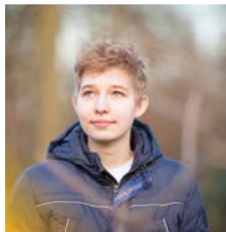
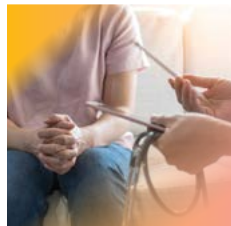
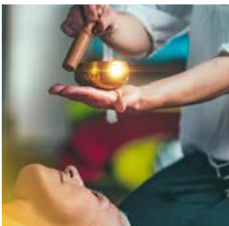
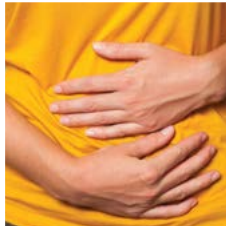


# Endometriosis Pain Management Guide



**Endometriosis Pain  
Management Guide**  
First published May 2022.  
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**Note to reader:**

All care has been taken to ensure the accuracy of the information within this booklet prior to publication. Please remember that information pertaining to endometriosis is constantly being updated by healthcare professionals and the research community. This guide is intended as an introduction to pain and endometriosis. This handbook is not intended as a replacement for medical or professional advice. You must always consult with your healthcare professionals about any medical symptoms, questions or concerns that you may have. The Epworth Medical Foundation and the Julia Argyrou Endometriosis Centre at Epworth exclude themselves from liability for any injury, loss or damage incurred by the use of or reliance on the information provided in this booklet.



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# Your guide to pain and endometriosis

One of the most common symptoms experienced by people with endometriosis is pain. In particular, chronic pelvic pain. Pain affects quality of life, which can affect a person's ability to go to work or take part in everyday activities. But what causes chronic pain, and how is it managed?

We're here to answer your questions. Our pain guide will provide information about:

- > the different types of pain you may experience with endometriosis
- > how your body may respond to consistent pain that lasts for three months or more
- > treatment options to help you manage your pain.

Our goal is to help you understand your pain and how you can treat it. We want to help you build a toolbox full of resources that you can use to manage your pain and other symptoms.

At the Julia Argyrou Endometriosis Centre at Epworth, we want you to know that you're not alone on your endometriosis journey. We can show you the latest tools and resources to help you better manage this condition. This can help improve your quality of life and get you back to enjoying everyday activities.

JULIA ARGYROU  
Endometriosis  
Centre



*This guide is not a replacement for medical advice. Please discuss any matters affecting your health immediately with your healthcare professionals.*



## Guide 1

### Introductory guide: Endometriosis Patient Guide

This pain guide complements the Endometriosis Patient Guide. For a comprehensive overview of endometriosis, visit [epworth.org.au/EndoGuide](http://epworth.org.au/EndoGuide)





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## Glossary

**You may find terms you don't understand as you read through this booklet. While we have tried to keep the language free of complicated medical speak, there are some terms that you will need to know. If we haven't explained them in the booklet, you can easily find the definition here if you need it.**

**Acute pain** – short term pain, often related to an identifiable cause

**Adenomyosis** – a condition that occurs when endometrial-like tissue grows into the muscle of the uterus

**Allodynia** – pain from stimuli that wouldn't usually cause pain, such as light touch or changes in temperature

**Analgesics** – medications that relieve pain

**Central nervous system** – the part of the nervous system that is made up of the brain and spinal cord

**Chronic pain** – pain that persists for three months or more

**Dysesthesia** – strange and/or unpleasant sensations, such as aching, skin-crawling or burning

**Dysmenorrhoea** – pain before and during a period

**Dyspareunia** – pain during or after sexual intercourse

**Endometriosis** – the growth of endometrial-like cells (similar to the ones that line your uterus) in other parts of the body

**Hyperalgesia** – when your body becomes over-sensitive to painful stimuli and has an excessive response to pain

**Hypoalgesia** – when your body is less sensitive to painful stimuli

**Neural pathways** – groups of nerve fibres that carry information between the various parts of the nervous system

**Nociceptors** – tiny receptors on the nerve endings which sense things like pressure and temperature and initiate pain sensations

**Noxious stimuli** – a harmful stimulant that can damage or has the potential to damage tissue

**Ovulation** – the release of an egg from an ovary

**Pelvic floor** – muscles that are located between the tailbone and the pubic bone within the pelvis that support the bladder and bowel

**Psychosocial** – involving both psychological and social factors

## Pain and endometriosis

**Pain is the most common symptom associated with endometriosis. It is often thought that the pain a person experiences will depend on how bad their endometriosis is. This is not true. Some people can have lots of endometriosis and have no pain, while others can have severe pain but only have a small amount of endometriosis.**

Every case of endometriosis is different. This means that the type of pain and the location of the pain can also be different. Pain is most often located in the pelvic area, but it can also occur in other parts of the body. Other areas can include the abdomen, legs, back, buttocks and thighs. The frequency of pain will also be different from person to person. Some people will only have pain during their period, while others may have pain every day.

Some of the more common pain symptoms include:

- pain before and during a period (dysmenorrhoea)
- pain during or after sexual intercourse (dyspareunia)

- pain during ovulation which can consist of pain in the legs, buttocks, and thighs
- pain with bowel movements or when urinating
- pelvic pain that occurs outside of your period.

Endometriosis pain can develop into chronic pelvic pain (CPP). CPP is persistent pain in your pelvic area that lasts longer than three months. Persistent pain for three months or more can cause changes in how the central nervous system (brain and spinal cord) processes pain. This means you can still experience pain, even if the original cause of the pain has gone.

Many people will experience some pain with their period, which can be normal. But if your pain reaches a point where you're unable to participate in everyday activities, or it lasts longer than three months, we can support you to find ways to manage. Early treatment of pain can help prevent it from developing into chronic pain.





## Overview of pain

### What is pain?

For many of us, we look at pain as nothing more than a physical sensation that hurts. Such as the pain felt after we stub our toe or break an arm. In these cases, pain is the direct result of an injury. Pain can also result from an illness or medical condition. But pain is more complicated than that. According to the International Association of Pain, pain is 'an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage'.

But what does this mean? It means pain is an experience unique to each of us and is more than a physical reaction. Pain is a combination of many factors, including environment, attitude, beliefs, behaviour, health, and past experiences. Pain is complicated, and the only way to assess a person's pain is to ask them questions about their experience of it.

### Acute pain

Acute pain happens when your body tissue becomes damaged or inflamed. Acute pain is often related to an identifiable cause, such as a cut or a broken bone. With endometriosis, lesions are usually the cause of the initial feeling of pain.

The purpose of acute pain is to let our body know that something is wrong and to stop doing what may be causing the damage. Or if the cause is not clear, to investigate further to see what is causing the damage.

Acute pain is often treatable and will generally last for a short period of time (less than three months). It will usually stop after the tissue has healed and your nociceptors are no longer stimulated.



## Chronic pain

Chronic pain is persistent pain that lasts for longer than three months. It will often continue long after the tissue damage that caused the pain has gone. Chronic pain can result from an ongoing condition or disease, nerve damage or an oversensitised central nervous system.

When we damage body tissue, our body sends signals from the area of tissue damage to our brain. This lets our brains know there is a problem, and these signals are known as pain. Consistent pain lasting longer than three months can change our central nervous system. This can cause nerve fibres that carry information between the different parts of the nervous system (neural pathways) to behave differently, to compensate for the pain.

As a result, we can still feel pain, even though our tissue has healed and there is no longer any danger. The nervous system is highly sensitive and can send danger (pain) signals in response to non-threatening activities, such as exercise. This can also include everyday events such as a full bladder or bowel.

When your pain becomes chronic, it is more complex to treat as it becomes about more than damaged tissue. It also requires training your central nervous system to change how your body processes pain.

This is usually done through the support of the multidisciplinary team and may include physiotherapists, pain specialists, psychologists, nurses and your gynaecologist.

## What is the biopsychosocial model of pain, and why is it important?

The biopsychosocial model of pain is a holistic (whole person) approach to managing pain. Before this model, physical pain was the focus of pain management. There was little known about psychosocial factors (such as emotions or memories) that can contribute to pain. Nor how they can impact symptoms or response to treatment.

The biopsychosocial model considers physical pain as well as how you're feeling, past experiences and the people around you. We all have different experiences with pain because various factors contribute to our pain.

Effective pain relief requires interdisciplinary pain management from a team of health professionals. They will work with you to create a tailored pain management plan. Your plan will aim to reduce your pain, improve function and regain some abilities you may have lost.

Our patients receive whole-body, interdisciplinary care at the Julia Argyrou Endometriosis Centre at Epworth. Our team includes pelvic floor physiotherapists, psychologists and pain physicians, to name a few.





## What are the different types of pain?

The two broad categories of pain we are most familiar with are acute and chronic pain. They help us work out the type of pain we are experiencing. To get a better understanding of your pain and how to treat it, it's also important to understand the following types of pain:

### **Nociceptive pain**

The cause of nociceptive pain is tissue damage (or potential for damage) and inflammation. Nociceptive pain is the most common type of pain, and it's usually associated with acute pain. This type of pain usually stops once the threat of injury or the injury itself has gone. The cause of nociceptive pain is the activation of receptors known as nociceptors in the nervous system.

In endometriosis, nociceptive pain will likely resolve after the removal of lesions. However, due to chronic changes within the body, people may experience other types of pain, such as neuropathic pain.

### **Neuropathic pain**

The cause of neuropathic pain is disease, injury or irritation to the nervous system. The nervous system is made up of peripheral nerves (nerves outside the brain and spinal cord) and the central nervous system (nerves in the brain and spinal cord). When there are changes to the nervous system, your body can send pain signals to the brain without any injury or event.

Endometriosis lesions stimulate the growth of nerve fibres. These fibres respond to chemical signals made by the lesions and increase sensitivity to pain. After the removal of lesions, sometimes the sensitised nerve fibres remain and contribute to the chronic nature of neuropathic pain.

Neuropathic pain is most often chronic. People with this pain type will often experience some of the following symptoms:

- > shooting, burning or stabbing pain
- > numbness or tingling
- > pain from stimuli that wouldn't usually cause pain, such as light touch or changes in temperature (allodynia).

### **Nociplastic pain**

The cause of nociplastic pain is a malfunction in neuro-processing (pain signals). This means that pain nociceptors are being activated, even though there appears to be no tissue or nerve damage (or potential for damage). You can experience this type of pain on its own or with nociceptive or neuropathic pain.

Nociplastic pain is usually chronic. The symptoms can include:

- > multifocal pain that is excessive considering the amount of tissue and nerve damage present (or potential for damage)
- > fatigue
- > sleep issues
- > memory problems.

## How is pain assessed?

Pain is multidimensional, meaning it has many different aspects. A pain assessment needs to consider the many elements that can influence pain. Many health professionals use the biopsychosocial model to assess pain. The model accounts for the various dimensions of pain. These include:

- > sensory
- > affective
- > cognitive
- > physiological
- > behavioural
- > social
- > cultural.

When conducting a pain assessment, your specialist will consider the following:

- > the intensity of the pain
- > the location of the pain
- > a description of the pain
- > how long the pain lasts
- > psychosocial factors such as past pain experiences, coping strategies and the emotional impact of the pain
- > understanding any barriers to assessing and managing your pain
- > how pain impacts your ability to function in everyday life, such as working, looking after yourself
- > how your mood may affect your experience of pain
- > other health conditions.

## How is pain measured?

Pain measurement helps to measure how intense your pain is. Commonly used measures for pain include:

- > self-reporting – what you say about your pain (the gold standard of pain assessment and measurement)
- > a review of your medical and pain history.

Pain measurement tools are one of the most common ways of measuring pain, and they measure the duration, type and severity of the pain.

Pain can be measured by a numeric pain rating scale – providing a rating of the pain on a scale of one to 10 on a visual analogue scale – a person will mark on a line the point that they feel accurately represents their current state of pain.

More comprehensive assessments of chronic pain include:

- > McGill pain questionnaire – a questionnaire that assesses the different aspects of pain a person may experience and makes an assessment based on the words they use to describe their pain.
- > brief pain inventory – an assessment tool used to determine the intensity of pain and how much it interferes with a person's ability to function and their quality of life.

# What are the main causes of chronic pelvic pain (CPP)?

## Endometriosis

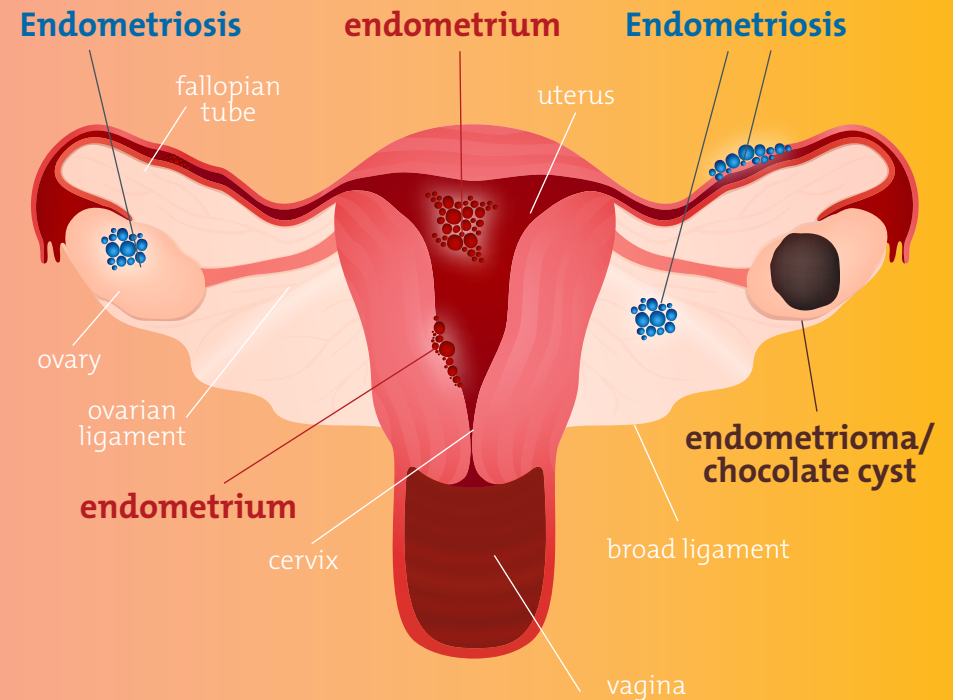
Endometriosis is a chronic condition that sometimes leads to chronic pelvic pain. It's caused by the growth of cells (similar to the ones that line your uterus) in other parts of the body. These growths are known as endometriosis implants or lesions. Please refer to our endometriosis patient guide for more detailed information.

Endometriosis is most often found on the lining of the abdominal and pelvic cavities, but it can also implant on any organ. The pelvic organs are the organs most often affected, but endometriosis can also embed on the bowel, bladder and vagina.

Endometriosis has a long list of symptoms, but the most common include:

- > pelvic pain
- > infertility
- > period pain (dysmenorrhea)
- > pain before and after your period
- > pain during or after sexual intercourse
- > heavy or extended period bleeding
- > pain when using your bladder or bowels.

Endometriosis requires a laparoscopy to confirm the condition. But a pelvic exam and imaging can help reach a diagnosis by showing anything unusual happening in your abdomen or pelvic cavity. Further investigation by your GP and a specialist referral are important to diagnose and manage this condition.





## Adenomyosis

Adenomyosis is a condition that occurs when endometrial-like tissue grows into the muscle of the uterus. The uterus is often bulky and tender. The tissue growing into the uterus thickens, breaks down and then bleeds during your period. The blood is trapped in the muscle and can cause pain.

Symptoms for adenomyosis can include:

- > severe cramping and period pain (dysmenorrhea)
- > pelvic pain
- > pain before and after your period
- > pain during sexual intercourse
- > heavy or extended period bleeding.

Adenomyosis is detectable on a high-quality ultrasound or MRI. The only way to confirm a diagnosis is a pathology test of the uterus after a hysterectomy.

## Bladder pain syndrome

Bladder pain syndrome (also known as interstitial cystitis) is a chronic condition. Common symptoms include:

- > pelvic pain
- > bladder pressure
- > bladder pain.

You may also experience an urgency to urinate and a need to urinate more often. Some people are at higher risk of developing the condition, including those with pelvic floor dysfunction, bladder trauma and chronic pain conditions.

A diagnosis for bladder pain syndrome is based on patient history and excluding other possible causes for the symptoms.

## Central sensitisation

This is a type of nociplastic pain in which the nociceptors become oversensitive to normal stimuli, such as touch. The central nervous system becomes extremely sensitive when it continually experiences painful stimuli. Your central nervous system becomes highly reactive and responds to pain differently when this happens. This means it's easier for your nerves to receive pain signals and you may start to react to stimuli that are not usually considered painful.

Some of the characteristics of central sensitisation include:

- > heightened sensitivity to pain
- > heightened sensitivity to touch
- > sensory sensitivity across other senses, such as light, smells and noise
- > fatigue
- > sleeping problems
- > short term memory issues
- > emotional distress/anxiety
- > restless legs syndrome (uncomfortable sensation in legs or an overwhelming urge to move them).

## Pelvic floor muscles

Pelvic floor dysfunction (PFD) is a condition in which you don't have control over your pelvic floor muscles. Your pelvic floor muscles are at the bottom of your pelvis, and they help support your pelvic organs. When they're working correctly, they contract and relax when we use our bowels, empty our bladder, have sex and give birth. When they're not working, they can't tighten or relax when needed and can be the source of persistent pain.

PFD may be initiated by pelvic pain, and may continue after treatment for the original injury or damage that caused the pelvic pain.

Other common symptoms of PFD include:

- > pain and/or difficulty emptying the bladder or bowel
- > pain during or after sexual intercourse
- > incontinence (unable to control bowel or bladder functions)
- > needing to go to the toilet often
- > pelvic pain that can spread down the back and legs.

# Ways to help manage your pain

## Chronic pain



### The interdisciplinary pain management approach – building a toolbox

When approaching pain management, it's important that you have a toolbox of resources to help you manage pain. By learning and implementing skills to self-manage your pain, you can improve your pain experience and enjoyment of life.

Whilst expert management of endometriosis is a core part of living with the disease, health care professionals alone cannot always stop your pain. It is a process in which people with chronic pain must work closely with their team for the best results possible, over time.

A good starting point is to trial the resources in this section to find what helps manage your pain best. Often you will need multiple strategies. If you can find a few things that work well for you, you will feel more confident to manage when you experience a flare.



### Pelvic floor physiotherapy

If you are experiencing pelvic floor dysfunction, book an appointment with a qualified pelvic floor physiotherapist. A pelvic floor physiotherapist will provide you with an assessment of your pelvic floor muscles. Based on the results, they will provide you with a strategy to relax muscle tightness in your pelvis and restore elasticity to the tissue.

Pelvic floor physiotherapy is a specialised area of physiotherapy. Our pelvic floor physiotherapists have the training needed to help you improve your pelvic floor function.



### Pain psychology

Psychologists play an important role in helping you to manage pain. As psychological and emotional factors contribute to pain, it can help to see someone who specialises in this field. By understanding the behaviours, thoughts, and emotions that contribute to your pain, you can help reduce the pain you're feeling and learn strategies to cope with it better.

The benefits of seeing a psychologist about your pain can include:

- > helping you to understand how psychosocial factors play a role in the experience of chronic pain.
- > providing you with an understanding of how these factors may be contributing to your pain.
- > helping to improve your quality of life by putting strategies in place to improve the areas of your life affected by chronic pain.



### Transcutaneous electrical nerve stimulation (TENS)

TENS therapy involves using low-voltage electric current to help ease chronic pain. A small, battery-operated device provides electrical current that is delivered through electrodes. Electrodes are placed on your skin near the nerves where the pain is or the trigger points for your pain. The idea is to stimulate nerves to block the transmission of pain signals and alter your perception of pain.



## Lifestyle modifications

**Making some simple lifestyle changes is one of the quickest and easiest ways that you can start to self-manage your pain. You will quickly see results by altering some of your long-term habits and maintaining new ones. We have listed some common lifestyle modifications that can impact pain below.**



## Nutrition

Many patients with endometriosis experience dietary triggers for their pain. Making some changes to what you eat is one of the simplest ways to help reduce pain. Significant changes or restrictions to your diet should be under dietitian supervision. By improving your eating habits, you can:

- > improve the function of the nervous and immune systems, which can help to reduce pain.
- > reduce the impact of other chronic diseases that can make your pain worse (poor mental health, diabetes and heart disease).
- > improve your health and wellbeing, allowing you to be more active, which leads to improved function and quality of life.
- > prevent constipation which may contribute to pain.

By making some changes to your diet, you can help to reduce inflammation in the body. By reducing inflammation, you can reduce pain. Some of the items you should look to include in your diet to help reduce inflammation include:

- > **fruit and vegetables:** they have anti-inflammatory and antioxidant properties that can help reduce stress and inflammation in the body.
- > **healthy fats:** olive oil and omega-3 fats help reduce inflammation and offer benefits to the immune system.
- > **protein:** to improve muscle growth and strength (lean meat, eggs, nuts and seeds).
- > **water:** drink plenty of water as dehydration can make you more sensitive to pain.
- > **foods high in fibre:** fibre helps to maintain healthy digestion and maintain a healthy gut.
- > **unprocessed foods:** reduce your intake of processed foods and sugars as they can increase inflammation.

You may wish to work with a health professional to keep track of your intake. This can help identify foods that cause your symptoms to worsen.

Our dietitians can provide you with more specific dietary advice based on your individual needs.





## Sleep

Sleep and pain are closely linked, and they impact each other. Pain during the day can affect how you sleep, and poor sleep can affect your pain the next day.

People with chronic pain often find it harder to sleep, or their sleep is interrupted by pain. Some medications may impact sleep. You may often find that the quality of your sleep is poor as well. This means you may feel tired when you wake up, even if you've had a full night's sleep. This makes it important to look at ways to improve the amount of sleep you get and the quality of your sleep.

Simple ways to improve your sleeping patterns include:

- > get into a routine and try to get up and go to bed at the same time each day.
- > don't have screens in the bedroom.
- > spend time in natural light during the day.
- > avoid napping as it can make sleep harder at night.
- > limit your caffeine intake and don't have caffeine at all in the afternoon or evening.
- > reduce liquids in the evening as this may reduce the need to empty your bladder overnight.
- > avoid alcohol and smoking.
- > have a warm bath or shower before bed.
- > try meditation before bed.
- > ensure your bedroom is quiet and comfortable.

You can discuss any sleep issues with your GP.



## Exercise

Exercise is important in the treatment of chronic pain. Often people will avoid exercise as they have experienced an increase in pain after exercise in the past. Exercise can help decrease inflammation, and improve mobility and function.

Exercise increases the anti-inflammatory and antioxidant markers in our bodies, which can help settle inflammation. It's also great for your cardiovascular and mental health.

Exercise doesn't need to be a formal undertaking, but being more active in your day to day life has many benefits.

Make sure you find a type of exercise suited to your current health and ability. Non-impact exercise is a good place to start, such as swimming and cycling. Many people enjoy walking. If you're not sure how to begin exercising safely, our exercise physiologists can provide you with an exercise plan suited to your needs.

When you first start exercising, it's important that you slowly build up the level and amount of exercise over time, to reduce the risk of pain and injury.

This is called graded exposure and is an effective tool in helping to manage chronic pain.

You may like to use a mobility aid such as a stick or a walker, particularly when you're starting out.



## Pacing

Pacing is a strategy that encourages people with chronic pain to remain active while not over-exerting themselves. You should spend just enough time on an activity that you're able to enjoy it without pushing yourself to a point where you cause more pain. It's about balancing activity with rest. Intentionally planning to rest in between times of increased activity can help you remain active but reduce pain flares.

Pacing aims to avoid over and under activity, also known as boom-bust. Over time, you will build up how much you can do without worsening your pain. Pain psychologists or specialist occupational therapists can help with pacing.

## Complementary therapies

Endometriosis pain management often requires a dynamic approach to find what works for you. Some complementary therapies that may be helpful include:



**Massage** – involves manipulation and rubbing of your muscles and soft tissue. The purpose is to improve your health and wellbeing. Patients with endometriosis can use massage therapy to help reduce pain, anxiety, nausea, and depression.



**Meditation** – a mental training and breathing practice that aims to calm you. It achieves this by developing your concentration and improving your focus to help you stay present and engaged. Meditation improves your emotional wellbeing by reducing stress and anxiety and improving sleep.



**Heat** – applying heat to painful areas can give relief because it relaxes muscles and opens blood vessels. Helpful tools include a hot water bottle, heat pack and hot bath or shower.



**Naturopathy** – a holistic approach to health and wellness that uses natural remedies to help the body to heal itself.



**Guided image therapy** – a relaxation technique in which you focus on an image that makes you feel relaxed and happy. The purpose is to take your concentration away from what is upsetting you. It will teach you how to change your feelings by changing your focus.



**Music therapy** – uses music to help your physical, emotional, cognitive, and social needs. It involves participating in various activities, including listening to music or playing an instrument. Music therapy can help decrease your anxiety, depression, and pain. It can also help promote sleep and enhance the quality of life.



**Hypnotherapy** – a guided relaxation technique. You're placed in a heightened state of awareness (also known as a trance). When in this state, you're more open to suggestion. This allows for changes in thoughts, sensations, perceptions, and behaviours. It can help you reduce your pain by relaxing you and drawing your attention away from the pain.



**Yoga** – by using specific yoga tools, you can improve your physical and emotional wellbeing. Yoga tools include postures, exercises and breathwork, to name a few. Many yoga stretches can be helpful for people with chronic pelvic pain or pelvic floor dysfunction, as they can help relax the hips and pelvis.

## Medications used for pain management

It's important to note that medicines are usually only effective for a limited time. Combining medicines with other non-drug treatments is essential for your pain management plan. You should not rely on pain killers or other medications alone to manage pain.

### Analgesics (pain killers)

Analgesics (or pain killers) are medications used to relieve pain. These pain killers provide pain relief without causing loss of consciousness or causing you to fall asleep. According to the World Health Organisation's analgesic ladder, analgesics can be grouped together based on their potency and/or strength for more effective pain management. The different types of analgesics include:

- > paracetamol
- > nonsteroidal anti-inflammatory drugs (NSAIDs) – such as ibuprofen, aspirin
- > opioids (narcotics)–such as morphine, fentanyl.

Taking analgesics before your pain becomes severe can help stop pain from escalating or developing into chronic pain.

### Paracetamol

Paracetamol is an analgesic commonly used to relieve pain or reduce a high temperature. It's a simple and affordable form of pain relief that is highly effective. You can use paracetamol safely with NSAIDs, and when combined, they have an additive effect.

If you are experiencing severe pain, you should always start with paracetamol before moving to stronger pain killers. Continuing to take paracetamol while taking stronger medications can make other pain relief work more effectively. Paracetamol is available over the counter and doesn't need a prescription.

### Nonsteroidal anti-inflammatory drugs (NSAIDs)

The purpose of NSAIDs is to reduce pain and inflammation. They block enzymes that help to produce prostaglandins. Prostaglandins occur during your period and cause your uterus to contract. If your prostaglandins levels are too high, this can cause severe contractions and period cramps.

NSAIDs are very effective in treating acute pain. They are often recommended in endometriosis. It helps to take them as soon as the pain starts and continue using them regularly until your pain settles.

Regular use of NSAIDs should be under the supervision of a GP.



## Opioids

Opioids are powerful drugs that provide temporary relief from severe pain. Opioids work by binding to opioid receptors in cells located in your brain, spinal cord and other parts of the body. After attaching, they block pain signals to your brain and give you a sense of pleasure by increasing your dopamine levels. They also slow down some of your body's automatic functions, such as breathing and your heart rate. This lowers your level of pain.

Due to their strength and the risk of addiction, opioids are only available by prescription and recommended for short term pain relief. In the long term, if overused, they can make pain worse by altering the receptors in the central nervous system.

The Australian and New Zealand College of Anaesthetists (ANZCA) and Faculty of Pain Medicine statement does not support the routine use of opioids in chronic, non-cancer pain. This makes them unsuitable as a long term treatment option for chronic pain.

## Neuropathic agents

Neuropathic agents are medicines that are used to help treat neuropathic pain. Medications for depression (such as duloxetine) and epilepsy (such as pregabalin) are usually the first choice for treating neuropathic pain. This is because of their effect on chemicals in the brain that send pain signals through the nervous system.

## Adjuvant treatments

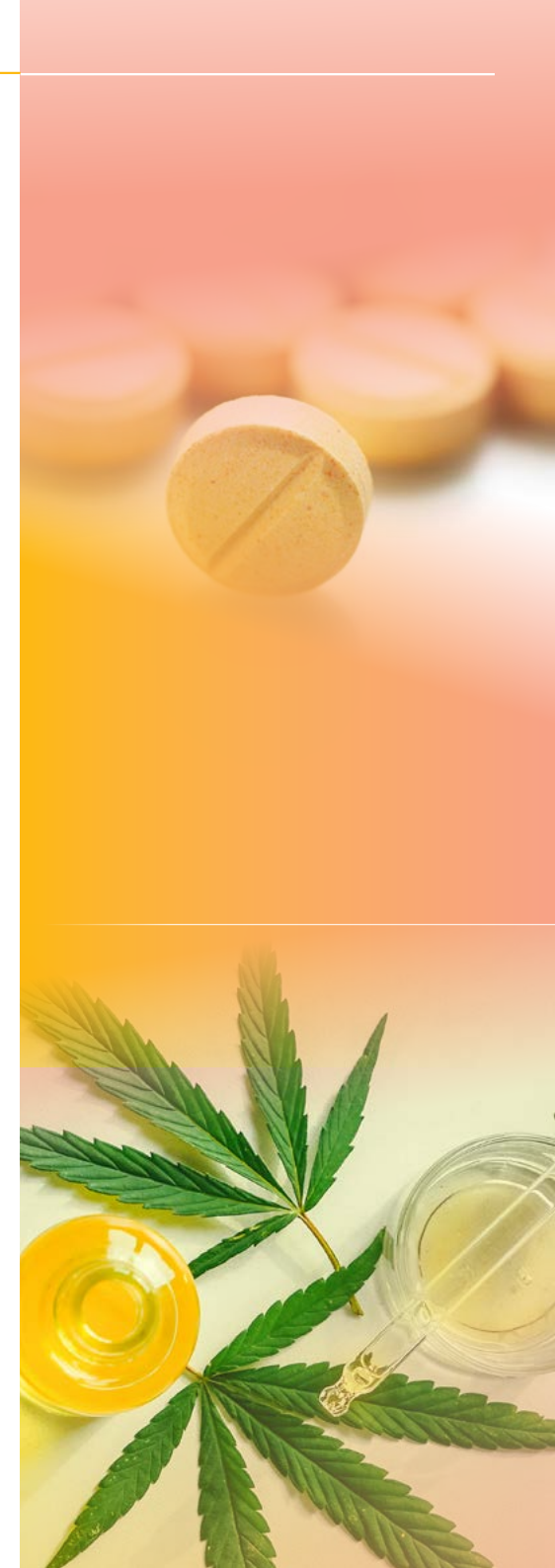
Adjuvants are drugs that have a multipurpose. Their primary purpose is to manage a specific medical condition. They can also be used as an analgesic (pain relief medication).

Adjuvants include medicines used for depression and epilepsy (also neuropathic agents). Other adjuvant medications include muscle relaxants (such as baclofen) which treat muscle spasms, cramping and stiffness in people with spinal injuries. They can also be used as a form of pain relief by slowing down activity and stimulation to the central nervous system. Clonidine is another adjuvant treatment. It's mainly used to treat high blood pressure but has the added benefit of being used for pain relief because it stops the transmission of pain signals to the brain.

## Cannabinoids

Cannabinoids are substances found in the cannabis plant. Marijuana is often associated with cannabis or cannabinoids. Marijuana is one of over 100 substances found in a cannabis plant and contains large amounts of tetrahydrocannabinol (THC). THC is the substance that affects a person's mental state (causes a high). Cannabidiol (CBD) is the other substance used in medical cannabinoids, but it doesn't cause a high. Both THC and CBD are used in differing concentrations as they have different benefits in managing pain, sleep issues and anxiety. Cannabinoids are thought to relieve pain by activating certain receptors in our nerve cells that help reduce the feeling of pain.

In Australia, cannabinoids are not on the PBS (Pharmaceutical Benefits Scheme). Your GP or specialist needs to apply to the Therapeutic Goods Administration (TGA) before they can prescribe cannabinoids for you. The use of non-prescription cannabinoids is not recommended as there is no regulation of the ingredients in the product. There is a high risk of contaminants such as fungi and heavy metals.



## Interventional pain management

**People with persistent and severe pain may require an interventional pain management strategy, led by a pain specialist. It is important that interventional pain management has a multidisciplinary approach.**

**All the procedures described involve a hospital admission. Your pain specialist will always discuss the risks and benefits with you.**

### Botox injections

Botox injections are more commonly known as a cosmetic procedure that are used to reduce wrinkles.

Botox is a neurotoxin that paralyses muscles, causing the muscles to relax. Injecting Botox via the vagina relaxes the muscles in your pelvis that are contracting or spasming.

Before trying Botox, patients generally try other approaches, such as physical therapy, dilators or muscle relaxants. Botox injections should be combined with physical therapy and dilators for the best results.

### Ketamine/lignocaine (lidocaine) infusion

Ketamine and lignocaine infusions are used in some circumstances to treat severe pain. They are an alternative to using opioids for pain relief and allow people to reduce their opioid intake. Lignocaine and ketamine infusions are delivered through an IV infusion or underneath the skin (subcutaneous). Ketamine and lignocaine are both analgesics and are used to treat neuropathic pain.

### Nerve blocks

A nerve block is an injection that targets a nerve or group of nerves in a specific area of your body to stop pain. Nerve blocks use special needles to deliver local anaesthetic or steroids to nerves causing pain.

The goal of the nerve block is to stop pain signals and reduce inflammation in the area. If the pain stops, this usually means that the nerve, or group of nerves near the nerve block, is the most likely source of the pain. The nerve block injection provides temporary relief from pain.

### Sacral nerve stimulators (SNS)

SNS (also called neuromodulation or neurostimulation) involves electrical stimulation of the sacral nerve. The sacral nerve controls your bladder, bowel, pelvic floor and the muscles that make them function. SNS involves the implantation of a small, battery-operated device called a neurostimulator under the skin in the upper buttock. This device sends a low-voltage electrical current to the spinal cord. This stimulates nerves and blocks pain signals from travelling up to the brain. The treatment has two phases: an evaluation and then an implant phase.

## Pain after surgery

After surgery, it is common for patients to feel acute pain. Managing your post-surgery pain can also help to speed up your recovery and reduce the chances of any complications.

You need to manage pain carefully, so it's essential to have a post-operative pain treatment plan in place. Your pain plan will involve discussions between you and your healthcare professional.





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