People’s individual experiences of chronic pain are influenced by diverse physical, social, psychological and genetic factors. Because of all this, chronic pain responds best to a multidisciplinary approach tailored to individual needs.

Not only is chronic pain managed differently to acute pain, but different types of pain are also treated differently. For example, neuropathic pain (pain caused by damage to nerves) responds to some medicines that are not useful for inflammatory pain (pain caused by injury to muscles and bones). Pain resulting from cancer is also treated differently.

This fact sheet focuses on chronic non-cancer pain.

**Getting the best results**

Management of chronic pain aims to reduce the impact of pain on your daily activities. Typically a combination of strategies is used. This may include medicines, but also individually tailored exercises, relaxation techniques, stress management, performing activities that are within your pain tolerance and addressing sleep habits.

In the management of acute pain there is usually a greater focus on medicines. For chronic pain, if medicines are used, it should be alongside other approaches. Whatever strategies you use, talk to your doctor to help you decide what is best for you.

**Non-medicine treatments**

Managing stress and keeping active can help reduce pain and improve function.

People who actively manage their pain through lifestyle techniques experience lower levels of pain-related disability, as well as improvements in mood and overall health compared with those who rely solely on more passive therapies such as medicine or surgery.

Active management can include:

- psychological techniques to counter unhelpful thoughts and change behaviours
- meditation
- relaxation and breathing techniques
- stress management
- exercise – including yoga, tai chi, hydrotherapy, stretching, strengthening exercises
- pacing your daily activities by doing things in small, manageable steps rather than big chunks
- strategies to improve sleep, such as a minimising alcohol, caffeine and rest during the day
- participating in activities you find relaxing

Allied healthcare professionals such as exercise physiologists, physiotherapists and psychologists can help implement and support these strategies. Ask for a referral to allied health professionals who have expertise in pain management. You may also find it useful to participate in support or self-help groups where you can share experiences and learn how others in similar situations manage pain.

**Using over-the-counter medicines**

Speak to your doctor or pharmacist about the best options before buying any over-the-counter medicines. This is particularly important if you have any other medical conditions, such as stomach, kidney, liver or heart problems.

To ensure the safest and most effective pain management, talk to your doctor or pharmacist about:

- the location of the pain and how long you have had it
- possible side effects of your medicines
- whether a particular pain-management approach is right for you
- whether the pain medicine will affect any other medicines you are taking

A range of pain medicines can be bought ‘over the counter’ without a prescription, including paracetamol and ibuprofen.
When used correctly and alongside other strategies, paracetamol can be effective for mild to moderate pain. If you take paracetamol, check that none of your other medicines also contain it. Paracetamol can cause serious liver damage if taken in larger or more frequent doses than recommended.

Combination pain medicines

Combination pain medicines contain more than one active ingredient. Examples include products that combine ibuprofen or paracetamol with a low dose of codeine.

New over-the-counter medicines that contain specially formulated ibuprofen and paracetamol are now also available in Australia.

Tell your doctor and pharmacist if you use an over-the-counter medicine because it may affect other medicines you are taking. Add it to your medicines list to help you keep track of your medicines. You can create and print a medicines list on our website (go to www.nps.org.au/medicineslist). As well, many over-the-counter medicines and most prescription medicines have a consumer medicine information (CMI) leaflet, which can give you important facts to know before, during and after taking your medicine. Ask your pharmacist or doctor for the CMI for your medicine.

Using prescription medicines for pain

NSAIDs

Some non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, are available ‘over the counter’, but others such as celecoxib and naproxen are only available on prescription. These medicines are effective in relieving pain, fever and inflammation (at least in the short term) but they can cause unwanted side effects. They should be used at the lowest dose that improves your symptoms, and only for a short time. These medicines may not be suitable for people with stomach troubles, heart problems, kidney problems, high blood pressure or asthma.

Opioids

Prescription opioids include buprenorphine, fentanyl, morphine, oxycodone, tramadol, tapentadol and codeine in higher doses.

Opioids are commonly used to relieve severe acute pain or cancer pain but are generally not effective at reducing chronic pain that is not caused by cancer, particularly in the long term.

Opioids may be addictive and may have side effects such as nausea, vomiting and constipation. Because of their sedative effect, your ability to drive might be affected. If you are taking opioids, do not drink alcohol and beware of other sedatives – these can further impair your ability to function and lead to accidental overdose and death.

The longer you take opioids, the greater the risk of experiencing negative consequences. About 80% of patients who take opioids long term will experience side effects such as constipation, nausea or drowsiness.

Supplements

When pain is caused by osteoarthritis, some people use glucosamine and/or chondroitin. However, the long-term benefits of these products are unclear.

Emerging evidence suggests that omega-3 fatty acids may help some types of pain, such as chronic widespread pain (fibromyalgia), neck and shoulder pain and menstrual pain. Early studies do not show an effect for some other types of pain such as migraines and osteoarthritis. However, most of the studies to date have been small or done in animals, and large clinical trials are needed to clarify whether or not omega-3 fatty acid/fish oil can benefit people with any of these conditions.

Questions to ask your doctor

There are a number of important things to talk to your doctor or pharmacist about when choosing a pain medicine:

- Should I take this medicine at regular intervals or only when I feel pain?
- How long will it take to work?
- Is it safe to use in the long term?
- How will this medicine benefit me?
- Will this medicine make me feel drowsy?
- What side effects should I expect or watch out for?
- What can I do to minimise any side effects?
- How will this medicine interact with my other medicines?
- Could I become addicted to this medicine?
- What should I do if the pain does not go away?
- What alternatives should I consider?

Talk to your doctor about a pain management plan

Developing a pain management plan with your doctor can help improve the way you manage your pain. It can help to set step-by-step achievable goals. Your plan could include strategies such as exercise therapy, meditation or activity management (eg, pacing of tasks), as well as medicines.

Ask your doctor to consider a team care approach and refer you to an allied health professional trained in pain management.

For more information on different types of pain:


www.painmanagement.org.au

www.painaustralia.org.au

www.chronicpainaustralia.org.au

Fact Sheet | Chronic pain: what can I do? NPS1600
Choosing your team

Chronic pain is complex. Trying to work out who is the best health professional to see when you have chronic pain is often difficult. It can be helpful to have a ‘team’ of health care professionals that you feel comfortable with and have confidence in. This may involve a bit of trial and error.

What to look for

Whoever you decide to include on your health care team, qualities of effective health professionals include someone who:

» Knows about chronic pain and how to treat it (or is prepared to learn).
» Believes you are in pain.
» Listens with care to your concerns.
» Encourages you to ask questions.
» Is comfortable when you disagree.
» Is willing to speak to your family or friends if you are not feeling well.
» Works with you to develop a pain management plan. The aim of the plan is to help reduce your pain and to set realistic goals so you can get back to important and enjoyable activities.
» Provides information about risks and benefits of each suggested pain treatment.
» Tells you when he or she doesn’t know something about your pain problem or treatment.

Health professionals include your GP, medical specialists including a pain specialist, and allied health professionals such as physiotherapists. You may also find that complementary and alternative medicine options are helpful.

More information about these health professionals is available on the National Pain Week website.

www.nationalpainweek.org.au

Remember:

This is your team. If you are not satisfied with the way a health care professional communicates with you or treats you, it is important to either try to discuss this with him or her, or try someone else.
Living with or experiencing a chronic illness can result in many adjustments and changes, such as loss of independence and not being able to do all the active things you used to do or usually enjoy. Anxiety and depression are common in people with chronic physical illness.

The good news is that there are effective treatments for anxiety and depression. With careful management, the symptoms of anxiety and depression can be treated along with those of many chronic physical illnesses.

What is a chronic physical illness?

A chronic physical illness is an enduring health problem that will not go away – for example diabetes, asthma, arthritis or cancer. Chronic physical illnesses can be managed, but they cannot be cured. People who live with a chronic illness have a greater risk of developing anxiety and/or depression.

There are many different types of chronic physical illness and each presents its own challenges. Here is an overview of some of the more common types.

Heart disease

Of the different forms of cardiovascular (heart and blood vessel) disease, coronary heart disease is the heart condition most closely linked with depression.

Coronary heart disease is a long-term condition that affects around 685,000 Australians and is a common cause of death and disability.

Depression is a significant risk factor for heart disease. Depression is more common among people with heart disease and it affects recovery and increases the risk of further heart-related incidents such as heart attack and sudden death. People who do not have good social support networks (such as someone to confide in and opportunities to participate in social activities) are also at greater risk of developing heart disease. Anxiety can also be a risk factor for heart attack and other heart-related events.

Stroke

Stroke is Australia’s second biggest cause of death after coronary heart disease and is a leading cause of disability. In 2012, about 50,000 Australians suffered new and recurrent strokes – that is 1,000 strokes every week or one stroke every 10 minutes. In 2012 there were over 420,000 people living with the effects of stroke and 30 per cent of these people were under the age of 65.

A stroke occurs when blood flow to the brain is interrupted. Having a stroke can result in many changes. On a physical level, it can lead to people finding it difficult to move and swallow. Having a stroke can also cause stress, worry and sadness, and affect the way in which people think and feel. There is a strong link between depression, anxiety and stroke.

Cancer

Cancer is a leading cause of death in Australia – more than 43,200 people are estimated to have died from cancer in 2011. An estimated 128,000 new cases of cancer will be diagnosed in Australia in 2014, with that number set to rise to 150,000 by 2020. Half of Australian men and one in three Australian women will be diagnosed with cancer by the age of 85.

Cancer is a disease of the body’s cells. Normally cells grow and multiply in a controlled way, however, if something causes a mistake to occur in the cells’ genetic blueprints, this control can be lost. Cancer is the term used to describe collections of these cells, growing and potentially spreading within the body. As cancerous cells can arise from almost any type of tissue cell, cancer actually refers to about 100 different diseases. The most common cancers in Australia (excluding non-melanoma skin cancer) are prostate, bowel, breast, melanoma and lung cancer, accounting for over 60 per cent of all cancers diagnosed in Australia.

Men with prostate cancer are nearly twice as likely to develop depression as men in the general community.

Research shows that anxiety and depression are common among women with breast cancer, and one study found that up to 50 per cent of women with early breast cancer may experience anxiety and/or depression in the year after diagnosis.

www.beyondblue.org.au  1300 22 4636
Diabetes
There are several types of diabetes, although people with diabetes all have one thing in common – too much sugar, or glucose, in their blood. The hormone that helps the body convert glucose to energy, insulin, is either no longer made by the body (type 1 diabetes) or not produced in sufficient quantities and/or the body becomes resistant to the effects of insulin (type 2 diabetes). Diabetes can lead to serious complications if it is not diagnosed and managed – including eye and kidney damage, nerve damage, heart attacks and stroke.6

Research shows there are strong links between anxiety and depression and diabetes. Approximately one in four people with type 2 diabetes experience depression and one in six with type 2 diabetes experience anxiety.11 Among people with type 1 diabetes, approximately one in five experience depression and one in seven experience anxiety.11

Arthritis
Arthritis is a name for over 100 conditions that cause damage to the joints, usually resulting in joint pain and stiffness. Arthritis can affect many different parts of the joint and nearly every joint in the body. In 2011/12, 3.3 million people in Australia reported having arthritis.22 Many people think arthritis is a condition that affects people when they get older. In fact, two out of every three people with arthritis are between 15 and 64 years old.13

Up to two-thirds of people with arthritis say their condition has affected them emotionally.11

Osteoporosis
In Australia, 1.2 million people live with osteoporosis and a further 6.3 million people have low-bone density or osteopenia, which is often a precursor to osteoporosis.19 Reduced bone mineral density is a risk factor for osteoporotic fracture. Ten per cent of Australians are currently affected by osteoporosis-related conditions and osteoporosis-related fractures currently occur in nearly one-third of men over the age of 60.14 Musculoskeletal conditions such as osteoporosis may have significant psychological impacts on people, such as loss of independence and increased risk of experiencing depression.17

Asthma
More than 2 million Australians have asthma and research indicates that there is a link between asthma, anxiety and depression.18

Asthma is a condition of the airways. A person with asthma has symptoms that affect their breathing, often disturbing their sleep. Waking up at night and early morning due to asthma symptoms can leave a person feeling tired during the day. Having asthma can make it hard to join in with everyday activities, such as playing sport and other recreational interests. This can lead to feeling unmotivated and socially isolated.

Chronic pain
Chronic pain is pain that lasts beyond the time expected for healing following surgery, trauma or other condition, or it can exist without any clear reason at all. Left untreated, chronic pain can have a devastating impact on all aspects of people’s lives – such as sleep, sex, work, exercise and routine self-care. It can also severely impact personal relationships, social interactions and lifestyles.

Ninety per cent of people with severe and very severe pain find that their work is affected (inside and outside the home)19 and chronic pain accounts for 40 per cent of forced retirements.20 The impact on personal life is greatest in young adults, with four in five people with chronic pain aged 20–24 reporting interference in daily life.21

Rates of depression are four times higher among people with chronic pain than people without pain, and almost one in three Australian adults with severe or very severe pain have high or very high levels of psychological distress.3 In people with chronic pain, depressive symptoms are characterised predominantly by mood-related symptoms and they are more likely to think about and attempt suicide.4,5 In Australia, one in five suicides are linked to physical health problems22, and some studies suggest the risk of death by suicide may be double in people who have chronic pain.23

Dementia
Dementia is a term used to describe a set of symptoms including changes in thinking, memory, behaviour and mood, and difficulties with communication. Many conditions cause dementia, including Alzheimer’s disease, vascular dementia and dementia with Lewy bodies.

There were over 322,000 Australians living with dementia in 2013.23 In 2011, 9 per cent of Australians aged 65 and over, and 30 per cent of Australians aged 85 and over, had dementia.24 There were an estimated 23,900 Australians under the age of 65 with dementia in 2011.23
Older people with dementia are at greater risk of depression. Depression is thought to affect one in five people experiencing dementia.

**Chronic Fatigue Syndrome**

Myalgic encephalomyelitis (ME), commonly known as Chronic Fatigue Syndrome (CFS), is defined by the World Health Organisation as a neurological illness. The main symptom of CFS is having ‘flu like’ symptoms after exertion and not having enough energy for daily activities. Other symptoms include pain, disrupted sleep, difficulty thinking, and changes in blood pressure, hormones and body temperature. Over 180,000 Australians of all ages have CFS. For some people, a viral infection, toxic exposure, anaesthetic, immunisation, gastroenteritis or trauma may trigger the illness. In other people, CFS may develop slowly over a period of years.

What is anxiety?

Anxiety is more than just feeling stressed or worried. Anxious feelings are a normal reaction to a situation where a person feels under pressure and usually pass once the stressful situation has passed, or ‘stressor’ is removed.

However, for some people these anxious feelings happen for no apparent reason or continue after the stressful event has passed. For a person experiencing anxiety, anxious feelings cannot be brought under control easily. Anxiety can be a serious condition that makes it hard for a person to cope with daily life. There are many types of anxiety and many people with anxiety experience symptoms of more than one type.

Living with chronic physical illness is one of many things – such as a family history of mental health conditions, stressful life events and personality factors – that may trigger anxiety. The combination of chronic physical illness, lost educational or employment opportunities and financial worries can lead to the development of anxiety.

Anxiety is common and the sooner a person seeks support, the sooner they can recover.

**Signs of anxiety**

The symptoms of anxiety can often develop gradually over time. Given that we all experience some anxiety, it can be hard to know how much is too much. In order to be diagnosed with an anxiety condition, it must have a disabling impact on the person’s life. There are many types of anxiety, and there are a range of symptoms for each.

Anxiety can be expressed in different ways such as uncontrollable worry, intense fear (phobias or panic attacks), upsetting dreams or flashbacks of a traumatic event.

Some common symptoms of anxiety include:

- hot and cold flushes
- racing heart
- tightening of the chest
- snowballing worries
- obsessive thinking and compulsive behaviour.

There are effective treatments available for anxiety. For more information on anxiety and treatments see the beyondblue Understanding anxiety fact sheet or visit www.beyondblue.org.au/anxiety

What is depression?

While we all feel sad, moody or low from time to time, some people experience these feelings intensely, for long periods of time (weeks, months or even years) and sometimes without any apparent reason. Depression is more than just a low mood – it’s a serious condition that has an impact on both physical and mental health.

Depression affects how a person feels about themselves. A person may lose interest in work, hobbies and doing things he or she normally enjoys. Some people may lack energy, have difficulty sleeping or sleep more than usual, while some people feel anxious or irritable and find it hard to concentrate.

The good news is that depression is treatable and effective treatments are available.

**Signs of depression**

A person may be depressed if he or she has felt sad, down or miserable most of the time for more than two weeks and/or has lost interest or pleasure in usual activities, and has also experienced some of the signs and symptoms on the list below.

It’s important to note that everyone experiences some of these symptoms from time to time and it may not necessarily mean a person is depressed. Equally, not every person who is experiencing depression will have all of these symptoms. The symptoms will not provide a diagnosis – for that you need to see a health professional – but they can be used as a guide.

Some common symptoms of depression include:

- not going out anymore, loss of interest in enjoyable activities
- withdrawing from close family and friends
- being unable to concentrate and not getting things done at work or school
- feeling overwhelmed, indecisive and lacking in confidence
- increased alcohol and drug use
- loss or change of appetite and significant weight loss or gain
- trouble getting to sleep, staying asleep and being tired during the day
- feeling worthless, helpless and guilty
- increased irritability, frustration and moodiness
- feeling unhappy, sad or miserable most of the time
- thoughts such as, “I’m a failure”, “Life’s not worth living”, “People would be better off without me”.

As with anxiety, there are effective treatments available for depression. For more information on depression and treatments see beyondblue’s Anxiety and depression: An information booklet or visit www.beyondblue.org.au/depression
What are the links between anxiety, depression and chronic physical illness?

Research indicates there are strong links between anxiety, depression and chronic physical illness. Anxiety is the most common mental health condition in Australia – one in four people will experience anxiety at some stage in their life.1 Depression is also common – one in five women and one in eight men will experience depression in their lifetime.6 For people who live with a chronic physical illness, this figure is even higher. Research shows that 28 per cent of people with a chronic physical condition also have a mental health condition.5

People who experience persistent pain are four times more likely to experience anxiety or depression than people living without pain.14 Having a chronic physical illness puts a person at greater risk of developing anxiety or depression.1 The symptoms of chronic physical illnesses, as well as some of the treatments, can result in major lifestyle changes which may cause severe disruptions to a person’s work/social life and create financial difficulties.

Depression also increases the likelihood of developing a chronic physical illness, particularly heart disease, stroke and diabetes.5 Continuing physical illness can also trigger anxiety, complicate the treatment of anxiety or the physical illness itself. Common conditions that can do this include hormonal problems (e.g. overactive thyroid), diabetes, asthma and heart disease.

For people with a chronic physical illness, anxiety or depression makes living with their condition even more difficult. It can make it harder for people to find the energy to eat healthily, exercise or take medication regularly. Depression is more debilitating than the feelings of frustration or disappointment at having a chronic health condition. There is a sense of loss of enjoyment, as well as the other characteristic changes described in the ‘signs of depression’ list. Some chronic physical illnesses, such as chronic pain, can be largely invisible so that people can feel misunderstood and stigmatised by co-workers, friends, family and even the medical profession.17

Having a chronic physical illness can also make it seem like an effort to connect with family members and friends. This can make the person with the illness feel isolated and make it harder for them to recover from anxiety or depression.

What are the treatments for anxiety and depression?

Managing anxiety and depression can greatly improve people’s wellbeing and quality of life. People with anxiety and/or depression can find it difficult to take the first step in seeking help. They may need the support of family, friends and a health professional.

There is no one proven way that people recover from anxiety or depression and it’s different for everybody. However, there is a range of effective treatments and health professionals who can help people on the road to recovery. There are also many things that people with anxiety, depression and asthma can do to help themselves to recover and stay well. The important thing is finding the right treatment and the right health professional that works for you.

Different types of anxiety and depression require different types of treatment. This may include physical exercise for preventing and treating mild depression or anxiety, through to psychological and medical treatment for more severe episodes. The treatment for anxiety, depression and chronic illness involves a coordinated approach that monitors the symptoms of anxiety, depression and the illness.

Psychological treatments

Psychological therapies may not only help with recovery, but can also help prevent a recurrence of anxiety or depression. These therapies help build skills in coping with stressful life circumstances and can be provided by a psychologist, psychiatrist or other trained health professional.

- Cognitive behaviour therapy (CBT) is an effective treatment for people with anxiety and depression. It teaches people to evaluate their thinking about common difficulties, helping them to change their thought patterns and the way they react to certain situations.

- Interpersonal therapy (IPT) is also effective for treating depression and some types of anxiety. It helps people find new ways to get along with others and to resolve losses, changes and conflict in relationships.

Medication

Antidepressant medication, alongside psychological therapies, can also play a role in the treatment of moderate to severe depression and some anxiety conditions.

Making a decision about which antidepressant is best for a person can be complex. The decision will be made in consultation with a doctor, after careful assessment and consideration. The doctor should discuss differences in effects and possible side-effects of medications. Stopping medication should only be done gradually, with a doctor’s recommendation and under supervision.
A doctor or treating health professional will take into account several factors when suggesting the most suitable treatment. Regular contact with and ongoing assessment by a doctor to check that treatments are working effectively is an important part of becoming and staying well. Most people taking medication will also benefit from psychological therapies, which will reduce the likelihood of relapse after the person has stopped taking the medication.

Who can assist?
A General Practitioner (GP) is a good first step to discuss your concerns. Your GP can:
- make a diagnosis
- check for any physical health problem or medication that may be contributing to the condition
- discuss available treatments
- work with the person to draw up a Mental Health Treatment Plan so he or she can get a Medicare rebate for psychological treatment
- provide brief counselling or, in some cases, psychological therapies
- prescribe medication
- refer a person to a mental health specialist such as a psychologist, social worker or psychiatrist.

It is recommended that people consult their regular GP or another GP in the same clinic, as medical information is shared within a practice.

Psychologists are health professionals who provide psychological therapies such as cognitive behaviour therapy (CBT) and interpersonal therapy (IPT). Psychologists are not doctors and cannot prescribe medication in Australia.

Psychiatrists are doctors who specialise in mental health. They can make medical and psychiatric assessments, conduct medical tests, provide therapy and prescribe medication. Psychiatrists often use psychological treatments such as CBT, IPT and/or medication. If the condition requires hospital admission, a psychiatrist will be in charge of the person’s treatment.

Mental health nurses are specially trained to care for people with mental health conditions. They work with psychiatrists and GPs to review a person’s mental health, monitor medication and provide information about mental health conditions and treatment. Some have training in psychological therapies.

Social workers in mental health are specially trained to work with people who are experiencing difficulties in life. Social workers can help people find ways to manage more effectively some of the situations that trigger these conditions such as family issues, financial problems, work stress and living arrangements. Mental health social workers can also provide focused psychological self-help strategies.

Occupational therapists in mental health help people who, because of a mental health condition, have difficulty participating in normal, everyday activities. Mental health occupational therapists also provide focused psychological self-help strategies.

Aboriginal and Torres Strait Islander mental health workers understand the mental health issues of Indigenous people and what is needed to provide culturally safe and accessible services. Some may have undertaken training in mental health and psychological therapies. Support provided by Aboriginal and Torres Strait Islander mental health workers might include, but is not limited to, case management, screening, assessment, referrals, transport to and attendance at specialist appointments, education, improving access to mainstream services, advocacy, counselling, support for family and acute distress response.

The cost of treatment from a mental health professional varies. However, in the same way that people can get a Medicare rebate when they see a doctor, they can also get part or all of the consultation fee subsidised when they see a mental health professional for treatment of anxiety or depression. See beyondblue’s Getting help – How much does it cost? fact sheet at www.beyondblue.org.au/resources

To find a mental health practitioner in your area, visit www.beyondblue.org.au/find-a-professional or call the beyondblue Support Service on 1300 22 4636.
Helpful strategies and tips

Coping with a chronic physical illness and its treatments can be challenging enough, but if you experience mental health conditions as well, it can be very difficult to work out how to manage – both emotionally and practically. Remember, you don’t have to sort everything out at once. It may take some time to deal with each issue. Ask for help if you need it – your doctor or other health professional can refer you to a mental health professional who has special training or experience in supporting people with chronic physical illness. Remember, it’s important to seek help early – the sooner the better.

The following tips may be helpful in managing depression and anxiety:

- Speak to your doctor about your concerns and discuss treatment options. Make sure you attend all of your appointments and have regular check-ups.
- Learn as much as you can about depression and the chronic physical illness.
- Accept help, support and encouragement from family and friends.
- Avoid feeling isolated by becoming involved in social activities, if you are able.
- Talk to others who are going through a similar experience, such as in a peer support group.
- It’s important to be kind to yourself, eat well, get regular exercise if you are able, try to get enough sleep and avoid alcohol. Make time for activities that you enjoy and allow yourself time to relax. You can find helpful tips for recovery and staying well at www.beyondblue.org.au/staying-well

Advice for family and friends

When a person has a chronic physical illness and anxiety or depression, it can affect family members and friends. Carers may be at increased risk of anxiety and/or depression, so it’s important that you look after your own health by doing the following:

- Make sure you eat well, exercise regularly, get enough sleep and avoid alcohol and other drugs.
- Allow yourself time to relax and do what you enjoy. Plan activities like social outings and exercise.
- Look for symptoms of depression in yourself and seek help at the earliest sign.
- Seek support from professionals. This may involve having counselling or attending a carer support group.
- Find ways to ease the load, for example take Carer’s Leave from work.
- Involve other family members and friends and accept offers of help and encouragement.
- Acknowledge you are going through a difficult time and are likely to experience periods of grief.
- Remember that allowing others to help is not a sign of weakness – rather it is an act of generosity to allow them to show their concern and support for you.

For more information, see beyondblue’s free booklet A guide for carers available from www.beyondblue.org.au/resources or by calling 1300 22 4636.
Resources

BeyondBlue has a number of free information resources available in addition to this booklet. To download PDF files or order hard copies of available resources please visit www.beyondblue.org.au/resources to access BeyondBlue’s online ordering catalogue, or call 1300 22 4636.

References

Where to find more information

**beyondblue**
www.beyondblue.org.au
Learn more about anxiety and depression, or talk it through with our Support Service.

- **Facebook:** facebook.com/beyondblue
- **Twitter:** twitter.com/beyondblue

**Diabetes Australia**
www.diabetesaustralia.com.au
1300 136 588
Information about diabetes

**Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) Australia**
www.mecfs.org.au
03 9529 1344
Information about ME/CFS

**National Heart Foundation of Australia**
www.heartfoundation.org.au
1300 36 27 87
Information on a range of heart-health topics

**National Stroke Foundation**
www.strokefoundation.com.au
1800 787 653
Information on stroke

**Osteoporosis Australia**
www.osteoporosis.org.au
1800 242 141
Information about osteoporosis

**The Cancer Council Australia**
www.cancer.org.au
13 11 20
Information about cancer

**Mindhealthconnect**
www.mindhealthconnect.org.au
Access to trusted, relevant mental health care services, online programs and resources.

**Alzheimer’s Australia**
www.alzheimers.org.au
1800 100 500
Provides advocacy, support services, education and information about dementia

**Arthritis Australia**
www.arthritisaustralia.com.au
1800 111 101
Information about arthritis

**Asthma Foundations of Australia**
www.asthmaaustralia.org.au
1800 645 130
Information, advice, education, counselling and support for people with asthma

**Pain Australia**
www.painaustralia.org.au
1300 340 357
Provides information and support services to prevent and manage pain

Donate online www.beyondblue.org.au/donations
Analgesics Fact Sheet

Group 1: Traditional pain medications (called analgesics). These can be tried for usual acute pain or nociceptive pain, inflammatory pain and some of these might help neuropathic pain.

Paracetamol
While paracetamol is one of the oldest forms of analgesics, current research indicates that on its own, paracetamol is ineffective in the treatment of low back pain and provides minimal short-term benefit for people with hip or knee osteoarthritis. Therefore, it is important to discuss with your doctor how best to use paracetamol for your pain condition. Your doctor may suggest to combine paracetamol with another class of medicines, such as non steroidal, as these can work better together, requiring lower doses and fewer side effects.

Paracetamol is available from pharmacies as tablets, liquid mixtures, or suppositories. Often paracetamol is the sole chemical, but it is also used in combination e.g. cold and flu tablets.
- Paracetamol is non-addictive.
- Paracetamol works on the day you take the tablets (within 30-60 minutes).
- Panadol Slow Release: Panadol Osteo™ is one example and is an 8-hourly Slow Release 665mg tablet that is cost effective (~$10 for 96 tablets). Try 2 in the morning and 2 in the evening, and can take 2 in the afternoon is needed. It is a maximum is 6/day.
- Four people out of 100 using daily paracetamol for 12 months can get gastritis or stomach ulcers.
- Regular Paracetamol at 4gm/day can cause liver damage.
- Do not take with other tablets that have Paracetamol e.g. Panadol™, Panadeine Forte™, Codalgin Forte™

If paracetamol isn't helpful, please stop taking it and see your doctor.

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)
- These include Aspirin, Willowbark, Diclofenac (Voltaren™), Naproxen (Naprosyn™), Indomethacin (Indocid™); Ibuprofen (Nurofen™), Meloxicam (Mobic™), Celecoxib (Celebrex™)
- The NSAIDs are more likely to help acute pain nociceptive and inflammatory pain and are non-addictive
- Available as tablets, some as suppositories, and a few as gels or ointments. Doctors and Pharmacists can provide further advice
- They “work” on the day you take them (within 30-60 minutes). If they aren't that helpful please stop them and if needed see your doctor
- They can cause stomach ulcers if taken regularly, so they need to be taken with food
• Tablets that protect the stomach reduces this risk and should be taken if NSAIDs are used on a regular basis e.g. Losec™, Somac™, Nexium™, Ranitidine (Zantac™).
• NSAIDs all increase the chance of bleeding, except Celecoxib (Celebrex™).
• NSAIDs can worsen asthma, interfere with kidney function, and increase the risk of heart attacks and strokes
• Not recommended for people who have kidney problems, past history of bleeding stomach ulcer, asthma induced by NSAIDs, bleeding disorders or allergies to NSAIDs

Tramadol
These include Tramal™, Zydol™, Tramahexal™, Durotram™

Tramadol can help acute nociceptive pain, inflammatory pain, and neuropathic pain\(^2\). Tramadol it works at 3 different “receptors” (Tramadol has weak Opioid with additional Nor-Adrenaline and Serotonergic actions), and has mixed opioid and anti-neuropathic pain relieving properties.
• Practically non-addictive (only 1 person in 100,000 can become addicted to them)
• Strongly recommend a slow introduction to Tramadol as this is less likely to cause side-effects
• In the first ‘wash-in’ week start with 50mg (Immediate Release (IR) or Slow Release (SR) – however in Australia Authority Scripts are available for the SR (120 of the 50mg SR tablets with 5 repeats) which makes it much cheaper
• Start at night time for three days, then 50mg twice a day for three days, and then increase to 50mg three times a day for three days
• If needed, that is, if you still have significant pain and no side-effects, then in the second week, change to the 2 x 50mg SR or one of the 100mg Slow Release (SR) tablet at night for three days, then, if needed, increase to 100mg SR in the morning and night
• In Australia, an authority script (for one month’s supply, with 5 repeats) can be organised by your GP for the Slow Release (SR) tablets for either the 12 hourly slow release or the 24 hourly extended release (Durotram). This means you can get a months supply for the price of one script
• Tramadol works on the day you take them, and the pain modification effect improves after you have taken them regularly for a few days
• 1 person in 5 needs a higher dose (up to 200mg twice a day) as their body doesn't activate Tramadol in their liver as easily as most people
• Tramadol can be effective for nerve pain (1 in 4 patients). It is less constipating, less addictive and unlikely to slow down breathing compared to an opioid like Morphine
• Tramadol can interact with antidepressants to cause serotonergic syndrome (hot, sweaty, muscle twitches), blackouts and seizures. It is vital
to discuss these side effects with your doctor if they occur. Usually dose reduction or ceasing tramadol is needed
• Not recommended for people with epilepsy.
• People on antidepressants need to check with their doctors.
• Tramadol is not recommended if you are taking Mono-amine Oxidase Inhibitors ‘MAOIs’.
• Caution and monitoring is recommended if you are taking antidepressants that are Selective Serotonin Reuptake Inhibitors ‘SSRIs’, or Serotonin Noradrenaline Reuptake Inhibitors ‘SNRIs’.
• Usually dose reduction or ceasing the tramadol is needed
• Not recommended for people with epilepsy or people on antidepressant ‘MAOIs’, and monitoring if taking antidepressant that are ‘SSRIs’.

Combinations
There are a multitude of pain medications that have several different medications in the one tablet. These should be discussed with your pharmacist or doctor.

Panadeine (paracetamol 500mg and codeine 8mg)
• Usual dose is two tablets. They last about 4 hours.
• The amount of codeine isn't usually enough to add much more relief than taking the Panadol by itself, but can constipate people.

Panadeine Forte (paracetamol 500mg and codeine 30mg)
• Usual dose is two tablets. They last about 4 hours.
• The amount of codeine is usually less effective than Tramadol.
• Tends to constipate people.

There are individual exceptions. Why does codeine work for some people and not others? After codeine is swallowed and enters the blood stream, it needs to get converted in the liver to morphine before if has any effect on pain. However, 10-20% of people (i.e. 1 or 2 people out of 10) don't have the fully functioning system in the liver to do this conversion.

This is the same system that needs to convert Tramadol into its active chemical, so the people that codeine doesn't work for are often the same people that need a higher dose of Tramadol (i.e. up to 200mg twice a day compared to 50-100mg twice a day for most other people). Codeine, once converted to morphine, helps one person out of 3 or 4 reduce their pain by half (50%). That means that 2 or 3 people out of 4 don't get any more relief than taking a sugar tablet or placebo!
Paracetamol with Tramadol (Zaldiar TM) is a newer combination tablet. These two tablets work better together i.e. they are synergistic; requiring low doses and fewer side effects.

Why does codeine work for some people and not others?
Codeine is a weak pain modifier, but can actually increase your sensitivity to pain (hyperalgesia)\(^3\). It is recommended, that codeine is not used on a regular basis.

Codeine-related deaths are increasing in Australia as the consumption of codeine-based products increases\(^3\). For every two opioid-related deaths in 2009, there was one codeine-related death, and most of these (83.7\%) were the outcome of toxicity due to combined drug use\(^3\).

After codeine is swallowed and enters the blood stream, it needs to get converted in the liver to morphine before if has any effect on pain.

Rapid metabolisers: some people break the codeine down into morphine quickly (rapid metabolisers). Unfortunately this has caused some people harm. Harm includes deaths in children, especially infants\(^3\). Codeine is therefore not recommended.
References


Anti-neuropathic Pain Medications Fact Sheet

Group 2: Anti-neuropathic medications
These medications are also known as co-analgesics\(^1\) and can be prescribed for nerve-related (neuropathic) pain. These medications are often prescribed if you have burning or shooting pain (nerve injury or 'neuropathic pain')\(^2\).

Anti-neuropathic medicines can help to reduce or “calm down” nerve activity and reduce pain hypersensitivity associated with conditions like shingles, diabetic pain, sciatica, fibromyalgia and headaches.

Based on current evidence they help approximately 1 out of 6-7 people with neuropathic pain\(^2\). They don't tend to help usual acute nociceptive pain or inflammatory pain.

**Tramadol** is likely to help acute nociceptive pain, inflammatory pain, and neuropathic pain.

Tramadol works at 3 different receptor sites (Tramadol has weak Opioid with additional Nor-Adrenaline and Serotonergic actions). It is practically non-addictive (S4). Please see the further information in the Analgesic fact sheet.

**Antidepressant pain-relievers**
A 4 weeks trial (minimum) is needed to change pain as it takes time to adjust neurotransmitters in the nerve cells. However, the sleep effect is noticeable on the day you take them.

**Tricyclic (TCAs): Non-addictive:**
These may be useful for pain and sleep\(^2\)

- Amitriptyline (Endep™) 10-30mg/day:
  - Start a low dose of one 10mg tablet at 6pm tea-time, as it takes 2-3 hours to work to help sleep, for three nights.
  - Then slowly increase by one tablet every 3rd night up to 30mg if you don't have side-effects
  - The antidepressant dose is 100-150mg, so no mood effect at low dose
- Nortryptiline (Allegron) 10-30mg; less sedating
- Trimipramine (Surmontil) 12.5-25mg; less sedating
Serotonin NorAdrenaline Reuptake Inhibitors (SNRI's): Non-addictive
These may be useful for pain, mood and sleep².
- Duloxetine (Cymbalta) 60mg/day. Start 30mg for 1-2 weeks at 8pm. Increase to 60mg if no side-effects for 4 to 8 week trial.
- Venlafaxine (Effexor) 75mg/day. Start 37.5mg for 1-2 weeks at 8pm. Increase to 150mg if no side-effects for 4 to 8 week trial. Wide dose range for pain from 75 to 300mg/day.

Remember - Some people find that mild side effects (such as dry mouth, blurred vision, or drowsiness) improve the longer they take the medicine.

Anti-Epilepsy drugs:
- Anti-Epilepsy drugs: Gabapentin (Neurontin™, Gantin™, Gabahexal™) or Pregabalin (Lyrica™) are medications which also be may be effective in treating nerve pain in about 1 in 6-7 patients², and fibromyalgia in 1 in 15 patients.
- Other epilepsy drugs are Carbamazepine (Tegretol™, Sodium Valproate (Epilim™ for Spinal Cord injury only).
- If Epilim or Tegretol are used, you will need to have tests performed every 6 months to monitor your blood count and liver function, to make sure you are not developing uncommon side effects of these medications.

Gabapentin and Pregabalin do not require this early monitoring and are commonly prescribed from state funded hospitals pain medicine units).

How can you release your body's own medicine chest to relieve pain?
1. Smile: Smiling releases many of our ‘up’ chemicals including serotonin. We are wired from childhood that smiling means happiness, so that if you smile (even if you aren't happy), the body releases our ‘happy’ chemicals.

2. TIP 1: If children or adolescents are in a ‘grumpy’ mood (and if feeding them hasn't helped), get them to smile (properly). It is then hard for them to return to the bad mood: smiling acts as a circuit breaker.

3. TIP 2: Serotonin is the chemical released from chocolate and milk drinks - smiling does it without the calories (kJ's). a. Exercise: This doesn't mean getting hot and sweaty. Just walking at your own pace outside doing your daily walk increases your serotonin and nor-adrenaline. Nor-Adrenaline makes you feel more robust and able to cope with stressors or issues. This is what the anti-depressants can also do – but you can help by doing it naturally

4. TIP 3: athletes do also get an ‘opioid high’, or ‘runners high’ in addition to the other chemicals. Studies have shown that this ‘runners high’ may not occur if you have chronic pain. So, do the level of exercise that is of benefit to you (not necessarily what others can do)
References
What are benzodiazepines?

Benzodiazepines are a group of drugs called minor tranquillisers, often known as benzos. These drugs are prescribed by a doctor to help people with anxiety or sleep problems. There are about 30 different types (generic names) of benzodiazepines. Each one of these generic name drugs may be sold under several different brand names – all the same drug, but made by different companies.

The table below shows some of the different generic and brand names of benzodiazepines.

<table>
<thead>
<tr>
<th>Drug name</th>
<th>Brand names</th>
</tr>
</thead>
<tbody>
<tr>
<td>diazepam</td>
<td>Valium, Ducene, Antenex, Valpam</td>
</tr>
<tr>
<td>oxazepam</td>
<td>Serepax, Murelax, Alepam</td>
</tr>
<tr>
<td>nitrazepam</td>
<td>Mogadon, Alodorm</td>
</tr>
<tr>
<td>temazepam</td>
<td>Normison, Temaze, Temtabs</td>
</tr>
<tr>
<td>lorazepam</td>
<td>Ativan</td>
</tr>
<tr>
<td>flunitrazepam</td>
<td>Rohypnol, Hypnodorm</td>
</tr>
<tr>
<td>bromazepam</td>
<td>Lexotan</td>
</tr>
<tr>
<td>clonazepam</td>
<td>Rivotril, Paxam</td>
</tr>
<tr>
<td>alprazolam</td>
<td>Xanax</td>
</tr>
</tbody>
</table>

Some slang names for benzodiazepines include benzos, rowies, serries, moggies, vals, V, normies, downers, tranks and sleepers.

Some people use benzodiazepines without a prescription from a doctor. This is illegal and can be very dangerous.

How are benzodiazepines used?

Benzodiazepines slow down the workings of the brain and the central nervous system. They are used medically to reduce anxiety, to help people sleep and to relax the body. They should only be prescribed for short periods of time. This is because it is possible to become dependent on them after as little as four weeks’ use as directed by a doctor (see ‘Tolerance and dependence’ on page 2 in this fact sheet).

Different types of benzodiazepines work in the body for different lengths of time. They come in the form of tablets or capsules and some are available for intravenous use in hospital settings.

Some people inject benzodiazepines and/or use them at the same time as they use heroin, alcohol or other drugs. This can be very dangerous and can cause an overdose or death.

Injecting benzodiazepines, which are intended to be swallowed in tablet/capsule form, can also cause severe damage to veins, leading to loss of limbs from poor circulation, organ damage or stroke.

Effects of benzodiazepines

What benzodiazepines do to you depends on:

- how many tablets and what dose you take
- your height and weight
- your general health
- your mood
- your past experience with benzodiazepines
- whether you use benzodiazepines on their own or with other drugs
- whether you use alone or with others, at home or at a party etc
- route of administration.
Immediate effects

The effects of benzodiazepines may last from a few hours to a few days, depending on the dose and type of benzodiazepines you take. The immediate effects can include that you:

- feel relaxed
- feel drowsy, sleepy or tired
- have no energy
- become confused or dizzy
- feel really good
- have mood swings
- slur your words or stutter
- can’t judge distances or movement properly
- have blurred or double vision
- can’t remember things from just a short time ago.

If you take a very high dose of benzodiazepines with other drugs you can go into a coma or die.

Long term effects

Benzodiazepines are highly addictive. If you use benzodiazepines often and for a long time (more than two to three weeks), you may:

- have no energy or interest in doing normal things
- be cranky
- feel sick in the stomach
- have headaches
- have dreams that make you feel bad
- experience fatigue or drowsiness
- lose interest in sex, or your body won’t work properly during sex
- get skin rashes
- be more hungry and put on weight
- have menstrual problems if you are a woman
- be depressed.

The way a person uses benzodiazepines can also cause problems:

- Injecting benzodiazepines that are intended to be swallowed in tablet/capsule form can also cause severe damage to veins, leading to loss of limbs from poor circulation, organ damage or stroke.
- Using benzodiazepines at the same time as other central nervous system depressants – such as alcohol, heroin, methadone, or some prescribed drugs – is very dangerous. It can cause you to become unconscious, stop your breathing, put you into a coma or cause you to die.
- Injecting benzodiazepines with used or dirty injecting equipment makes you more likely to get infected with HIV, hepatitis B or C, and get blood poisoning (septicaemia) and skin abscesses.
- When you are getting benzodiazepines from a doctor, tell them about any other drugs you are taking so they can give you the right dose. This will help to prevent the risk of different drugs affecting each other in your body.

Mixing with other drugs

Using benzodiazepines at the same time as any other drug, including alcohol can be dangerous. Mixing benzodiazepines with other drugs that slow down the body (eg alcohol, sleeping pills, heroin, cannabis) can:

- make it harder to think clearly
- make it harder to properly control how you move
- stop your breathing and cause death.

Tolerance and dependence

Anyone can develop a tolerance to benzodiazepines or other drugs. Tolerance means that you must take more of the drug to feel the same effects you used to have with smaller amounts or lower doses. This may happen very quickly with benzodiazepines.

Dependence on benzodiazepines means that these drugs take up a lot of your thoughts, emotions and activities. You spend a lot of time thinking about using benzodiazepines, looking for them, using them and getting over the effects of using them. You also find it difficult to stop using or control how much you use. Dependence can lead to a variety of health, money, legal, work and relationship problems.
Not all people who ever use benzodiazepines become dependent. But it is very easy to become dependent on benzodiazepines and it can happen within four weeks.

Withdrawal

People who are dependent on benzodiazepines find it very hard to stop using them or cut down because of withdrawal symptoms. Suddenly stopping using benzodiazepines can be dangerous. You should get help and withdraw gradually if you have been using benzodiazepines regularly or using high doses of them.

Symptoms of withdrawal can include:

- disturbed sleep
- feeling nervous or tense
- being confused or depressed
- feeling afraid or thinking other people want to hurt you
- panicking and feeling anxious
- feeling distant or not connected with other people or things
- sharpened or changed senses (eg noises seem louder than usual)

- shaking
- convulsions
- pain, stiffness or muscle aches or spasms
- flu-like symptoms
- heavier menstrual bleeding and breast pain in women.

Overdose

It is unusual to overdose on benzodiazepines alone – but if you use them with other drugs such as alcohol, heroin or methadone it is very easy to overdose and die. Symptoms of overdose are:

- person is unable to be ‘roused’ or woken
- coma
- very slow breathing
- slow heartbeat
- cold clammy skin
- lips may appear bluish.

If someone overdoses, other people with them should:

- phone 000 to get an ambulance and tell the operator that the person has overdosed (the police will not come unless someone dies)
- stay with the person
- try not to panic
- try to keep the person awake – walk them around, talk to them, use their name
- if the person is unconscious, put them on their side, in the recovery position.
- clear their airway, check their breathing
- do mouth-to-mouth resuscitation if they stop breathing
- if the person is on the nod and looks like they may overdose, walk them around and keep talking to them.
Benzodiazepines and pregnancy

Benzodiazepines taken during pregnancy cross the placental barrier and can affect the growth and development of the baby. New babies of mothers who use benzodiazepines are more likely to:

- be sick in the first few weeks of life and later
- have withdrawal symptoms when they are born (because they are no longer getting benzodiazepines from the mother’s blood supply). These symptoms can include breathing problems, sucking difficulties, poor body temperature control and poor muscle tone.

Tell your doctor or the health professional managing your pregnancy if you are using benzodiazepines. They will be able to help you care for your baby.

Information and advice

24 hour confidential telephone counselling service

NSW
Alcohol and Drug Information Service (ADIS)
Tel. (02) 9361 8000
*Toll free. 1800 422 599

Victoria
Direct Line
Tel. (03) 9416 1818
*Toll free. 1800 858 584

Western Australia
Alcohol and Drug Information Service (ADIS)
Tel. (08) 9442 5000
*Toll free. 1800 198 024

Tel. (08) 9442 5050 (for parents)
*Toll free. 1800 653 203

Queensland
Alcohol and Drug Information Service (ADIS)
Tel. (07) 3236 2414
*Toll free. 1800 177 833

South Australia
Alcohol and Drug Information Service (ADIS)
Tel. (08) 8363 8618
*Toll free. 1300 131 340

Northern Territory
Alcohol and other drug services
Darwin
Tel. (08) 8922 8399  *Toll free. 1800 629 683

Alice Springs
Tel. (08) 8951 7580

Benzodiazepines and the law

Using benzodiazepines without a prescription from a doctor, or keeping, selling or giving them to someone else is illegal. If you are caught you could face substantial fines and penalties including a prison sentence.

Benzodiazepines and driving

It is illegal to drive under the influence of drugs, including benzodiazepines if used illegally. Penalties include losing your licence, a fine and/or jail.

Benzodiazepines slow down the workings of your brain and your body, so they may make you drive dangerously. You should not drive if you have taken a large dose of benzodiazepines or have been given an increased dose for the first time.

You will find a copy of this sheet at: www.yourroom.com.au

Further copies are available to order via email at: drugaction@doh.health.nsw.gov.au or call (02) 9424 5946.

Other publications in this series include Cannabis, Cocaine, Alcohol, Heroin, Ecstasy, Hallucinogens, and Speed.
Opioid Pain Medications Fact Sheet

Group 4 pain medications - Opioid
Opioid means the medication has an action 'like opium'. Opium comes from the Poppy plant and is discussed separately, as there are serious health concerns (including the risk of death) associated with long term use\(^1\). Opioids may be prescribed for nerve-like pain but current evidence supports only a weak recommendation for use as a third line treatment\(^2\).

Effectiveness of opioid pain medications:
- Only about 1 in 5 patients obtain effective pain relief with opioid pain medications, without major side effects
- A ‘successful’ response includes not only a decrease in pain severity, but more importantly, an improvement in physical function (such as walking, exercise, work)
- Your body may also become used to (tolerant) to pain medications, meaning you continually need a larger dose to get the same pain relief. This leads to a vicious cycle; the higher the dose, the more side effects develop and the worse the pain becomes
- Opioids use is associated with lower sex hormone levels, which could increase the chance of osteoporosis
- Opioids also seem to alter the immune system in an unhelpful way
- Not all patients respond to opioid pain medications, despite them being very potent, and these medications can actually increase pain in some cases!
- The human body is not designed to have high levels of morphine-based (opioid) pain medications floating around in the blood stream. When the body detects high levels of opioids in the bloodstream, it produces chemicals that actually increase the pain signal, to counteract these medications. This increases in pain sensitivity and is called opioid-induced hyperalgesia\(^1\).

The way to deal with tolerance or opioid-induced hyperalgesia, is a gentle slow reduction in your pain medication. This approach helps to reset the chemical balance of your brain and reduce your pain.
Types of opioids

**Buprenorphine patches (Norspan™)**

Norspan patches come in 5mg, 10 mg, and 20 mg. Neuropathic pain can contribute to spinal pain. If a strong opioid is considered for neuropathic pain, then buprenorphine (S8) could be considered the least harmful effective option.

Norspan is the only strong opioid not associated with rapid tolerance, opioid-induced hyperalgesia, a lowering of the sex hormones, or a negative impact on the immune system.

- Western Australia Department of Health approval is required for authority scripts (4 patches with 2 repeats if approval sought), otherwise 2 patches per script which means the script only lasts 2 weeks
- Theoretical advantages are a reduced chance of tolerance (that is ‘your body gets used to it’ and dose increases are less likely); there may be a reduced chance of opioid induced hyperalgesia
- Usually start with 5mg, put on one patch and leave on for a week [unless there are side-effects, in which case, remove], then remove and apply second patch for the next week
- You can increase to 10mg per week, and then 20mg per week, if needed
- If a rash develops under the patch then pre-treatment with Diprosone cream 0.5mg/g (15gm and 50gm tubes) 30 minutes prior to application.

**Oxycontin™**

CR is a Slow Release (12 hourly) Oxycodone tablet. Oxynorm (Endone) is short acting

**Targin™**

Is a combination of Oxycontin and naloxone, and reduces opioid induced constipation. MS Contin™ and Kapanol™ are Slow Release 1(2 hourly) morphine tablets. Morphine elixir is a short acting form.

**Fentanyl patches**

Have an effect for 3 days:
- Rapid tolerance is an issue
- Available in 12.5 and 25 mcg per hour.
- The higher dose 50 and 100 mcg per hour are for cancer pain only as they are equal to 150 and 300-400mg of morphine per day respectively
- Jurnista™ (Hydromorphone Slow Release) is a once daily form.
- Dilaudid™ is a short acting form

**Methadone™**

Is a slow acting tablet taken once or twice per day. Not recommended to be started if you are not in a hospital and needs to be started with caution.
Tapentadol (Palexia™)
Was registered on the Pharmaceutical Benefits Scheme in Australia in 2014.

- It is a 12 hourly extended release tablet.
- Tapentadol works on the opioid receptor and noradrenaline receptor\textsuperscript{4} and has less side-effects for a similar amount of pain relief compared to the other opioid medications discussed below.
- Tapentadol also has a lower community death rate that other opioid medications\textsuperscript{1}.
- Taken together, the benefit-risk ratio of tapentadol appears to be improved compared to third line opioids\textsuperscript{5}.

References

Complementary and Alternative Medicine (CAM)

CAM refers to forms of health care that are used in addition (complementary) or instead of (alternative) traditional medical treatment. Complementary therapies are often based on traditional knowledge. The scientific evidence suggests that some complementary health approaches may help people manage chronic pain. In most instances, the amount of evidence is too small to clearly show whether a particular therapy is effective for everyone. There is less scientific evidence available about their safety and effectiveness, than for conventional treatments for pain management. Many of the complementary approaches studied for chronic pain have good safety records, but that doesn’t mean that they are risk free for everyone.

Many things need to be considered prior to using any CAM therapy such as a person’s age, current health status, presence of other medical conditions or pregnancy. Another major consideration is taking prescribed or over the counter medications, as these may affect the safety of some complementary approaches. If you are considering or using a complementary approach for pain, you need to check with your health care provider to make sure that it is safe for you and is compatible with your conventional medical treatments. Some herbs and conventional treatments can interact with other medications and stop them from working properly. They can also cause side effects.

Regulation of complementary therapists

In Australia some complementary therapists are regulated by national legislation.

*Chinese medicine practitioners, acupuncturists, Chinese herbal medicine dispensers* These practitioners are members of the Chinese Medicine Board of Australia, part of the Australian Health Practitioner Regulation Agency (AHPRA) governed by the Health Practitioner Regulation National Law Act 2009 which also regulates 10 National Health Practitioner Boards. This means that practitioners must be adequately qualified to practice.

*Naturopaths and herbalists* These practitioners are covered by the Australian Register of Naturopaths and Herbalists. This self-governing body maintains a register that makes choosing a naturopath or a Western herbalist safer.

The Commonwealth Department of Health and Ageing’s Therapeutic Goods Administration is responsible for regulating therapeutic goods sold in Australia. These include medicines, herbal and nutritional supplements, flower remedies and homoeopathic medicines. Approved herbal and nutritional products have an Aust L code, which means they are considered low risk. The products are assessed for safety, but not how well they work.
## CAM Therapies

### Mind-Body Techniques
(Also known as Psychological techniques, Emotional Therapies or Spiritual Healing)

### Support Groups:
These are organised groups where people with chronic pain and their families can meet other people going through similar experiences. Groups can offer practical and emotional support for people in pain or the people who help care for them. They can be in various forms:
- Face-to-face support groups
- Online discussion forums
- Telephone support groups
- Peer support programs

### Counselling:
This allows the person in pain an opportunity to discuss various issues with a counsellor or psychologist. They can help them identify problems and explore ways of resolving negative thoughts and feelings that may impact on that person’s pain experience and life. It allows an opportunity for the individual to express their emotions in a safe, objective environment, helping to improve self-esteem, communication, relationships and specific difficulties.

### Hypnosis:
Deep relaxation is used to help people become more aware of their inner thoughts. It focuses on inducing a psychological state of awareness, where distraction is minimised and focus and concentration is heightened. Hypnosis can help overcome mental blocks that have previously stopped individuals from dealing with their anxieties, fears, low self-esteem, pain, insomnia or other unwanted habits.

### Art Therapy:
This allows a way of using visual art to express a person’s feelings. An art therapist can help a person in pain explore the images that they have created and understand some of their emotions and concerns.

### Music Therapy:
This therapy allows people in pain to people express themselves and feel more in control. It aids relaxation, reduces stress and anxiety, focuses on healing and enjoying the moment.

### Life Coaching:
This is about helping people to develop their personal, spiritual, physical and professional lives. Its approach encourages people to live and enjoy their life to the fullest and is focused on finding solutions to problems and getting results by making positive changes for their future despite obstacles.
**Relaxation and Meditation:**

Relaxation usually includes slow breathing and muscle-loosening exercises to physically and mentally relax the body.

Meditation is an ancient practice that involves holding your attention on a subject such as breathing. There are many different types of meditation. *Mindfulness meditation* means being aware and present in each moment. *Guided imagery, or visualisation,* uses your imagination to create healing thoughts. Relaxation and meditation may help to release muscle tension, reduce stress, anxiety and pain.

**Spirituality:**

Spirituality can mean different things to different people. Some people may consider spirituality as being part of a religious order e.g. Christianity, Judaism, Islam or Buddhism. For others, spirituality may reflect their own individual beliefs about the universe and their place in it, or a search for meaning and purpose to their lives. When people have pain they may find comfort in prayer, meditation or quiet contemplation to help them to deal with it.

**Body-Based Practices**

*(These can be Passive or Active Based Therapies)*

**Massage Therapy:**

There are many styles of massage, but they all aim to promote deep relaxation in tissue by manually applying pressure, tension, vibration and the like to connective tissue and muscle, as a means of assisting relaxation, healing, and well-being. Massage may help reduce low back pain, anxiety and stress, nausea and muscle tension.

**Reflexology:**

This is a form of foot and hand massage. Reflexologists believe that certain points on the feet and hands correspond to the body’s internal organs and systems, like a map. Many people find reflexology very relaxing. By pressing on reflex points, energy meridians are unblocked and healthy changes can occur in the corresponding parts of the body.

**Aromatherapy:**

This is the use of aromatic essential oils extracted from plants for healing and relaxation. They are mainly used mainly during massage but can also be used in baths, inhalations or vapourisers or specialised aromatherapy oil burners. When these essential oils are inhaled or absorbed through the skin, the oil stimulates positive effects on different systems in the body. Aromatherapy can aid relaxation and reduce stress.
<table>
<thead>
<tr>
<th><strong>Osteopathy:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>An osteopath focuses on the links between the structure and function of the body and uses manual techniques to assist the body to heal itself. The Australian Osteopathic Association regulates practice. AOA osteopaths are government registered, meet high professional standards and complete annual continuing professional education to practice.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Chiropractic Medicine:</strong></th>
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</thead>
<tbody>
<tr>
<td>This involves spinal manipulation performed by trained practitioners that involves using their hands or a device to apply a controlled force to a joint of the spine. The focus is on the structure and function of the spine and its relationship to the nervous and musculoskeletal systems and general well-being.</td>
</tr>
</tbody>
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<tr>
<th><strong>Acupuncture:</strong></th>
</tr>
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<tbody>
<tr>
<td>Acupuncturists put fine, sterile needles just under the skin into points or apply a laser probe on acupuncture points along the meridian channels in the body. It is an important part of traditional Chinese Medicine and is based on the theory that this unblocks and moves qi (energy) to strengthen vital force and reduce physical and emotional symptoms. Western Chinese or Medical Acupuncture is an interpretation of the traditional Chinese acupuncture. It works on the theory that the needles stimulate nerves to release the body’s own natural chemicals, which help reduce pain or regulate the brain and their functions.</td>
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<tr>
<th><strong>Energy Therapies:</strong></th>
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</table>
| They work on the concept that everyone has an energy field and unblocking it restores balance. Techniques include:  
  - Bowen therapy  
  - Polarity therapy  
  - Reiki  
  - Healing touch  
  - Therapeutic touch.  
Energy therapies focus on the transference of energy to promote equilibrium and are gentle. The aim is to increase energy levels, promote relaxation, self-healing and wellbeing. |

<table>
<thead>
<tr>
<th><strong>Yoga and Physical Activity:</strong></th>
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<tbody>
<tr>
<td>Yoga is a mind and body practice that combines physical activity or postures, slow and deepening breathing exercises, and meditation. There are many styles of yoga with varying intensity from gentle, such as <em>hatha yoga</em> to vigorous, such as <em>ashtanga yoga/Iyengar</em>. Yoga helps both physical and emotional health and has been studied for pain conditions such as chronic low-back pain and arthritis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tai chi:</strong></th>
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<tbody>
<tr>
<td>This is a part of traditional Chinese medicine that combines movement, breath work and meditation. Movements create stability in the body, reflecting an ancient Chinese concept of balance known as ‘ying and yang’. Breath work is calming and meditative, while creating</td>
</tr>
</tbody>
</table>
and holding the poses helps loosen and strengthen the muscles and can help relieve pain and reduces stress.

Qi gong:
This is part of traditional Chinese medicine. ‘Qi’ means one’s life energy, and ‘gong’ means work. It combines movement with controlled breathing and meditation. Movements keep the flow of energy running through the body’s energy channels. This can help generate a sense of wellbeing and peace for the individual, as well as improving both mental and physical vitality.

Other Active Exercise Techniques:
There are other exercise techniques you might like to explore. They are generally accepted as being beneficial for improving breathing, strength, flexibility, mobility, fitness and general wellbeing.

Alexander technique: This is not a type of exercise, but an approach to balance and wellbeing in mind and body and teaches people to be aware of the way they move and hold themselves. By changing the way people use their body, they can enhance their mental and physical functioning on many levels.

Feldenkrais: This method helps people become more aware of the way they move and how this contributes to or compensates for bad posture, pain and mobility restrictions. By gently retraining the mind and body to be open to new possibilities in movement, people find ways to become freer and more comfortable.

Pilates: A program that encourages the mind to be aware of its control over one’s muscles. Using awareness of one’s breath and posture, the method helps to strengthen core muscles and correct postural habits that have contributed to pain, reduced mobility and poor coordination.

Strength training or lifting weights (resistance training): This active exercise technique is good to help people improve muscle strength, flexibility, mobility, fitness and general wellbeing.

Therapies Using Herbs
Herbal medicines use various parts of the plant that cause chemical changes in the body when consumed or applied to the skin to treat disease and promote health.

Western Herbal Medicine:
Western herbal medicines are usually made from herbs grown in Europe and North America, but some come from Asia. Herbs are used to help the body work more efficiently, assisting healing and well-being, overcome symptoms and improve vitality.
### Chinese Herbal Medicine:
Chinese herbs are a key part of traditional Chinese medicine. Herbs are used to unblock energy meridians, bring harmony between yin and yang, and restore organ function and promote well-being and general health.

### Therapies Based on Diet

**Naturopathic Nutrition:**
Naturopathic nutrition is about what you eat and how it affects your health and wellbeing. Naturopathy maintains that the mind, body and spirit are all connected, and that the body can heal itself through dietary and lifestyle changes. It promotes the use of whole foods, organic foods and certain food types for different people. For your body to function efficiently, you need to eat a balanced diet of fats, proteins and carbohydrates. You also need vitamins, minerals, antioxidants and other nutrients found in fresh food. It finds and treats both the cause and effect of symptoms using a combination of dietary changes, bodywork and herbal medicines or nutritional supplements.

### Other Therapies

**Homeopathy:**
This is based on the theory of ‘like cures like’. It tries to stimulate the body’s ability to heal itself by giving small doses of highly diluted substances. For example you would be given a substance that causes similar symptoms in a healthy body as the symptoms you are experiencing. This is said to stimulate energy in the body that relieves the symptoms of ill health. Homoeopathic remedies are made from plant, mineral and animal substances. Homoeopathy is a gentle way to restore vitality and reduce emotional imbalances in the body.

**Flower Remedies:**
Also known as flower essences, these are highly diluted extracts from the flowers of wild plants. There are many types of flower remedies from around the world. They are used to balance the mind, body and spirit so you are more able to cope with emotional problems, which sometimes can contribute to poor health.
Complementary and Alternative Medicine (CAM)

Things to consider before using complementary therapies

What are the benefits?
What’s the scientific evidence to support its use?
Can I afford the cost of the therapies or medicines?
Will the therapy directly harm me because of:

- Possible side effects
- Possible interaction with other conventional treatment or medications

General questions to ask any potential complementary therapist

1. What are your qualifications? Are you a member of a professional association?
2. What training or experience do you have in treating people with chronic pain?
3. What exactly is the therapy and how does it work?
4. How long will it take to work?
5. How can the therapies you practise help me?
6. Are there any specific precautions you would take for me?
7. Can these therapies be combined with conventional treatment?
8. Do you expect me to stop using any of my usual medication?
9. Are you willing to work with other health professionals I may need to see?
10. How long should I use this therapy and how will I know if it’s working?
11. What do you charge for a consultation?
12. What can I expect from a consultation?
13. How many consultations do you recommend, and how often?
14. How much can I expect to pay for medicines?
15. Have the products or medicines you dispense been approved by the Therapeutic Goods Administration?

General questions to ask your doctor

1. Are you familiar with complementary therapies or medicines for chronic pain?
2. Are there any complementary therapies you think might help me?
3. Would you be happy for me to use complementary therapies?
4. Would you be willing to guide me in my research or choice of complementary therapies for chronic pain?
5. Would you be willing to talk to my complementary therapists if necessary?
6. Can you recommend any complementary therapists for my chronic pain?
7. Do you know whether the complementary medicines I’m taking or wish to take will interfere with any of my treatments?

Professional Associations

The following associations represent practitioners across a range of complementary therapies in Australia. Click on the link to go to their website and find out more about the different therapies and to locate a registered practitioner.

<table>
<thead>
<tr>
<th>Professional Associations</th>
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<tbody>
<tr>
<td>Association of Massage Therapists</td>
</tr>
<tr>
<td>Australian Acupuncture and Chinese Medicine Association</td>
</tr>
<tr>
<td>Australian Chiropractor Association</td>
</tr>
<tr>
<td>Australian and New Zealand Arts Therapy Association</td>
</tr>
<tr>
<td>Australian Association of Massage Therapists</td>
</tr>
<tr>
<td>Australian Feldenkrais Guild</td>
</tr>
<tr>
<td>Australian Homoeopathic Association</td>
</tr>
<tr>
<td>Australian Hypnotherapists’ Association</td>
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<tr>
<td>Australian Music Therapy Association</td>
</tr>
<tr>
<td>Australian Natural Therapists Association</td>
</tr>
<tr>
<td>Australian Naturopathic Practitioners Association</td>
</tr>
<tr>
<td>Australian Osteopaths Association</td>
</tr>
<tr>
<td>Australian Society of Teachers of the Alexander Technique</td>
</tr>
<tr>
<td>Australian Traditional Medicine Society</td>
</tr>
<tr>
<td>Bowen Therapists Federation of Australia</td>
</tr>
<tr>
<td>Psychotherapy and Counselling Federation of Australia</td>
</tr>
<tr>
<td>Dietitians Association of Australia</td>
</tr>
<tr>
<td>International Aromatherapy and Aromatic Medicine Association</td>
</tr>
<tr>
<td>Exercise and Sports Science Australia</td>
</tr>
<tr>
<td>National Herbalists Association of Australia</td>
</tr>
</tbody>
</table>
Australian Organisations

Australasian Integrative Medicine Association
www.aima.net.au

Australian Health Practitioner Regulation Agency
www.ahpra.gov.au

Health Insite – an Australian Government Initiative
www.healthinsite.gov.au/topics/complementary_and_alternative_therapies

The National Institute of Complementary Medicine
www.nicm.edu.au

Therapeutic Goods Administration
www.tga.gov.au

National Center for Complementary and Alternative Medicine
www.nccam.nih.gov

Natural Medicines Comprehensive Database
www.naturaldatabase.com

Office of Cancer Complementary and Alternative Medicine
www.cancer.gov/cam
The first step in dealing with a sleep problem is an accurate assessment of its nature, severity and causes. Then a diagnosis can be made and appropriate treatment implemented.

The Sleep Diary

The Sleep Diary is useful when a more comprehensive assessment is required. Generally, people include the Sleep Diary as part of their daily routine. The times that are written down need only be estimated.

How to use the Sleep Diary

Complete the Sleep Diary over seven to fourteen consecutive days.

Just before going to bed each night:
> Record the day in the box (e.g., Monday).
> Draw a line on the graph for any daytime naps.
> Place a C for each cup of tea, coffee or caffeine cola.
> Place a A for each glass of alcoholic drink.
> Place a M when sleep medication is taken.
> Place a down arrow (▼) at the time you intend turning out the lights to go to sleep.

When you get out of bed:
> Record the time you got out of bed with an up arrow (▲).
> Draw a line on the graph for the time you were asleep.
> Leave gaps to indicate any period where you believe you were awake.

This is only an estimate of the time awake. DO NOT clock watch!

Once completed return to your health professional with the diary for analysis and to receive the recommended management therapy(s).
For instructions on how to use the Sleep Diary, please see the graph provided. The Sleep Diary commences at 9am. Please list all your current medications.
**TWO WEEK SLEEP DIARY**

**Instructions:**

1. Write the date/day of the week and type of day (work, school, day off, vacation).
2. Pl flat bed in the box when you have coffee/cola, tea, etc. Pl flat bed when you take any medicine.
3. Bl when you exercise.
4. Pl flat bed (V) in the box when you go to bed. shaded in the box that shows when you think you fell asleep.
5. Leave boxes unshaded to show when you woke up at night and when you awoke during the day.

**SAMPLE ENTRY BELOW:**
- On Monday when 1 work, I Logan on my lunch break at 1 PM and a glass of wine with dinner at 6 PM. I also have my medication at 7 PM in the morning.

**Notes:**
- Week 1:
  - Mon 1 PM: Work
  - Tue 1 PM: Work
  - Wed 1 PM: Work
  - Thu 1 PM: Work
  - Fri 1 PM: Work
  - Sat 1 PM: Work
  - Sun 1 PM: Work

**References:**
# Symptoms / Management Table

This table will guide patients to identify whether they have insomnia symptoms and suggest appropriate management techniques. If they answer **YES** to any of the questions place a tick in the associated box. This process should result in one or more ticks indicating the recommended management technique(s). This simply means a number of factors may be contributing to their sleep problem.

### Insomnia symptoms

If any of the following are present from the clinical consultation or the *Sleep Diary* tick the associated box.

<table>
<thead>
<tr>
<th>Insomnia symptoms</th>
<th>Management techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to bed but not falling asleep for some time (over 30 minutes) and becoming anxious about it.</td>
<td>Sleep: Facts and hygiene plus</td>
</tr>
<tr>
<td>Waking for long periods during the night and becoming anxious about being unable to return to sleep.</td>
<td>Bedtime Restriction Therapy</td>
</tr>
<tr>
<td>Spending excessive time in bed and experiencing sleep broken by frequent awakenings.</td>
<td>Relaxation Therapy, Cognitive Therapy</td>
</tr>
<tr>
<td>Falling asleep early each evening (before 9pm), waking very early and being unable to return to sleep.</td>
<td>Sleep Restriction</td>
</tr>
<tr>
<td>Not falling asleep until the early hours of the morning (after midnight) and then experiencing difficulty rising early each morning, even with an alarm.</td>
<td>Bright Light Therapy (evening), Bright Light Therapy (morning)</td>
</tr>
</tbody>
</table>

### For more information

Refer to ‘Insomnia management’ and ‘Sleep problems’ on the SA Health website: [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au)


Professor Leon C. Lack and Dr Helen Wright, School of Psychology, Flinders University assisted with the information in this resource.
INSOMNIA MANAGEMENT KIT

Sleep: Facts and hygiene

The Insomnia Management Kit is intended to be used in conjunction with your GP.
To access further instructions on the use of this fact sheet and other components of the Insomnia Management Kit, go to ‘Insomnia management’ on the SA Health website: www.sahealth.sa.gov.au.

Sleep

Sleep is a natural process that allows the body and brain to rest and recover. For most people the sleep process satisfies their sleep need and it causes few problems. However, factors such as lifestyle commitments, stressful events, worries and many physical conditions can alter the balance. This may lead to increased anxiety and stress that can cause further difficulty in gaining satisfactory sleep.

To improve the situation it is useful to understand what is affecting the sleep process. This factsheet provides information on the real nature of normal sleep and its purpose, and describes day and night routines that promote good sleep habits.

Sleep is not one long period of unconsciousness but a series of cycles each lasting approximately 90 minutes.

Each cycle consists of REM and Non-REM sleep states. The Non-REM state is also divided into three stages.

| Non-REM  | Stage 1 (N1) light sleep |
| REM       | Stage 2 (N2) moderate sleep |
|           | Stage 3 (N3) deep sleep or slow wave sleep |

(rapid eye movement or dreaming sleep)

Understanding the normal sleep pattern

There are three Sleep Charts (on the last page) showing normal sleep patterns. The first is the new NREM classification Sleep Chart. The second is for a healthy younger adult and the third is for a healthy older adult.

The differences between the second and third charts show that:

> the younger adult has more total sleep including more N3 sleep and wakes only occasionally and briefly.
> the older adult has 1-2 hours less total sleep and wakes more frequently and for longer.

This is a normal and acceptable pattern for an older adult.

When viewing the charts consider the following facts:

> sleep needs vary from person to person
> it is normal for adults to wake several times a night, if only for a minute or so
> ageing reduces sleep need and alters the sleep pattern.

Changes in Sleep over a Life Span

Progressive stages of the sleep cycle

N1: Light sleep commences and usually extends for only a short period (5-10 minutes).

The body temperature begins to drop and muscles become relaxed. You are easy to wake during N1 and if this occurs you may not realise you have been asleep.

N2: Moderate sleep (approximately 30-45 minutes).

You are still easy to wake during N2. If woken from this sleep you are likely to feel as if you have already been awake, since our minds are active during sleep.

N3: Deep sleep or slow wave sleep

In these stages your breathing and muscles become more relaxed, your heart rate slows and sensitivity to sound and light diminish. You will be more difficult to wake during N3. Deep sleep satisfies our sleep needs the most effectively. We are unaware of deep sleep as we rarely wake unless interrupted by bright light or noise.

We may get 10-40 minutes of deep sleep in the first cycle of sleep, depending on our age.

About 80 minutes after falling asleep our sleep starts becoming lighter progressing into N3, then N2 and then into the first period of REM sleep.

REM (rapid eye movement)

This is a different state from Non-REM (N1 to N3). In REM sleep our mind is very active and usually experiences vivid dreams, however we will not remember these dreams unless we wake from REM sleep.

REM periods are short at the beginning of the sleep period but may be as long as 30-40 minutes before finally waking in the morning.

This completes the first 90 minute sleep cycle. The rest of the sleep period repeats three or four more of these sleep cycles.
Facts about sleep

How much sleep do we need?
Sleep to some extent adapts to an individual’s circumstances and needs.
Sleep needs vary from person to person. The average amount of sleep for an adult is about seven to eight hours, but sleep needs can range from five to ten hours per night.
The need for sleep declines by about an hour and a half in people aged from their twenties to their seventies.
Judgement on whether we are getting enough sleep depends on how well we feel and function during the day. If we do not feel sleepy and fatigued, then our sleep is adequate, even if it is not the average length of time.
Most of the restorative effects of a night’s sleep come during the first three to five hours when most deep sleep occurs. Some researchers have called this core sleep. Research shows it is possible to function normally during the day if you obtain this type of sleep. Research also shows that insomniacs typically obtain their core sleep every night despite believing they have obtained much less sleep.
No-one functions at peak levels everyday and within a day, we all have variations in performance and mood. For example, it usually takes 20-30 minutes after waking in the morning to feel reasonably alert. It is also normal to feel drowsy after lunch. Even after a sleepless night, people normally cope quite well even while feeling tired. A good night’s sleep usually puts us right back on track.

Awakenings
Adults will usually wake up a few times during the night. This often occurs during the light sleep stages spaced across the night. Each awakening can be as short as a few minutes and often is not remembered the next morning.
When an insomnia sufferer wakes up in one of these normal awakenings, their fear and anxiety of being unable to return to sleep prolongs the waking period and causes further insomnia.

Our perception of sleep
The number of brief awakenings can also affect the way we view the quality of our sleep.
Sometimes when woken from light sleep people can feel they were already awake and may have been awake for some time. This is because the thought processes present during light sleep are similar to those we have if awake and relaxed in bed with our eyes closed.
Recent research has found that people with insomnia are more likely to misjudge an awakening from sleep as having already been awake.
Therefore, it is possible to wake up from light sleep at the end of a 90 minute sleep cycle and not realise you have been asleep at all. If this happens at the beginning of the sleep period you may think you are taking a long time to fall asleep and feel frustrated. If it happens between two brief awakenings in the middle of sleep, you may feel anxious that you have lost a lot of sleep during the night. It is common to overestimate how long you have been awake and thus underestimate how much sleep you obtained. This is particularly true when more awakenings normally occur as we get older.
Without a sleep recording, one clue you can use to more accurately guess if you have been asleep or awake is to test your memory as to what you can remember thinking about. Since memory doesn’t occur when asleep, if you just woke up from sleep you will only have short fragments of memory of the mental activity occurring just before you awoke. If you had been awake for a long time you will be able to recall many detailed thoughts and worries.

The effects of ageing on sleep
People usually begin sleeping less as they enter middle age. The number of awakenings through the night increases as sleep becomes lighter with less deep sleep. Lighter sleep with more awakenings is normal in older adults and has no negative effects on daytime feelings and functioning.
In retirement people sometimes choose to spend more time in bed. The result of this will be to have more time awake in bed. If the time in bed is comfortable, relaxed and free of worry or frustration then it is okay to spend that time in bed. However, if these periods begin to cause concern, they can lengthen and insomnia can develop.
Consequences of losing sleep
Most people assume that loss of sleep causes their mental and physical abilities to decline. Although sleep loss can temporarily reduce our performance and feelings, our abilities are unchanged. Research on sleep deprivation shows that the body has a remarkable tolerance for sleep loss and can restore our feelings and best performance following recovery sleep.

Reduction of sleep results in:
> fatigue, exhaustion, lack of energy
> daytime drowsiness mainly during mundane activities
> tendency to become irritable
> impaired memory and concentration.

Sleep can tolerate being denied or reduced over several nights. Sleep pressure will inevitably build up and increase the chances and ease of falling asleep. It is this increased sleep pressure that interferes with our motivation to do anything other than sleep and interferes with tasks we try to complete in competition with this sleep pressure.

Making up lost sleep
Sleep following sleep loss is deeper and more efficient than usual. This means that it is not necessary to make up lost sleep on an hour-for-hour basis. It does not take a long time to recover from one or many nights of poor sleep. For example, the complete loss of sleep over one night (7-8 hours) can be recovered with an extra three hours the following night. A two hour reduction of sleep on 14 consecutive nights (28 hours total) can be recovered by an extra three hours on the first recovery night and extra two hours on a second recovery night.

Napping
Research suggests our bodies have an inclination for an afternoon nap. If you like taking a daytime nap then it is important to remember that the amount of sleep you need at night will be less, especially if it is a long nap (greater than 30 minutes).

A brief afternoon nap of 10-15 minutes is unlikely to interfere with the following night's sleep and can be as restorative as a longer nap.

If a person finds brief naps ('power naps') to be useful in reducing daytime tiredness, it can also reduce anxiety about night time awakenings since the nap can make up for the sleep loss.

How to promote a good sleep routine
Now that you have a clearer understanding of the normal sleep pattern, we can look at ways of promoting a good sleep pattern. Having a healthy day/night routine will support a regular sleep pattern.

During the day
> Establish regular daily routines for meals, taking medication, performing chores and participating in activities.
> Spend time outdoors in the morning particularly if you tend to be a late riser. Regular exposure to bright light helps to synchronise our body clock.
> Avoid daytime naps (unless naps are brief). Without long daytime naps you will feel more sleepy at bedtime.
> Daily exercise up to early evening tends to make sleep deeper and reduce anxiety.

During the evening
> Avoid caffeine for at least five hours before bedtime (eg coffee, tea, cola or cocoa) as it interferes with getting to sleep and staying asleep. If you regularly drink more than two cups of coffee a day, reduce your caffeine intake. Start by eliminating your last caffeine drink of the day.
> Avoid a heavy meal too close to bedtime. (If you are hungry a light snack may help you sleep).
> Relax and prepare for sleep.
> Put the day to rest. If necessary write a list of what is on your mind and decide to think about it tomorrow.
> If you have trouble ‘switching off’ at night, learn a relaxation routine. Practice the routine before you use it as a sleep aid.
> Wind down before bedtime, with an hour of quiet activity (eg watching TV, reading or listening to music) in dim light conditions.
> Avoid smoking near bedtime and if you wake up during the night.
> Avoid alcohol near bedtime – it can cause awakenings later in the night.
> Make sure your bed and bedroom are comfortable – not too cold or warm and reduce light.
> Where possible, reduce noises that are likely to keep you awake. If it is not possible to control the noise (eg barking dog) try to maintain a calm attitude and use a relaxation technique.

At bedtime
> Develop a bedtime routine (warm bath, light bedtime snack, brushing hair). Your body will recognise that you are preparing for sleep. Carry out this routine each night.
> Go to bed only when you feel sleepy or drowsy and not before.

In the morning
> Get up at the same time every morning.
> Sleep inertia will tend to make you feel drowsy and lethargic for a while after getting up. This is normal. Don’t judge the quality of your sleep at this time, judge it at the end of the day.
Sleep difficulties

Possible underlying causes

Underlying medical condition and medications (causing Secondary Insomnia)

The most appropriate management strategy, when insomnia is the result of another medical problem, involves treatment of the condition. For example, insomnia symptoms can be produced by sleep apnoea, restless legs syndrome, cardiovascular disease, diabetes, depression, anxiety attacks, etc. The underlying medical condition should certainly be treated. However, it is often helpful to treat the associated insomnia as well. For example, insomnia is often associated with depression and can be a precursor of depression. Research has shown than the treatment of insomnia can reduce depression.

Pain (eg arthritic or back pain) is an obvious and common disruptor of sleep and, if managed appropriately during the night, can improve sleep. It is recommended you speak to your doctor regarding pain management.

Certain medications can disrupt sleep. Check for this possibility with your doctor.

Sleep apnoea

Sleep apnoea results from a breathing obstruction during sleep. On inspiration, an obstruction of the upper airways occurs presumably because of relaxed pharyngeal muscles. The obstruction continues for 20-60 seconds until the blood oxygen drops and carbon dioxide elevates to the point when brain arousal mechanisms are activated. Muscle tension returns to air passages, breathing resumes, blood gases return to normal and the person returns to sleep. This process may occur hundreds of times a night. Obstructive sleep apnoea usually reduces deep sleep and REM sleep and produces excessive daytime sleepiness.

Sufferers of this condition are usually unaware of the many arousals and the disrupted sleep. The sleep diary will reveal a rather long sleep time and frequent daytime naps. Often, morning headaches and hypertension are present. It is more common in overweight middle aged men who are heavy snorers, but can occur in anyone, even children. If you suspect you have sleep apnoea a sleep evaluation is necessary and referral to a sleep clinic is recommended.

Restless legs syndrome and/or periodic limb movements

Periodic limb movements (brief skeletal muscle contraction, usually in the lower legs, lasting only a few seconds), are often accompanied by restless legs syndrome (experiences of discomfort described as crawling, tickling, itching sensation in the legs). Restless legs syndrome can prevent you from falling asleep and returning to sleep during the night.

Periodic limb movements may be infrequent or occur several thousand times during a typical sleep period. This can cause brief arousal and can disrupt sleep without the person being aware. Periodic limb movements are experienced by around 20 percent of chronic insomniacs when investigated in the sleep laboratory. This condition can be managed by trained sleep physicians in sleep clinics.

Narcolepsy

Narcolepsy occurs in approximately 25-50 per 100,000 of the general population. Narcolepsy is a disorder of excessive sleepiness that is associated with cataplexy (a loss of muscle tone triggered by strong emotions).

Onset of this condition usually occurs between early adolescence and early twenties and is a lifetime condition. The person experiences attacks of daytime sleep that are sudden and overwhelming. These attacks can last from a few seconds up to an hour, on average lasting about 5-10 minutes. Although narcoleptics may sleep eight hours or more a night, many feel drowsy throughout the day and often report a disturbed night sleep.

Narcoleptics who are unaware of their disorder often believe their daytime sleepiness is due to insomnia. However, daytime fatigue, not sleepiness, is most associated with chronic insomnia. The daytime attacks of sleep often include dreams and sleep paralysis on waking. The attacks of sleep usually occur when the individual is in a relaxing quiet situation, and for this reason can become more apparent during retirement. Speak to your doctor if you suspect you may have narcolepsy.

Insufficient sleep

This is the most common cause of excessive sleepiness during the day and typically follows episodes of sleep restriction that have occurred over weeks or months. This problem is commonly seen in adolescents, but can occur at any age and is associated with too many daytime and nocturnal commitments and activities. Give yourself at least an extra hour of sleep per night over at least a week to see if your daytime sleepiness dissipates.

Sleep patterns

The example sleep charts (on the next page) show the different sleep patterns commonly experienced by the younger and older adult.

The older adult spends a greater portion of the night in N1 and N2 sleep (light to light-moderate sleep).

The younger adult gains more N2 sleep (light to moderate) and has more N3 sleep (deep).
A typical sleep pattern for a healthy young adult

![Graph showing sleep stages for a healthy young adult]

A typical sleep pattern for a healthy older adult

![Graph showing sleep stages for a healthy older adult]

Please note:
NREM Stg 3 and Stg 4 are now known as N3
NREM Stg 1: N1
NREM Stg 2: N2

For more information

Stages and architecture of normal sleep. Uptodate. Dr Kirsch, March 2017
Relaxation

Relaxation is the act of relaxing the mind and body and it can physically change the way your body functions. When your body is relaxed breathing slows, blood pressure and oxygen consumption decrease, and some people report an increased sense of well-being. This is called the “relaxation response.”

The stress response is also known as the fight-or-flight response. The sympathetic nervous system is activated when we are in fight-or-flight mode. This over time can have detrimental effects to us both psychologically and physically and are seen as the symptoms of stress.

On the other hand the “relaxation response” is associated with physiological changes that are the direct opposite to the fight-or-flight responses of an individual. Relaxation techniques often combine breathing and focused attention to calm the mind and the body and reduce stress.

A relaxation technique is any method, process, procedure, or activity that helps a person to relax to attain a state of increased calmness or otherwise reduce levels of anxiety, stress or anger. Being able to produce the relaxation response using relaxation techniques may counteract the effects of long-term stress, which may contribute to or worsen a range of health problems including depression, digestive disorders, headaches, high blood pressure, and insomnia and pain.

Relaxation techniques are generally safe and may be most effective when practiced regularly and combined with good nutrition, regular exercise, and a strong social support system. There are various techniques used by individuals to improve their state of relaxation. Some of these methods can be performed alone whilst others may require the help of another person who may often require specialised or professional training. Some relaxation techniques involve movement eg) Yoga, walking, Tai chi, others focus on stillness eg) deep breathing and meditation whilst other methods involve different elements eg) music or floatation therapy.

Useful Links and Resources for Relaxation Techniques


http://www.helpguide.org/mental/stress_relief_meditation_yoga_relaxation.htm

http://www.innerhealthstudio.com/what-is-relaxation.html

References:
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