWLEDGE IS IMPORTANT WHEN ADVISING CUSTOMERS



Questions

- 1) What holds bones together?
 - a) Ligaments
 - b) Tendons
 - c) Muscles
 - d) Cartilage
- 2) Which statement is **FALSE**?
 - a) Synovial fluid acts as a shock absorber for the joints
 - b) Most bones are directly joined to each other
 - c) Skeletal muscles exist in opposing pairs
 - d) Synovial fluid lubricates joints
- 3) Which of the following would **NOT** require referral?
 - a) A suspected ruptured Achilles tendon
 - b) A suspected dislocated shoulder
 - c) A suspected sprained ankle
 - d) A suspected fracture of the lower arm
- 4) Which of the following is a component of **PRICE**?
 - a) Putting a heat pack on an injured area
 - b) Moving the joint as much as possible to prevent it stiffening up
 - c) Compressing the area to minimise swelling
 - d) Applying direct pressure to an affected joint
- 5) Which of the following is **NOT** usually recommended as a way of preventing sports injuries?
 - a) Warm up before exercising
 - b) Cool down by stretching muscles to promote flexibility
 - c) Ask someone who is experienced in the activity to demonstrate the correct technique
 - d) Pushing the body as hard as possible in order to build muscle strength
- 6) Which treatment option would be most sensible for someone who has injured their knee while running but has no red flag symptoms?
 - a) See a specialist sports physio
 - b) Apply a covered ice pack to the affected area
 - c) A steroid injection
 - d) Go for another run to test the joint



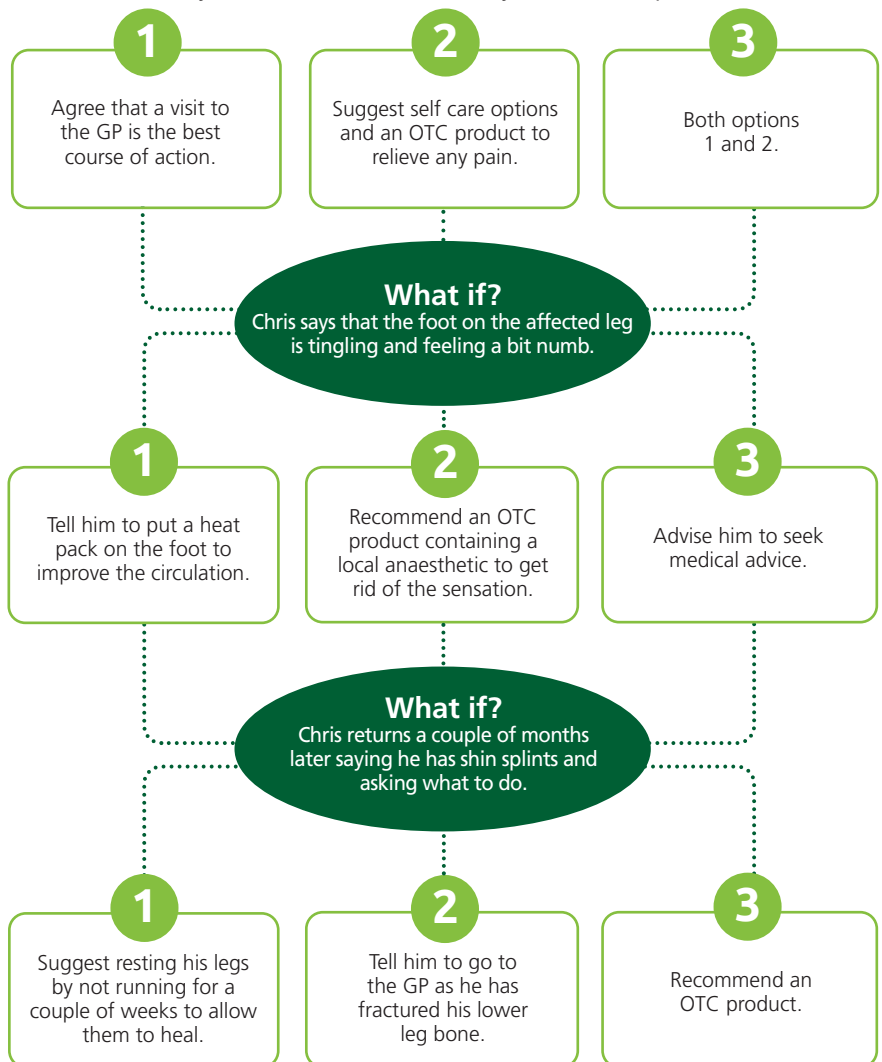
Scenario

Chris, a man in his 40s, asks whether it is worth seeing the doctor about his knee, which he thinks he has strained while running.



What would you recommend?

For each part of this scenario, think about the decision you would make and, importantly, why you would choose that option. In addition, for each decision that you make, think about how you would talk to the customer and provide the necessary advice, and discuss this with your team and pharmacist.



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RELIEVES
MUSCLE PAIN
& TARGETS
INFLAMMATION



Diclofenac sodium

For customers suffering from muscle pain flare-ups including neck, shoulder, leg or arm pain, and who are looking for an efficacious plaster or who may choose pain relief based on format.

Reference: ¹ GSK Data on file, 2011.

Product Information: Voltarol 140 mg Medicated Plaster (diclofenac sodium).

Indications: Local symptomatic, short-term treatment of pain in acute strains, sprains or bruises of the extremities following blunt trauma. Legal category: P. Licence holder: Novartis Consumer Health, Watchmoor Park, Camberley, Surrey GU15 3YL.

Date: 24 August 2015. Information about this product, including adverse reactions, precautions, contraindications, and method of use are available at:

<https://www.medicines.org.uk/emc/medicine/30684>

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