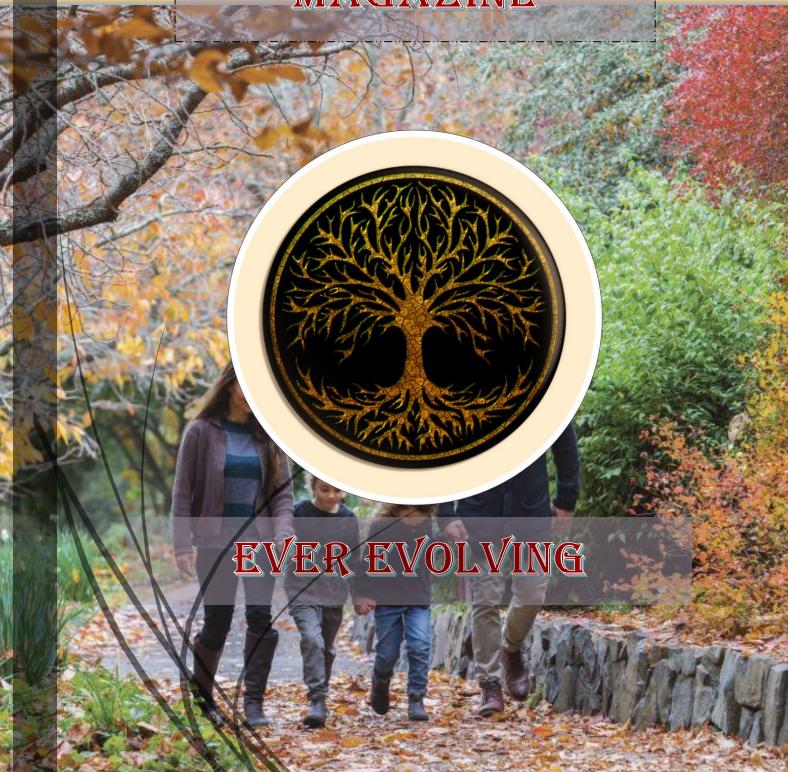


Sep-2021
Initial Spring
Edition
Vol-10

MARQUEE HEALTH MAGAZINE





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About Us

MARQUEE HEALTH: IN THE INTERESTS OF BETTER HEALTH, CARE AND PREVENTION

At the Marquee Health Clinic, we strive to provide a positive direction for your health with a clear understanding through clinical diagnosis and a working treatment hypothesis to empower and place you in the best possible position regarding the self- management of your health.

Sherry Gupta is skilled in all areas of beauty treatments and in helping clients improve their personal appearance. Sherry has completed her Diploma in Beauty Therapy in 2008 and qualified in Crystal Clear and Gatineau facials. Sherry has proven her ability by running a beauty clinic for 2 years by providing need-based beauty solutions.

Meet the Team



Olivier Lejus is a Nationally registered Acupuncturist and Chinese Medicine Herbal practitioner, and an accredited practitioner with the Toyohari Japanese Medical Association.

Olivier Lejus specializes in a Japanese style of acupuncture called Toyohari.





Ramon Tupac Perez holds a Diploma of Remedial Massage Therapy. His expertise also includes Reiki healing.

He looks forward to applying his diverse skills in the multi-disciplinary environment at Marquee Health. He will be managing the soft tissue arm of the clinic in close association with Marquee Osteopath Dr James Phillips. This will include continued professional development.

Meet Our Founder & Director of Marquee Health Clinic James C. Phillips – Osteopath

Osteopathy is a highly regarded, hands-on approach to holistic healthcare. It is the safest, fastest growing profession of allied health. Through the completion of a minimum of five years of university study in anatomy, physiology, pathology, general biophysical diagnosis and osteopathic practices and techniques, Dr James C. Phillips possesses the qualifications necessary to perform clinical examinations of the musculoskeletal, vascular, respiratory, and nervous systems and visceral symptoms. As a form of manual therapy, osteopathy may involve soft-tissue massage, mobilisation, and manipulation.

Treatment is effective yet gentle and should not cause unnecessary pain or discomfort. If you are experiencing symptoms of a painful nature, all due care will be taken to treat you in a way where you may remain as comfortable as possible.

James maintains his professional qualifications and practice through ongoing training and development to achieve optimal results for his patients. With extensive experience in conditions stemming from the imbalance/inflammation of the pelvis, the mobility of the spine and the functional capacity of the peripheral structures and tissues, James takes a holistic, broad investigative approach to gearing the body towards a more positive and functional state. Utilizing both direct and indirect manipulative techniques within a specialised soft tissue foundation, James works towards eliminating the body of negative influences and advises his patients of appropriate follow-up exercises and behaviours to support and maintain their progress.

MARQUEE HEALTH WELCOMES

TO THE INITIAL SPRING EDITION

The beginning of a new season should breathe fresh thoughts through an open mind. Continuing from the fresh beginnings and celebratory period that winter brings spring can continue the process that builds resilience in constitution through the mode of transition built from your humble review and beginnings.

As consistently presented the awareness section of the magazine reminds us, we are not singularly alone with just one health affliction. Therefore, a broad base view in recognising the ingredients that go to make health and wellbeing the reliable asset.

The Marquee Health Team encourages the evolving thought with action perpetuating an improved self-managed structure that consistently builds within your time in existence. The prepared mind will more likely acknowledge the right path and potentially speak with authority.

The Marquee Magazine continues, along with our practice to expand and develop areas of knowledge that will not only continue to shift the sand but raise the standard from where we need to be to operate to enable the methods of intervention and approach to appraise, assist and reciprocate on a bilateral consensus of progress by doing good to make better.

The important step in the journey of maintaining choice is creating options from which lateral thinking can play a major role. Thought leads to consideration, which can lead to contemplation better exposing the mind to possible integration.

I hope you enjoy your reading and in some gain something that will entrust your purpose for a better effect.

WITH RESPECT
Dr James C. Phillips

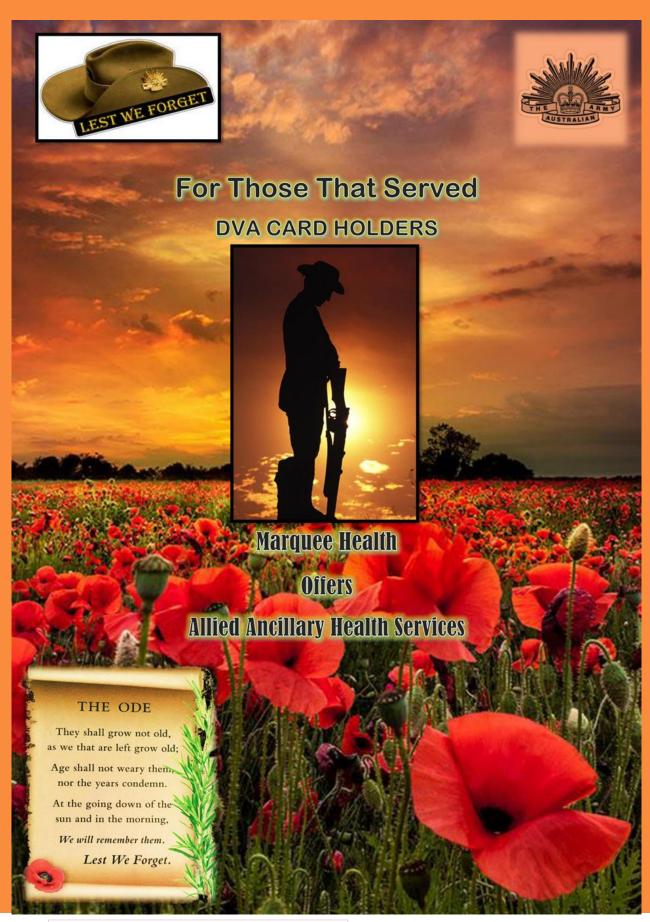
"Force, no matter how concealed, begets resistance"

Lakota



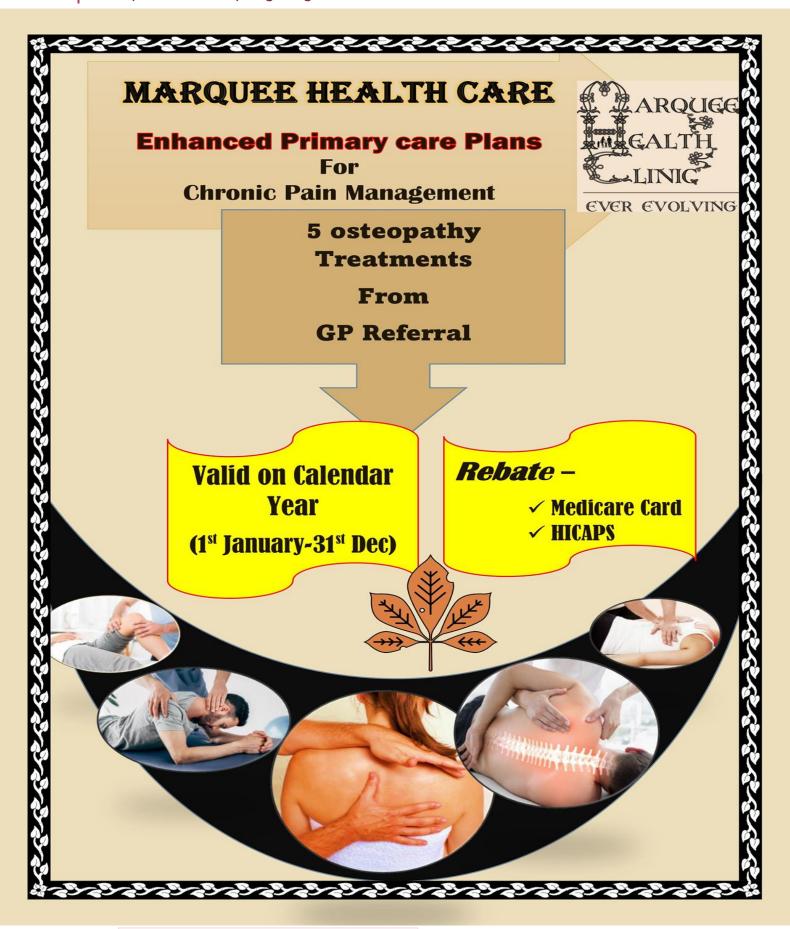






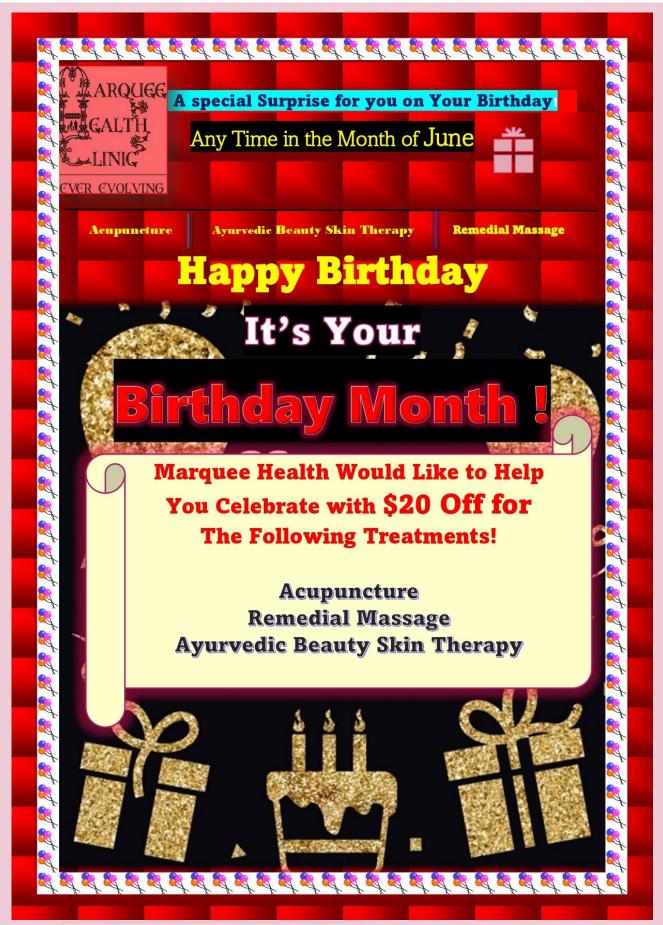
















Marquee Health September Awareness Month



Marquee Health



September Awareness Month







Childhood Cancer Awareness Month

Childhood Cancer Awareness Month was first proclaimed by former US President Obama in 2010. Since then, it has become a global initiative, raising awareness for childhood cancer.

The Gold Ribbon is the International Awareness Symbol of Childhood Cancer, with gold being the international colour of childhood cancer awareness.

Childhood Cancer Statistics

Each year, more than 950 children and adolescents in Australia - and 163,000 children worldwide - are diagnosed with cancer.

One third of childhood cancers are diagnosed in children aged 0-4 years.

Every week, nearly three children and adolescents in Australia - and 1,500 children worldwide - die from cancer.

Source: Children's Cancer Institute 2017



Locally, in South Australia, the Childhood Cancer Association receives an average of 55 referrals each year, for children newly diagnosed with cancer. In addition to this an average of 10 children relapse and 11 children pass away from cancer every year.

At present, the Childhood Cancer Association supports more than 400 families affected by childhood cancer.







Dementia Action Week 20 – 26 September 2021

Dementia impacts close to half a million Australians and almost 1.6 million Australians are involved in their care. The number of people living with dementia is set to double in the next 25 years.

With so many people impacted now and into the future, it is vital we clear up some of the prevailing misconceptions about dementia.

People living with dementia can live active and fulfilling lives many years after diagnosis. Despite this, they often experience discrimination. In a recent Dementia Australia survey, more than 70 per cent of people believed discrimination towards people with dementia is common or very common.





During Dementia Action Week 2021, Dementia Australia is providing simple and practical tips to:

Give a little support to a person living with dementia.

Give a little support to a carer, friend or family member of a person living with dementia.

Help healthcare professionals make their practice more dementia friendly.

The concept for Dementia Action Week was developed in consultation with Dementia Advocates, who have a lived experience of dementia.

The 'A little support makes a big difference' campaign demonstrates that many people living with dementia can continue to live well for many years after their diagnosis. This year, the focus will also be on supporting and celebrating carers of people living with dementia.





Big Heart Appeal month

The annual Heart Foundation Big Heart Appeal has started throughout Australia with 12,000 volunteers heading out to knock on doors.

Heart Foundation National CEO Lyn Roberts said every donation will help in the fight against heart disease, which is the number one killer of Australian men and women.

"Most people don't realise it, but heart disease is the number one cause of death in Australia, killing one person every 24 minutes.

"With the help of 120,000 people door knocking their neighbours, workplace fundraising and through individual giving, we hope to raise \$5 million to make world-class research possible. "As a charity, most of our funding comes from everyday Australians whose generous gifts are critical to helping us continue our lifesaving work.

"This appeal is the largest communityled fundraising program for the Heart Foundation, so we're asking all Australians to get behind the campaign and give whatever they can afford."

The 2013 Big Heart Appeal runs 1-30 September in all states except Queensland (2-15 Sept) and Western Australia (2-21 Sept).

"To recognise our volunteers and open your doors with confidence, you can check the collector is wearing a badge with the Heart Foundation logo and the words Volunteer Collector Official Identification Badge. "The badge also has the volunteer's ID number and an expiry date," Dr Roberts said.







Prostate Cancer Awareness Month

September is International Prostate Cancer Awareness Month. The Prostate Cancer Foundation of Australia is asking Australia to get involved in helping create awareness and raise the much-needed funds to assist in the fight against prostate cancer.

Join famous landmarks like Storey Bridge, Victoria Bridge and Brisbane City Hall in lighting up blue around the nation, this September, to help shine a light on the disease.

Did you know Prostate Cancer is the most diagnosed cancer in Australian men with 20,000 diagnoses and close to 3,300 deaths each year? Prostate cancer kills more men than breast cancer kills women. We want to encourage all men over 50 years of age, or 40 years

These risk factors include---

Age: The older a man is, the greater his risk for getting prostate cancer.

Family history: Certain genes (passed from parent to child) that you inherited from your parents may affect your prostate cancer risk. Currently, no single gene is sure to raise or lower your risk of getting prostate cancer. However, a man with a father, brother, or son who has had prostate cancer is two to three times more likely to develop the disease himself.

Race: Prostate cancer is more common in African American men. It tends to start at younger ages and grow faster than in other racial or ethnic groups, but medical experts do not know why.

Researchers are trying to determine the causes of prostate cancer and whether it can be prevented. They do not yet agree on the factors that can influence a man's risk of developing the disease, either positively or negatively.











Symptoms

There are usually no symptoms in the early stages. Some men do not have symptoms at all.

Some symptoms of prostate cancer include—

Difficulty starting urination. Weak or interrupted flow of urine. Frequent urination, especially at night.

Difficulty emptying the bladder completely.

Pain or burning during urination. Blood in the urine or semen.

Pain in the back, hips, or pelvis that doesn't go away.

Painful ejaculation.

If you have any symptoms that worry you, be sure to see your doctor right away. Keep in mind that these symptoms may be caused by conditions other than prostate cancer.

Early Detection

Two tests are commonly used to screen for prostate cancer—

Digital rectal exam (DRE): A doctor or nurse inserts a gloved, lubricated finger into the rectum to estimate the size of the prostate and feel for lumps or other abnormalities. Prostate specific antigen (PSA) test: Measures the level of PSA in the blood. PSA is a made substance by the prostate. The levels of PSA in the blood can be higher in men who have prostate cancer. The PSA level may also be elevated in other conditions that affect the prostate.

As a rule, the higher the PSA level in the blood, the more likely a prostate problem is present. But many factors, such as age and race, can affect PSA levels. Some prostate glands make more PSA than others. PSA levels also can be affected by—

Certain medical procedures. Certain medications.

An enlarged prostate.

A prostate infection.

Because many factors can affect PSA levels, your doctor is the best person to interpret your PSA test results. Only a biopsy can diagnose prostate cancer for sure.

Treatment Options

Different types of treatment are available for prostate cancer. You and your doctor will decide which treatment is right for you. Some common treatments are—

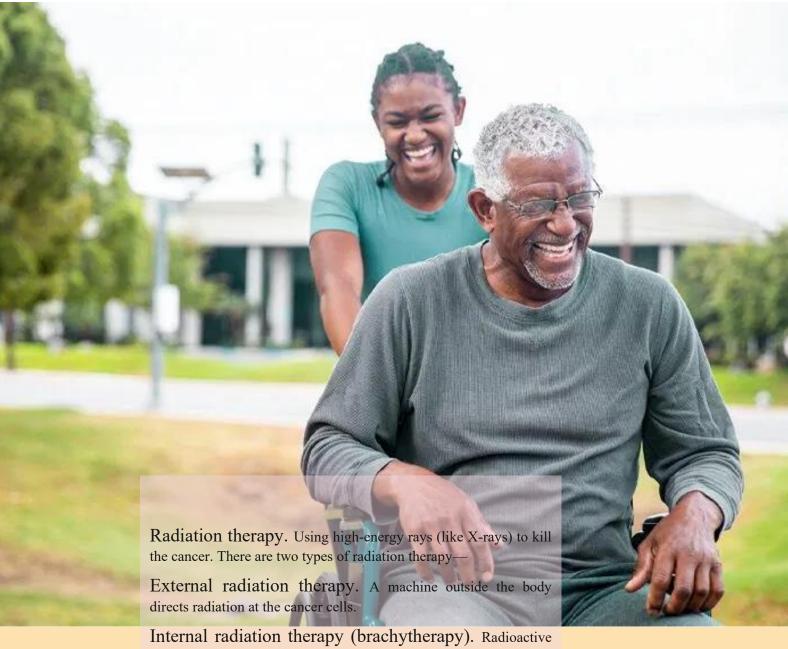
Active surveillance. Closely monitoring the prostate cancer by performing prostate specific antigen (PSA) and digital rectal exam (DRE) tests regularly and treating the cancer only if it grows or causes symptoms.

Surgery. A prostatectomy is an operation where doctors remove the prostate. Radical prostatectomy removes the prostate as well as the surrounding tissue.









Internal radiation therapy (brachytherapy). Radioactive seeds or pellets are surgically placed into or near the cancer to destroy the cancer cells.

Hormone therapy. Blocks cancer cells from getting the hormones they need to grow.

Other therapies used in the treatment of prostate cancer that are still under investigation include—













Blue

September 1-30

September is a campaign in which we're encouraging all Australians to face up to cancer in men.

Starting this Sunday, we're asking you to get blue and help raise awareness about men's cancers.

22,000 Australian men die from cancer every year, but at the ACRF we want to turn this statistic around. You can help by hosting a blue themed fundraiser, purchasing one of our limited-edition Blue September wristbands, or by donating to vital research into the cancers that affect men most





This is the first year that Blue September has offered these meaningful wristbands, which include a space for you to write the name of a man in your life who has been touched by cancer. You can purchase your wristband from any Harvey Norman, Tyre Right, Domayne, Sports Power, Tyre Power or Joyce Mayne store. With your help we can raise funds for ground-breaking cancer research, as well as awareness to help prevent some of the most common cancers affecting men: prostate cancer, bowel cancer, lung cancer, melanoma and testicular cancer.

JOINTHE FIGHTING CANCER IN MEN

There are many important ways men can reduce their cancer risk:

- Visit your GP for a check-up (something Aussie men are notoriously reluctant to do!)
- Reduce alcohol intake
- Be physically active
- Take care when in the sun
- Aim for a healthy body weight
- Quit smoking or help a mate quit

Fittingly the first day of Blue September falls on Father's Day – a day on which we take the time to celebrate the men in our lives. This year, for Blue September, we ask that you help your dad to reduce his risk of developing cancer by making these positive lifestyle choices. You might also take the chance to turn your Father's Day celebration into an excuse to raise funds or donate!

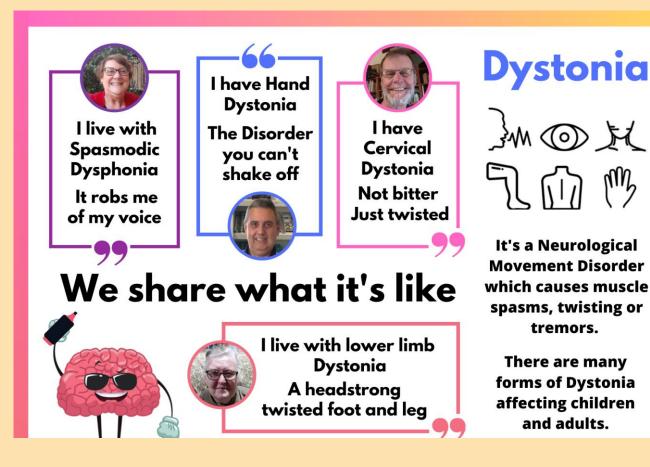




Dystonia Awareness Month

Dystonia is a disabling neurological condition that is relatively common. Primary dystonia has a prevalence of greater that 3/1000 people. This extrapolates to 70.000 people Australia. Dystonia secondary to other neurological disease such as stroke or neurodegenerative disease is probably even more common. Patients with dystonia suffer involuntary muscles spasms that typically occur during attempted activity and interfere with function. Onset can be at any age, and therefore dystonia often results in significant physical and social losses. A limited understanding of its cause restricts the current treatment of dystonia.









It's a Neurological **Movement Disorder**

spasms, twisting or tremors.

There are many

forms of Dystonia

affecting children

and adults.

There are two main controls of human movement. There is posture, which is like the crane portion of the cherry picker. Then there's fine motor movement, which is the part of the cherry picker that picks cherries. Recent animal studies found a separate system of brain cells that control posture in the movement part of the brain. Our project propose that dystonia is due to abnormality in this area of the brain, leading to abnormal postures and relatively preserved fine motor movement.

We will use techniques like surface muscle electrode recordings, magnetic stimulation recordings and functional brain imaging to examine patients with dystonia compared to normal subjects. We want to see if during postural control tasks, patients with dystonia have increased muscle and brain activity, compared to fine movements. We measure if previously proven therapies for dystonia like botulinum toxin can reduce excess muscle and brain activity during posture control tasks. We hope by understanding the cause of dystonia better, we can produce more effective and long-lasting treatment for this condition.

Info: https://brainfoundation.org.au/research-grants/2014/dystonia-2/









Gold Bow Day is the annual fundraiser for the Australian Thyroid Foundation and held on September 1st.

The two loops of the Gold Bow symbolise the Thyroid Gland, one on either side of the neck. The Gold colour symbolises that your Thyroid Gland is more valuable to you than Gold!

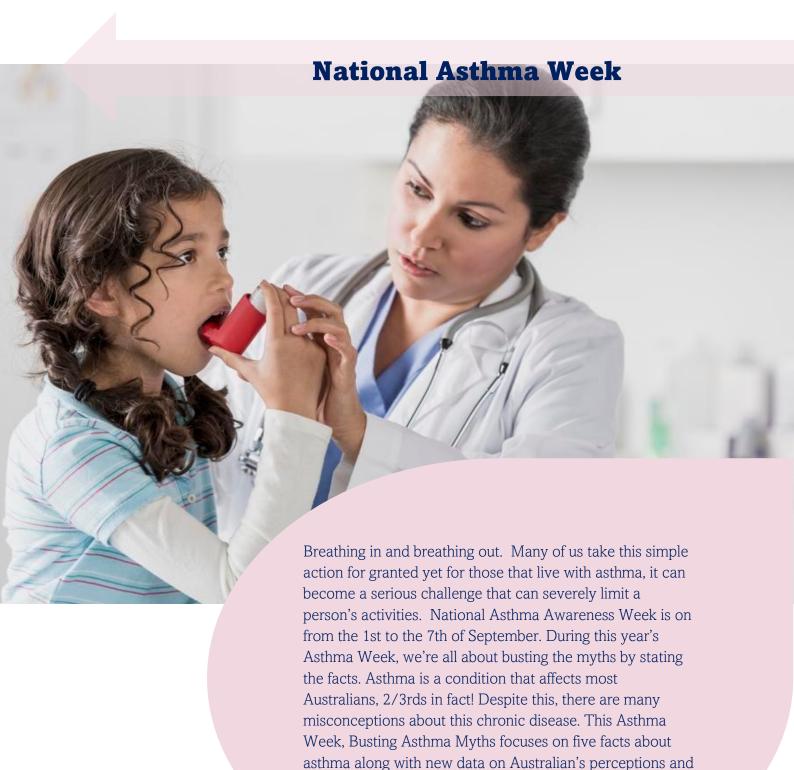
Gold Bow Day highlights the increase in Thyroid Cancer, with the most recent research from 2008 stating, thyroid cancer had increased by 84% in women and 40% in men over the previous 10 years.

The Australian Thyroid Foundation is 100% community funded. Your donation will help The Australian Thyroid Foundation continue to deliver support to the community through its services and ongoing education and awareness programs.

Info: https://dosomethingnearyou.com.au/cause/gold-bow-day/







misperceptions about asthma.



What is Asthma?

Asthma directly affects the lungs when certain triggers cause swelling and a narrowing of the airways. This restrictive feeling in the airways along with the mucus that is produced makes it hard to breathe. Asthmatic episodes can occur over a longer period or within minutes. Australia, one in ten people have a form of asthma and although there is no cure, symptoms can be controlled with an Asthma Management Plan.

Symptoms of Asthma Include:

- wheezing
- continuing cough
- tightness of the chest
- > Short of breath

Symptoms may triggered early in the morning or in the after evening, or activity, yet if an asthma management plan is followed then will minimise this symptoms.

Causes of Asthma

The direct cause of asthma is still proving to be elusive though to some extent may be hereditary.

Environmental factors such as tobacco smoke, weight gain can increase the chance of the onset of asthma.

Controlling Asthma

The best way to manage and reduce the severity of asthma symptoms is to take a proactive approach ensuring that medication and puffers are used correctly so that the right dose reaches the lungs during an asthmatic episode.

Speaking to your doctor about your medication or puffer, as well as potential side effects will give you the best chance to holistically manage asthma. Controlling asthma with a Management Plan can reward you with a full and active lifestyle.

INFO: http://www.archehealth.com.au/articles/news/national-asthma-awareness-week-1-7-september





Spina
Bifida
Awareness
Week



There are hundreds of thousands of people who have Spina Bifida, and throughout the month of October, we celebrate National Spina Bifida Awareness Month to raise awareness and support for them. Spina Bifida is a birth defect that occurs when the spine and spinal cord don't form properly. This neural tube becomes the baby's brain, spinal cord, and the tissues that enclose them. Spina bifida occulta or "hidden" spina bifida doesn't cause any disabilities and it doesn't appear until later in life. Typically, there's a gap in the baby's back instead of an opening and there's no damage to the spinal cord or the nerves.



defects have Spinal existed since the beginnings of mankind. Anthropologists have uncovered many depictions in statues and artifacts from ancient civilizations of people young and old with malformed spinal cords. In the Classical Period of the Greek physician Hippocrates, descriptive writings revealed such defects, though they didn't have the proper medical science and tools to heal them at the time.

The first description of a spina bifida case was by Nicolas Tulp in 1653. Tulp proposed the term and described it as a vertebral anomaly, and it was considered a of the duplication spinous process of the vertebra. Spina Bifida was first found in the textbook Observationes Medicae, written by Tulp, with descriptions of six Spina Bifida cases. One illustration showed a Spina Bifida case of a child with a large lumbar level myelomeningocele defect.

From the early 1600s to the mid-1800s, surgeons attempted to treat Spina Bifida to no avail. Despite this, they continued their research and approached the defect with new techniques, draining or injecting solutions into the sac. Mortality rates fell. but patient debilitation was still the result. In the middle of the nineteenth century, Dr. James Morton used an iodine and glycerine solution for injection into the sac and this technique proved successful.

In 1973, the Spina Bifida Association of America was formed in Chicago Illinois, and it was primarily used as a source of information for chapters members. They enabled children with spina bifida to live longer by using treatments new and diagnostic tools that helped families affected by it. As time goes on, the month of October is named as its official month and in the twentyfirst century, events and fundraisers increased in the ongoing battle to better treat spina bifida.







PKD Awareness Day



To raise awareness of PKD, its important people know the basics of the disease. There are two types of polycystic kidney disease (PKD): autosomal dominant (ADPKD) and autosomal recessive (ARPKD). Let's break down the difference.

ADPKD is one of the most common, life-threatening genetic diseases. In ADPKD, fluid-filled cysts develop and enlarge in both kidneys, eventually leading to kidney failure. It's the fourth leading cause of kidney failure, and more than 50% of people with ADPKD will develop kidney failure by age 50. Once a person has kidney failure, dialysis or a transplant are the only options.

Unlike some genetic diseases, ADPKD doesn't skip generation, meaning it often affects many people in one family. Approximately 10% of the people diagnosed with ADPKD have no family history of the disease, with the disease developing as a spontaneous (new) mutation. Once a person has ADPKD, even though a spontaneous mutation, they have a 50% chance of passing it on to each of their children.

ARPKD is a rare genetic disorder affecting approximately 1 in 25,000 children. It affects both genders equally and can cause death in the first month of life. If a child with ARPKD survives the newborn period, the chances of survival are good. But for these children, approximately one-third will need dialysis or transplantation by the age of 10.

Info: https://pkdcure.org/what-to-know-about-pkd-awareness-day/





Idiopathic Hypersomnia Awareness Week

What is PKD?

Polycystic kidney disease (PKD) is a chronic, genetic disease, causing uncontrolled growth of fluid-filled cysts in the kidneys. As the cysts accumulate more fluid, they get bigger and bigger, destroying healthy tissue, which leads to high blood pressure, other complications, and often kidney failure.



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s accumulate
r and bigger,



A typical kidney is the size of a human fist and weighs about a third of a pound.



Polycystic kidneys can be much larger, some growing as large as a football and weighing 30 pounds.





A typical kidney is the size of a human fist and weighs about a third of a pound. Polycystic kidneys can be much larger, some growing as large as a football. Kidneys can develop cysts ranging in size from as small as a pinhead to as large as a grapefruit.

There are two types of genetic PKD:

ADPKD autosomal dominant

ADPKD is the more common type of PKD and is estimated to affect more than 600,000 Americans and 12.4 million people worldwide.

ARPKD

autosomal recessive

ARPKD is a rare form of PKD that occurs in 1 in 25,000 children worldwide.

There is no cure. But with the first treatment for ADPKD approved in 2018 and ongoing clinical trials, there is hope.



What is ADPKD

Autosomal dominant polycystic kidney disease (ADPKD) is one of the most common, life-threatening genetic diseases. In ADPKD, fluid-filled cysts develop and enlarge in both kidneys, eventually leading to kidney failure. It is the fourth leading cause of kidney failure and more than 50 percent of people with ADPKD will develop kidney failure by age 50. Once a person has kidney failure, dialysis or a transplant are the only options.

ADPKD is a painful disease that impacts quality of life. The average size of a typical kidney is a human fist. Polycystic kidneys can get much larger, some growing as large as a football, and weighing up to 30 pounds each.

Unlike some genetic diseases, ADPKD does not skip a generation meaning it often affects many people in one family. Approximately 10 percent of the people diagnosed with ADPKD have no family history of the disease, with the disease developing as a spontaneous (new) mutation. Once a person has ADPKD, even though a spontaneous mutation, they have a 50 percent chance of passing it on to each of their children

Info: https://pkdcure.org/awareness-day/







The most important annual event for Idiopathic Hypersomnia is the Worldwide Idiopathic Hypersomnia Awareness Week hosted by Hypersomnolence Australia. It is held annually in the first full week in September.

It is the mission of Idiopathic Hypersomnia Awareness Week® to raise awareness and to help improve the level of education of Idiopathic Hypersomnia among the public, Hypersomnia patients and medical professionals.





Sleep Drunkenness in Idiopathic Hypersomnia

Extreme and prolonged difficulty awakening from sleep, confusion, disorientation, irritability and poor coordination with an uncontrollable desire to go back to sleep.

It is usually accompanied by automatic behaviour (performing tasks without consciously knowing it and not remembering you have done them eg: turning off alarm clocks or answering your phone).

What is Idiopathic Hypersomnia?

The main symptom of IH is excessive deep sleep. Despite adequate and often extraordinary amounts of good quality sleep (eg: 11 hours or more per night) people with IH still feel excessively sleepy during the day.

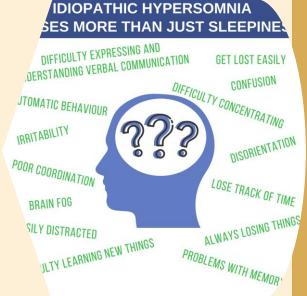
- Chronic excessive daytime sleepiness
- Long and unrefreshing naps. Naps are usually more than one hour long and are typically not refreshing.

Extreme and prolonged difficulty awakening from sleep, accompanied by confusion, disorientation, irritability and poor coordination with an uncontrollable desire to go back to sleep. It can also include automatic behaviour eg: turning off alarm clocks or answering your phone. This is known as "sleep drunkenness".

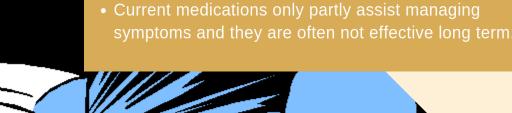
 Cognitive dysfunction (commonly referred to as 'brain fog'): problems with memory, automatic behaviour, concentration and attention.





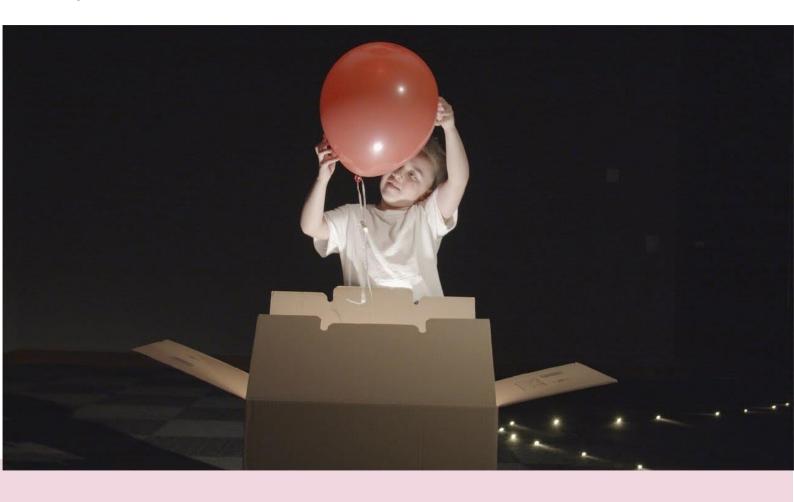


- There are no approved medications specifically for Idiopathic Hypersomnia. The medications that are
- There are no medications that assist with the Hypersomnia experience.









World Duchenne Awareness Day

World Duchenne Awareness Day to take place 7 September 2021

September 7 is World Duchenne Awareness Day. On this day, the World Duchenne Organization raises awareness for Duchenne and Becker muscular dystrophy (DMD/BMD) around the globe. This year's theme will be 'Adult Life & Duchenne'.





WHAT IS DUCHENNE MUSCULAR DYSTROPHY?

Duchenne muscular dystrophy is a genetic disorder characterized by the progressive loss of muscle. It is a multisystemic condition, affecting many parts of the body, which results in deterioration of the skeletal, heart, and lung muscles.

Duchenne is caused by a change in the dystrophin gene. Without dystrophin, muscles are not able to function or repair themselves properly. Becker muscular dystrophy, which is less severe than Duchenne, occurs when dystrophin is manufactured, but not in the normal form or amount.

Because the dystrophin gene is found on the X-chromosome, it primarily affects males, while females are typically carriers. However, some females can manifest varying ranges of physical symptoms of Duchenne and are therefore called "manifesting carriers".

WHAT CAUSES DUCHENNE?

Duchenne is caused by a mutation in the gene that encodes for dystrophin, a protein that is essential to the proper functioning of our muscles. Without dystrophin, muscles are not able to function or repair themselves properly. The loss of muscle then results in a loss of strength and function.

Duchenne can be passed from parent to child, or it can be the result of random spontaneous genetic mutations, which may occur during any pregnancy. In fact, about one out of every three cases occurs in families with no previous history of Duchenne. In other words, it can affect anyone, and crosses all races and cultures. Learn more about what causes Duchenne and Becker and how it can affect more than one person in a family.

WHAT ARE SIGNS AND SYMPTOMS OF DUCHENNE?

The average age of a Duchenne diagnosis is around 4 years old. Many times, there will be delays in early developmental milestones such as sitting, walking, and/or talking. Speech delay and/or the inability to keep up with peers will often be the first signs of the disorder. The symptoms of Becker can begin in childhood, the teenage years, or even later.



https://www.instagram.com/marqueehealthclinic/https://www.facebook.com/Marqueehealthclinic/https://marqueehealth.com.au/





Lyme Gladiolus Day



Classical Lyme disease is an infectious disease that can be transmitted to humans if bitten by a tick carrying Borrelia burgdorferi sensu lato. In Australia, this organism has yet to be identified in Australian ticks or any another vector that could transmit disease to humans.

It is for this reason, that the Australian Government does not support the diagnosis of locally Acquired Lyme disease in Australia.





What is Lyme disease?

Lyme disease is a tick-borne illness caused by 4 main Borrelia species of bacteria. The type of black-legged tick that transmits Lyme disease is found in Asia, Europe, and North America. Australians who have travelled to these regions and spent time in grassy or heavily wooded areas can be affected by Lyme disease.

There is a growing number of people who believe that Lyme disease occurs in Australia and that they have caught Lyme disease from ticks in Australia. But so far, there is no conclusive evidence that there are ticks in Australia infected with Lyme Disease-causing bacteria.



Lyme disease symptoms

Symptoms can vary depending on where you caught the infection.

The first symptom in 70-80 per cent of people infected with Lyme disease is a rash called erythema migrans. The rash appears at the site of a tick bite, between 3 and 30 days after being bitten. It starts as a red dot around the bite, and then slowly expands to form a bull's-eye pattern, with a red outer ring surrounding a clear area in the middle. The rash is not usually itchy or painful.

Sometimes the rash also appears elsewhere on the skin away from the tick bite, which is a sign that the bacteria are multiplying in the bloodstream.

Other Lyme disease symptoms can develop a couple of days to a few weeks after the rash first appears, and include:

- fever.
- headache.
- tiredness.
- joint pain; and
- muscle pain.

In the 20-30 per cent of people who do not develop the hallmark erythema migrans rash, these symptoms may be the only evidence of infection.

Complications

Untreated Lyme disease can be associated with other problems, including:

ongoing episodes of severe joint pain and swelling. fatigue.

meningitis (inflammation of the membrane surrounding the brain).

inflammation of the eyes. hepatitis (inflammation of the liver).

short-term memory problems. heart problems (such as inflammation of the heart or an irregular heartbeat); and nerve problems such as Bell's palsy (temporary paralysis of one side of the face) or numbness, weakness and shooting pains in the limbs. It's possible for some

It's possible for some complications to develop months to years after an untreated infection with Lyme disease.







Ticks attach themselves to their hosts (humans and other warm-blooded animals) and feed on the host's blood. As they are feeding, ticks can transmit bacteria to their host. You can catch Lyme disease if you are bitten by a tick that is infected with Borrelia bacteria. In many cases, bites from tiny, immature ticks (called nymphs) cause Lyme disease.

In North America, Borrelia burgdorferi is the main cause of Lyme disease. Borrelia mayonii is a new bacterial species also found to cause Lyme disease in the United States. Borrelia garinii is the main cause of Lyme disease in Asia, while in Europe Borrelia garinii and Borrelia afzelii are the main types of bacteria involved.

Lyme disease is the most common tick-borne illness in North America and Europe. The ticks that cause Lyme disease (black-legged ticks) are often found in grassy and heavily wooded areas, and infections are more common in summer than at other times of the year. If you are concerned about Lyme disease, see your general practitioner (GP). Your doctor will ask you about your symptoms, how long you've had them, and whether you have recently travelled anywhere overseas. They will also perform a physical examination, looking for signs of ticks and Lyme disease (such as the characteristic rash), as well as signs of other possible causes of your symptoms.

Diagnosing Lyme disease can be difficult because many of the symptoms and signs are non-specific and like those of other conditions, such as the flu and other viral illnesses. The rash is the only symptom that is unique to Lyme disease, but not everyone develops the rash. Also, ticks are very small, and their bites are usually painless, so some people may not realise that they have been bitten.

If your doctor thinks Lyme disease is a possibility, they will recommend you have tests. They may also refer you to a specialist in infectious diseases.

INFO:https://www.mydr.com.au/symptoms/lyme-disease/





WORLD ALZHEIMER'S DAY 21 of september



World Alzheimer's Day, September 21st of each year, is a day on which Alzheimer's organizations around the world concentrate their efforts on raising awareness about Alzheimer's and dementia. Alzheimer's disease is the most common form of dementia, a group of disorders that impairs mental functioning.

Every 65 seconds, someone develops Alzheimer's disease. At current rates, experts believe the number of Americans living with Alzheimer's will quadruple to as many as 16 million by the year 2050.

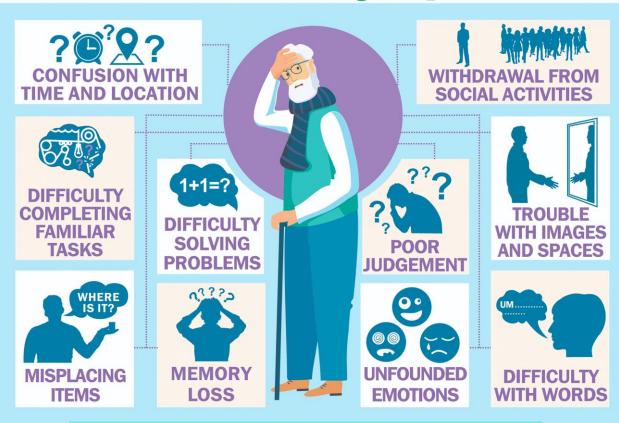
Alzheimer's disease is often called a family disease because of the chronic stress of watching a loved one slowly decline affects everyone. 5.7 million Americans are living with Alzheimer's. Alzheimer's disease is the sixth-leading cause of death in the United States and the only cause of death among the top 10 in the United States that cannot be prevented, cured or even slowed. With the increases in life spans and baby boomers coming of age, support for Alzheimer's research is more critical to our families than ever.

Understanding Alzheimer's and dementia Alzheimer's is the most common cause of dementia, a general term for memory loss and other cognitive abilities serious enough to interfere with daily life. Alzheimer's disease accounts for 60-80% of dementia cases. Alzheimer's is not a normal part of aging. The greatest known risk factor is increasing age, and most people with Alzheimer's are 65 and older. Alzheimer's disease is younger-onset Alzheimer's if it affects a person under 65. Younger-onset can also be referred to as early-onset Alzheimer's. People with younger-onset Alzheimer's can be in the early, middle, or late stage of the disease. Alzheimer's worsens over time. Alzheimer's is a progressive disease, where dementia symptoms gradually worsen over several years. In its early stages, memory loss is mild, but with late-stage Alzheimer's, individuals lose the ability to carry on a their conversation and respond to environment. Alzheimer's is the sixthleading cause of death in the United States. On average, a person with Alzheimer's lives 4 to 8 years after diagnosis but can live if 20 years, depending on other factors.





Alzheimer's Symptoms



Alzheimer's has no cure, but one treatment — aducanumab (AduhelmTM) — is the first therapy to demonstrate that removing amyloid, one of the hallmarks of Alzheimer's disease, from the brain is reasonably likely to reduce cognitive and functional decline in people living with early Alzheimer's. Other treatments can temporarily slow the worsening of dementia symptoms and improve quality of life for those with Alzheimer's and their caregivers. Today, there is a worldwide effort underway to find better ways to treat the disease, delay its onset and prevent it from developing.

https://www.alzinfo.org/articles/world-alzheimers-day/ https://www.alz.org/alzheimers-dementia/what-is-alzheimers







Mesothelioma Awareness Day takes place on September 26 every year with the goal of teaching people about this rare, aggressive, and preventable cancer. Awareness also brings in funding for important research to diagnose, manage, and treat rare diseases. There are many ways to get involved and to participate in Mesothelioma Awareness Day, for those with the disease or interested in supporting patients.

The Importance of Awareness Day

The importance of Mesothelioma Awareness Day cannot be overstated. For individuals struggling with this disease, it is a great boost to see people coming out to support them. More broadly, the day is crucial for bringing greater awareness to this rare type of cancer.

There are only about 3,000 people diagnosed every year, but most of these are people who were victims of asbestos exposure. They were exposed mostly through work and without being warned of the risks. The vast majority cases of mesothelioma preventable, and yet people are still being exposed to asbestos and are still getting sick.

Although rare, this is a deadly and devastating illness that needs more research funding to get to the bottom of how it develops, how to better diagnose it, and how to treat, manage, and even cure the disease. Because it is rare it often gets less attention and less funding than other types of cancer.





What is Mesothelioma?

Mesothelioma is a cancer affecting the mesothelial cells which cover most internal organs. There are two main types of mesotheliomas: pleural and peritoneal.

In rare cases, mesothelioma can occur in the pericardium, the lining of the heart. This is called pericardial mesothelioma. In even rarer cases, mesothelioma can occur in the membrane around the testicles (testicular mesothelioma).

It was estimated that 868 new cases of mesothelioma would be diagnosed in Australia in 2021.

The five-year survival rate for mesothelioma is approximately 6.3%.

Pleural Mesothelioma

This is a type of cancer that starts in the membrane that covers the lungs. Although it develops in the chest and involves the lining of the lungs, it is not a lung cancer, and it is treated differently to lung cancer.

Pleural mesothelioma is the most common type of mesothelioma, and accounts for about 90% of all mesotheliomas

Peritoneal mesothelioma

The other main type is peritoneal mesothelioma, accounting for about 10% of cases. It develops in the lining of the abdomen.



Mesothelioma symptoms

The main symptoms of pleural mesothelioma include

shortness of breath

- chest pain
- pain in the shoulder and upper arm
- sensitive skin
- loss of appetite and/or weight loss
- loss of energy

persistent cough or a change in a person's usual cough

excessive sweating, especially at night.

Early signs of pleural mesothelioma are like other conditions and diseases, however, if you think you have been exposed to asbestos, talk to your doctor.

Mesothelioma symptoms

The main symptoms of peritoneal mesothelioma include:

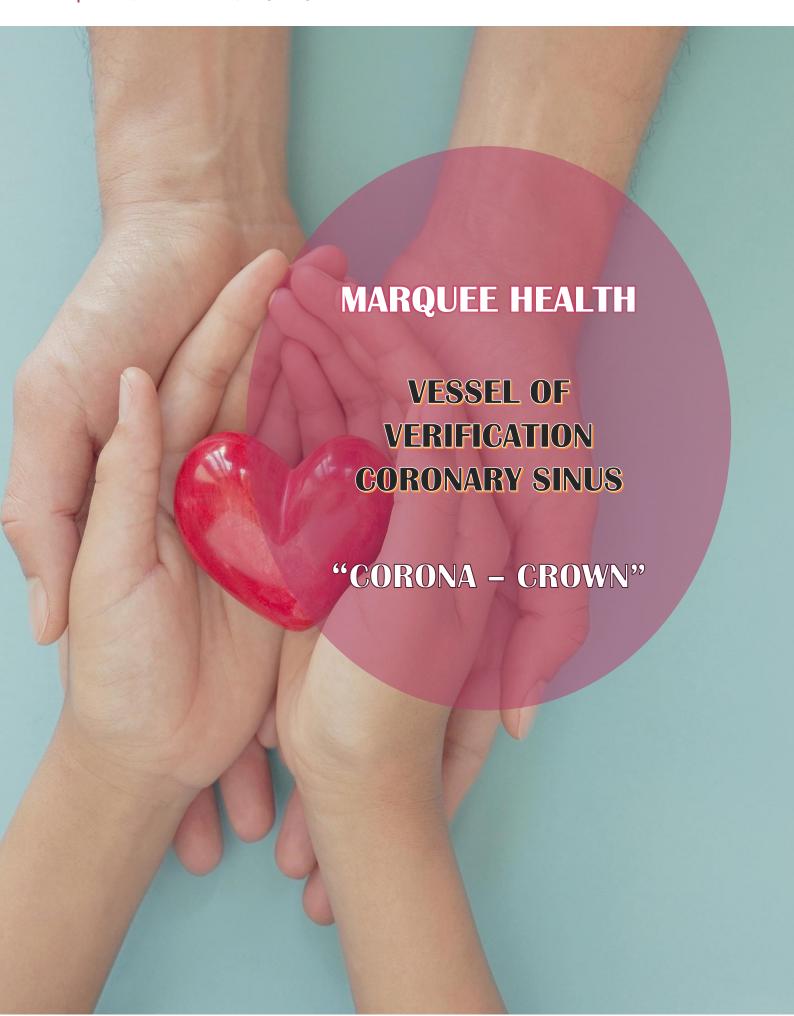
- swollen or painful abdomen
- loss of appetite
- nausea and/or vomiting
- fever or night sweats
- bowel or urinary problems.

Less commonly, mesothelioma begins in the membrane around the heart or the reproductive organs. Growth's form which gradually grow and spread to surrounding areas. Rarely, a person may develop mesothelioma in more than one place.

https://mesothelioma.net/mesothelioma-awareness-day/





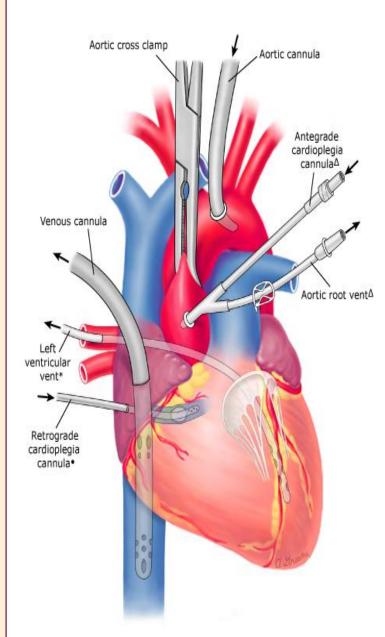


STRUCTURE AND FUNCTION

The coronary sinus is a collection of veins joined together to form a large vessel that serves as the primary collector of cardiac venous blood from the myocardium or heart muscle. The coronary sinus drains the De-oxygenated blood to the right atrium at the coronary sinus orifice, an opening between the inferior vena cava and the tricuspid valve. The coronary sinus is the main cardiac vein and receives blood from the ventricular veins during ventricular systole and empties into the right atrium during atrial systole.

The vessel originates at the juncture of the great cardiac vein and the oblique vein of the left atrium and forms a circle around the heart. It is protected by a semicircular fold of the lining membrane of the auricle the valve of coronary sinus. The sinus considerably dilates before entering the atrium. The wall is partly muscular and is somewhat constricted at the junction of the great cardiac vein where a valve is furnished consisting of two unequal segments.

The coronary sinus receives blood from most epicardial ventricular veins, mainly from the small, middle, great, and oblique cardiac veins. It also drains blood from the left marginal vein and the left posterior ventricular vein. The anterior cardiac veins drain directly into the right atrium. The length of the coronary sinus in adults can vary from 15 to 65 mm. The diameter of the coronary sinus can be variable and is dependent on the loading conditions, presence, and extent of atrial myocardium with the coronary vein, and the presence of underlying cardiac disease, prior cardiac surgery, or areas of infarcted tissue.







EMBRYOLOGY

During fetal development, the single heart tube gives rise to the primordial atrium and sinus venosus. By the 4th week of gestation, the three main paired venous systems of the embryo, the cardinal, umbilical, and viteline veins, drain into the ipsilateral horns of the sinus venosus. During the 4th week an invagination appears between the left horn of the sinus venosus and the ultimately atrium. separating the two and leading to anatomic separation of the left atrium from the veins entering the sinus venosus.

CLINICAL SIGNIFICANCE

The coronary sinus has become a clinically important structure especially through its role in providing access for different cardiac procedures. The coronary venous system is important in many electrophysiological procedures, including arrhythmia ablation, biventricular pacing, and for deployment of an array of cardiac devices.

The coronary sinus defect consists of an interatrial communication through the orifice of the coronary sinus, with absence of the usually adjacent walls of the coronary sinus and left atrium.

The wall of the coronary sinus is made up of striated myocardium that is continuous with the atria, forming a myocardial sleeve around the venous system external to the ventricle. In variations, where a continuation into the ventricle is formed, an atrioventricular bypass referred to as an epicardial pathway is formed.

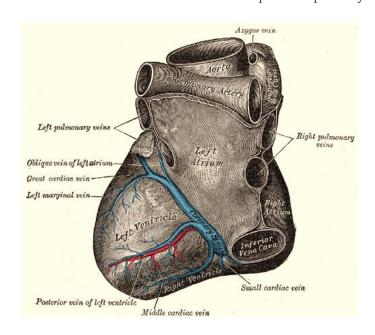
Electrodes can be inserted into and through the coronary sinus to study the electrophysiology of the heart.

The coronary sinus defect consists of an interatrial communication through the orifice of the coronary sinus, with absence of the usually adjacent walls of the coronary sinus and left atrium. There may also be a connection of a persistent left superior caval vein to the left atrial roof. The anomaly is consequence of absence of the walls which normally exist between the coronary sinus and the left atrium. In their absence, the orifice of the sinus becomes an interatrial communication.

When such a defect is large, its anterior margin encroaches approximating the area of the atrioventricular node.

The importance in cardiovascular disease finds the delivery of cardioplegia through the coronary sinus effective in myocardial protection, especially in patients with coronary artery disease.

Balloon catheters can be placed in the coronary sinus to deliver therapeutics, cardioplegia buffers, or contrast agents, to obtain venograms of the heart. Numerous devices can also be deployed in the coronary sinus to structurally remodel the annulus of the mitral minimise valvular valve to regurgitation.







PATHOLOGY

Enlargement of the coronary sinus can result from a wide spectrum of conditions causing right atrial dilatation, including tricuspid stenosis, tricuspid regurgitation, right ventricular dysfunction, and pulmonary hypertension.

Coronary sinus morphology and anatomy can be highly variable. Congenital coronary sinus variants include the presence of a diverticulum, variations in shape and variations in course because of numerous systemic and biological factors. Diverticula are commonly seen at the inferior aspect of the sinus at the junction with the middle cardiac vein and may require ablation.

Congenital anomalies of the coronary sinus either occur in isolation or in association with congenital heart defects. Some anomalies alter cardiac hemodynamics resulting in clinical manifestations and requiring prompt identification and treatment, while others are occult and symptom free.

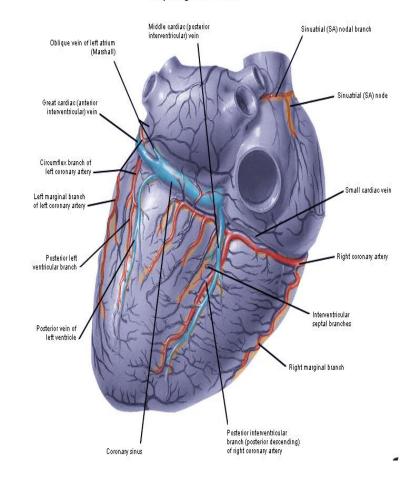
The inferior interatrial connections through the coronary sinus may explain the need for additional ablation in and on the coronary sinus to complete left atrial ablation lines extending down to the mitral annulus in this area for curing atrial fibrillation.

Absence of the coronary sinus is usually associated with other situs anomalies, specifically heterotaxy syndromes that involve abnormal lateralisation of the abdominal and thoracic viscera, often associated with complex congenital heart disease.

The condition of atresia of the coronary sinus ostium presents as a blind pouch or severe stenosis. The course of the coronary venous blood includes a persistent left superior vena cava or a communication with the left atrium. This may occur in isolation or associated with numerous cardiac malformations.

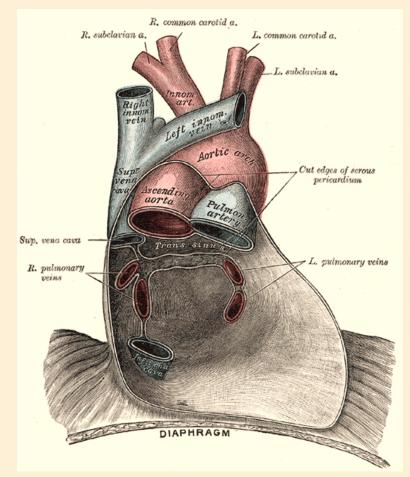


Diaphragmatic View









SUMMARY

Accurate knowledge of the coronary venous anatomy is essential for electrophysiologists performing left ventricular pacing procedures or radiofrequency ablation. Although many variations occur constant features include a large anterior interventricular vein that continues in the left atrial ventricular groove as the Great Cardiac vein and then joined by one or more posterolateral ventricular veins the CS forms the continuation until it drains into the right atrium.

Osteopathic perspective considers circulation on a dynamic level in relation to anterograde and retrograde velocity, loading and pressure resistance. The continuity of contour of the sinus and various vascular flows will be affected by consistent rhythm and regulation autonomically.

The extrinsic mechanisms from neighbouring tissue, potential space occupation and congestive accumulation from reduced reliable pumping mechanisms e.g., diaphragms, may be contingencies for adverse morphologic change.

The mobility and expansion of the thoracic cage can be integral for the circulation that supplies and travels through this region to do

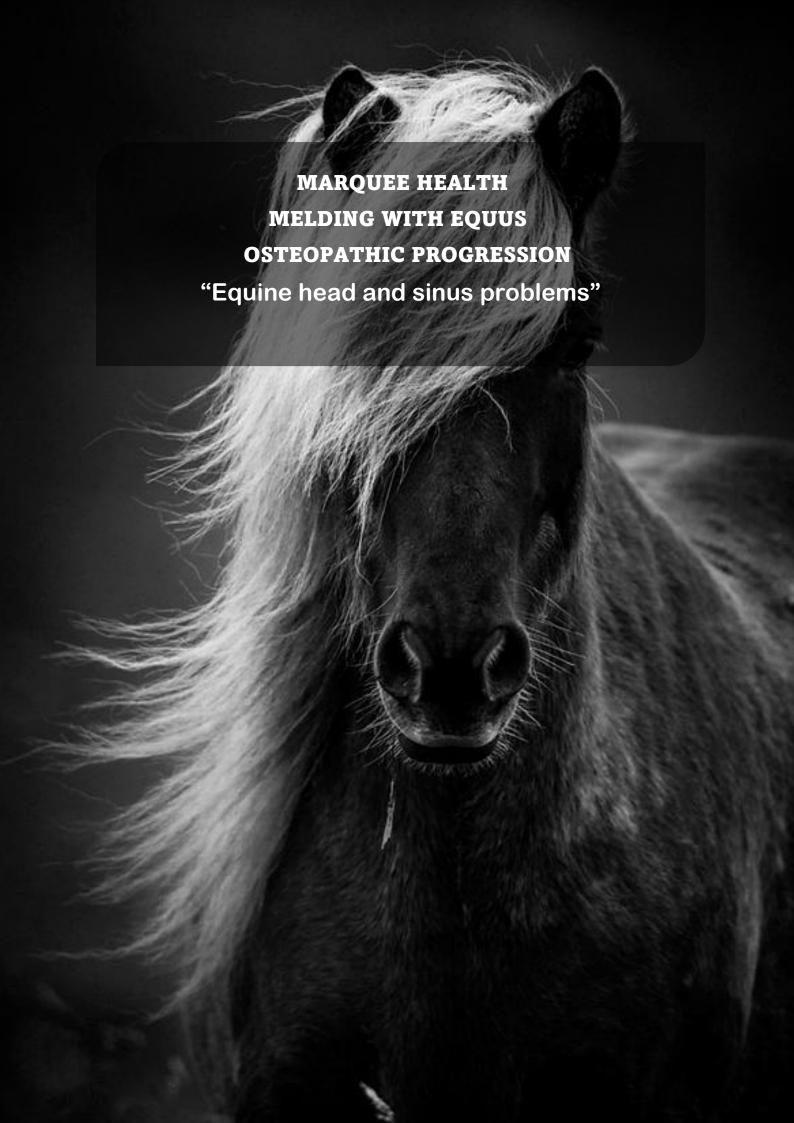
so unimpeded. This can fall into osteopathic considerations when assessing musculoskeletal, structural, and functional facilitation, and the pathways of the neural and vascular tracts. The contraction and relaxation ability of tissue and the consistent movement of fluid dynamics in and out of a region on a dynamic basis can make for a well-served and vital functioning system.

Dr. James C. Phillips

Osteopath & Director-Marquee Health Clinic







When investigating current or potential problems within the equine system good place to start is where you perceived and that is head. The awareness to your approach therefore the initial melding with the horse is vital to not only understand what may be troubling, but also to gain access from a mutual benefit therapeutically and insight.

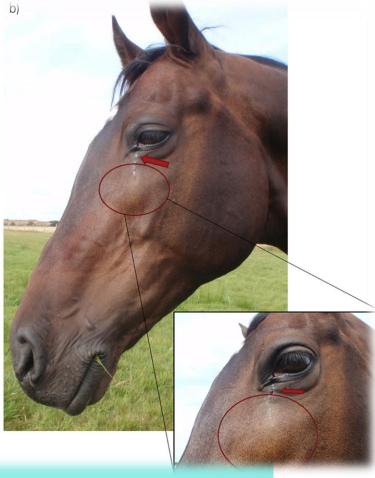
The visual assessment alone will hand a great deal of information immediately and will lead the way to how

the physical contact and assessment may continue.

The carriage and general active mobility, along with the lines of the head can indicate comfort in movement and therefore constitutional benefits dependent on the stimulus of easy movement indicating good flow space.

The obvious lumps, indentations, scars, cranial torsions, discharge, infection and inflammation, poor condition and aspects of energy can be measures of what is a local problem through trauma, or extrinsic manifestation from other regions metabolically and constitutionally.





The head intrinsically houses the brain and central nervous system components, major vascular vessels and neural elements that innervate the periphery. Consideration of the main elements and their pathways is imperative in the provision of optimal support to organs and musculoskeletal framework.

The head is important in navigation, acceleration and counterbalancing in pivotal movement particularly in situations of security. These inclusive thoughts gain perspective universally regarding approach, contact and possibilities of outcome in view of treatment and management.





Movement remains the horse's best asset, and the ability to do so from multiple stand points makes the quest, from an osteopathic treatment approach a stimulating matter composed multidisciplinary intervention/s that will involve the mechanics of structure, the functional state of muscle and connective tissue. the constitutional integrity viscerally and the fluid dynamic ability which is paramount from all aspects along with the neural innervation.

The elongated head which accounts for 10% of body weight contains a myriad of paranasal canals, turbinates. sinus foramina, cranial membranous and fibrous articulations. connective tissue and channels for vascular circulation and neural pathways. The symmetry of the head within itself will be a key feature in how these mechanisms effect and maintain function.

From an osteopathy perspective the head of the horse will never be assessed in isolation. The cervical spine to the thoracic outlet, the chest and forelimbs, withers and shoulder blades to the start of the proximal thoracic region will play a role in the foundational support and pivotal mechanics that develop ability or influence dysfunction. Therefore, a frontal 1/3rd of the horse will at least come under inspection when understanding health parameters of the head.



The assessment will lead the way to treatment. The external head examination will cover the condition of the muzzle, shape of the frontal bone, position of the mandible and the temporomandibular joints (TMJ), the parietal and occipital bones and membranous connections symmetry of articulation. The level and condition of the eyes, ears, and forelock. The nostrils and oral cavity, oesophageal contours and exit foramina and pathways of major blood vessels and neural for tracts blockage and impingement.

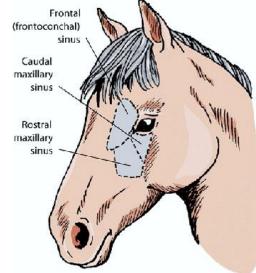
The development of cranial torsions may play a major role in poor systemic and functional, mechanical conditions whether from trauma proximally or further distal influence.

The approach to treatment and whether the treatment will begin directly on the head or start distally towards the head may depend on symptoms of systemic infection, blockage both vascular and neural, trauma or mechanical restriction.

The level of tolerance and chronicity may also dictate the most effective, subtle approach to enter and create optimal efficacy with confidence.

The ability to breath, chew and drink freely are obvious contingencies in the hypothesis of immediate and median term outcomes, hence the broad spectrum of assessment coupled with direct and indirect treatment intervention.

One of the most effective interventions in the initial stages of melding can be opening the head and sinus cavities by entering the oral cavity from the front under the muzzle or from the side between the teeth onto the This soft palate. can immediately release neural tension and spasm which can then lend to further direct structural and functional elements. This can followed with the various cranial treatments that will involve the unwinding of long held torsions and distortion of fascial connective tissue which can maintain chronic static pressure.







The TMJ is usually a very important joint to maintain articulatory integrity due the amount of work it performs and when dysfunctional can play a major role in more complex regional Through the intervention of contact using grams of pressure through lines of transitional connective tissue release of these mechanics can have profound effects locally and broadly throughout the

The access to some of the major vessels and peripheral nerves will be found craniodorsally. The opening of these pathways can be paramount for all musculoskeletal and visceral

rest of the cranial vault.

function and effect.

thoracic outlet. neck. shoulders, forelimbs, and all organs cranial to the diaphragm should be assessed and addressed for maximum support of the head and efferent / afferent conduction of systemic regulation. This will also set the platform for effective hind end energy transfer for maximum mobility.

Once the structures from the diaphragm to the neck have been treated, access to more intricate work on the head can take place with a lot more measured efficacy. The release of the cranial joints, opening of the sinus canals, improved respiratory mechanics and often improved endocrine effect through the higher centres of the brain can start to move the horse to another level of regulation and condition.

Whether the problem is acute or chronic, traumatic, or longdevelopment osteopathic approach will be to remove static pressure and blockages stimulating dynamic pressure while increasing flow for circulation metabolism. The opening of pathways, thoroughfare and unwinding transitional regions of connective tissue can reduce mobility,

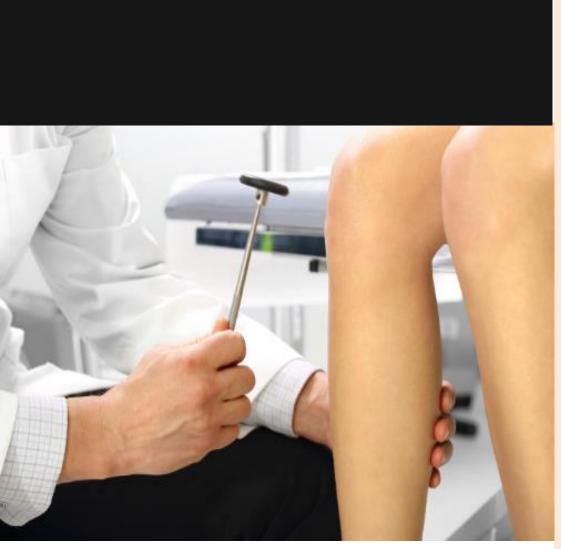
circulation, enhancing nutritional elements and improved productivity towards condition maintaining "The Rule of The Artery" supreme.

Dr. James C. Phillips

Equine Osteopath







Marquee Health

Nerve of Note Innovation

Dermatome and

Myotome

Akriti Kafle

Nursing Student & Receptionist, Marquee Health Clinic





Embryology

Dermatomes and myotomes both arise from somites, which are divisions of the body of an embryo. Somites are paired structures which run cephalocaudally (along the head-to-toe axis of the body).

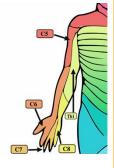
Dermatomes

A dermatome is an area of skin supplied by a single spinal nerve.

If we imagine the human body as a map, each dermatome represents the area of skin supplied with sensation by a specific nerve root.

When assessing sensation, areas close to dermatomal boundaries should be avoided to minimise the risk of misinterpretation. The lists below describe locations that can be used to assess the dermatomes of the head, upper limb, torso, and lower limbs.

Upper limb dermatomes



Dermatomal map of the whole body

Dermatomes of the head

Trigeminal nerve (CN V)

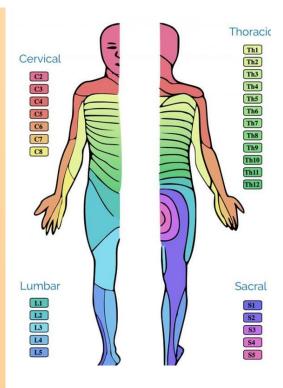
- V1: ophthalmic branch the lateral aspect of the forehead
- V2: maxillary branch
 the cheek
- V3: mandibular branch the lower jaw (avoid the angle of the mandible as it is supplied by C2/C3)

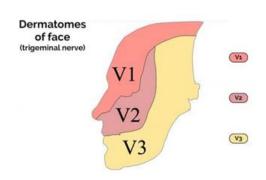
Other

- C2: 1-2 cm lateral to the occipital protuberance
- •C3: The supraclavicular fossa in the midclavicular line.

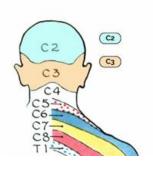
Dermatomes of the upper limb

- C4: over the acromioclavicular joint.
- C5: the lateral aspect of the lower edge of the deltoid muscle (known as the "regimental badge").
- C6: the palmar side of the thumb.
- C7: the palmar side of the middle finger.
- C8: the palmar side of the little finger.
- T1: the medial aspect antecubital fossa, proximal to the medial epicondyle of the humerus.



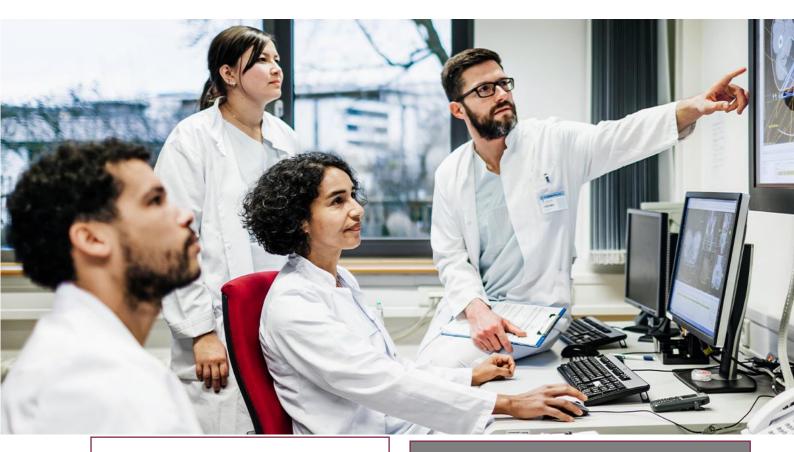


Dermatomes of the head





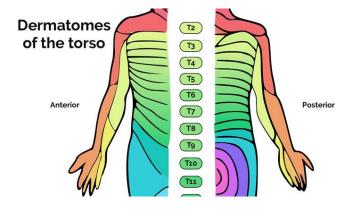




Dermatomes of the torso

- T2: the apex of the axilla.
- T3: the intersection of the midclavicular line and third intercostal space.
- T4: the intersection of the midclavicular line and the fourth intercostal space at the level of the nipples.
- T5: the intersection of the midclavicular line and the fifth intercostal space, horizontally located midway between the level of the nipples and the level of the xiphoid process.
- T6: the intersection of the midclavicular line and the horizontal level of the xiphoid process.
- T7: the intersection of the midclavicular line and the horizontal level at one quarter the distance between the level of the xiphoid process and the level of the umbilicus.
- T8: the intersection of the midclavicular line and the horizontal level at one half the distance between the level of the xiphoid process and the level of the umbilicus.

- T9: the intersection of the midclavicular line and the horizontal level at three-quarters of the distance between the level of the xiphoid process and the level of the umbilicus.
- T10: the intersection of the midclavicular line, at the horizontal level of the umbilicus.
- T11: the intersection of the midclavicular line, at the horizontal level midway between the level of the umbilicus and the inguinal ligament.
- T12: the intersection of the midclavicular line and the midpoint of the inguinal ligament.

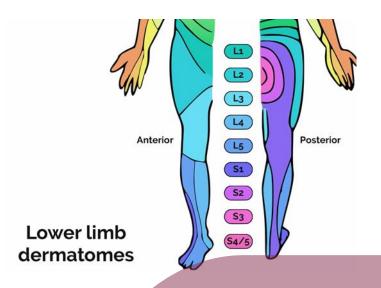






Dermatomes of the lower limb

- L1: the inguinal region and the very top of the medial thigh.
- L2: the middle and lateral aspect of the anterior thigh.
- L3: the medial epicondyle of the femur.
- L4: the medial malleolus.
- L5: the dorsum of the foot at the third metatarsophalangeal joint.
- S1: the lateral aspect of the calcaneus.
- S2: at the midpoint of the popliteal fossa.
- S3: at the horizontal gluteal crease (the horizontal crease formed by the inferior aspect of the buttocks and the posterior upper thigh).
- S4/5: the perianal area.



Myotomes

A myotome is a group of muscles innervated by a single spinal nerve.

There are 31 spinal nerves. Each vertebrae have a spinal nerve. The nerves are categorized by the vertebra which house them. There are:

8 cervical nerves, 12 thoracic nerves, 5 lumbar nerves, 5 sacral nerves, 1 coccygeal nerve.

16 of these 31 nerves has a specific myotome that controls voluntary muscle movement.

Most muscles in the limbs receive innervation from more than one spinal nerve root and are hence comprised of multiple myotomes. For example, the biceps brachii muscle flexes the elbow. It is innervated by the musculocutaneous nerve, which is innervated by C5, C6 and C7 nerve roots. All three of these spinal nerve roots can be said to be associated with elbow flexion.





This list details some important myotome nerve roots and the actions that their associated muscles produce:

C4: shoulder shrugs

C5: shoulder abduction and external rotation; elbow flexion

C6: wrist extension

C7: elbow extension and wrist flexion

C8: thumb extension and finger flexion

T1: finger abduction

L2: hip flexion

L3: knee extension

L4: ankle dorsiflexion

L5: big toe extension

S1: ankle plantarflexion

S4: bladder and rectum motor supply

Purpose: Myotome testing is an essential part of neurological examination when suspecting radiculopathy. Muscle strength in a particular myotome may help in identifying at which level a nerve root compromised. Testing of myotomes, in the form of isometric resisted muscle testing, gives information about the level in the spine where a lesion may be present. During myotome testing, you are looking for muscle weakness of a particular group of muscles. Results may indicate lesion to the spinal cord nerve root, or intervertebral disc hemiation pressing on the spinal nerve roots.

Technique

Begin by asking the client to perform a movement as per instructions and hold an isometric contraction against therapist resistance for a count of 5.

C5- Shoulder abduction Ask the person to raise both their arms to the side of them simultaneously as strongly as then can while the examiner provides resistance to this movement. Compare the strength of each arm.

C6- Elbow flexion Test the strength of lower arm flexion by holding the person's wrist from above and instructing them to "flex their hand up to their shoulder". Provide resistance at the wrist. Repeat and compare to the opposite arm. This tests the biceps muscle. Test the strength of wrist extension by asking the person to extend their wrist while the examiner resists the movement. This tests the forearm extensors. Repeat with the other arm.

C7- Elbow extension Ask the person to extend their forearm against the examiner's resistance. Begin their extension from a fully flexed position because this part of the movement is most sensitive to a loss in strength. This tests the triceps. Note any asymmetry in the other arm.







C8- Finger Flexion Examine the person's hands. Look for intrinsic hand, thenar and hypothenar muscle wasting. Test the person's grip by having the person hold the examiner's fingers in their first tightly and instructing them not to let go while the examiner attempts to remove them. Normally the examiner cannot remove their fingers. This tests the forearm flexors and the intrinsic hand muscles. Compare the hands for strength asymmetry. Finger flexion innervated by the C8 nerve root via the median nerve.

Finger abduction & adduction Test the intrinsic hand muscles once again by having the person abduct or "fan out" all their fingers. Instruct the person to not allow the examiner to compress them back in. Normally, one can resist the examiner from replacing the fingers. Finger abduction or "fanning" is innervated by the T1 nerve root via the ulnar nerve.

C8 & T1- Thumb Opposition To complete the motor examination of the upper extremities, test the strength of the thumb opposition by telling the person to touch the tip of their thumb to the tip of their pinkie finger. Apply resistance to the thumb with your index finger. Repeat with the other thumb and compare. Thumb opposition is innervated by the C8 and T1 nerve roots via the median nerve.

- L1 & L2: Hip Flexion Proceeding to the lower extremities, first test the flexion of the hip by asking the person to lie down and raise each leg separately while the examiner resists. Repeat and compare with the other leg. This tests the iliopsoas muscles.
- L3 Test extension at the knee by placing one hand under the knee and the other on top of the lower leg to provide resistance. Ask the person to "kick out" or extend the lower leg at the knee. Repeat and compare to the other leg. This tests the quadriceps muscle.
- **L4**: Ankle Dorsiflexion Test dorsiflexion of the ankle by holding the top of the ankle and have the person pull their foot up towards their face as hard as possible. Repeat with the other foot. This tests the muscles in the anterior compartment of the lower leg.
- **L5**: Great toe extension Ask the person to move the large toe against the examiner's resistance "up towards the patient's face". This tests the extensor halluces longus muscle.
- **S1:** Ankle plantar flexion and eversion/knee flexion Holding the bottom of the foot, ask the person to press down as hard as possible. Or in standing rise onto the ball of their foot. Repeat with the other foot and compare. This tests the gastrocnemius and soleus muscles in the posterior compartment of the lower leg.
- **S2:** Test flexion at the knee by holding the knee from the side and applying resistance under the ankle and instructing the person to pull the lower leg towards their buttock as hard as possible. Repeat with the other leg. This tests the hamstrings.





Description of the classic presentation of disc herniations at various spinal levels.

Level	Nerve	Dermatome	Myotome	Reflex
	Root			
C2/C3	C3	Anterior neck and posterior neck	Lateral neck press	None
C3/C4	C4	Nape and anterior shoulder	Shoulder shrug	None
C4/C5	C5	Deltoid anterior arm to base of thumb	Biceps	Biceps
C5/C6	C6	Lateral arm thenar eminence, thumb, and index finger	Wrist extensors	Brachioradialis
C6/C7	C7	Posterior arm to index, long, and ring fingers	Triceps	Triceps
C7/C8	C8	Inner aspect of forearm and hand, lateral three fingers	None	
T12/L1	L1	Iliac crest and groin	Psoas	None
L1/L2	L2	Anterior thigh	Psoas	None
L2/L3	L3	Anterior lower thigh and shin	Quadriceps	Knee jerk
L3/L4	L4	Medial calf and big toe	Tibialis anterior	Knee jerk
L4/L5	L5	Lateral leg and anterior foot	Extensor hallucis longus	Extensor digitorum brevis
L5/S1	S1	Lower half of posterior calf, sole of foot, and lateral two toes	Flexor hallucis longus; gastrocnemius	Achilles
L5/S1	S2	Posterior thigh, sole, and plantar aspect of heel	Hamstrings	Lateral hamstrings







Neurological Examinations

Clinical Signs:

- Scars: may provide clues regarding previous spinal, axillary, or upper limb surgery.
- Wasting of muscles: suggestive of lower motor neuron lesions or disuse atrophy.
- Tremor: there are several subtypes including resting tremor and intention tremor.
- Fasciculations: small, local, involuntary muscle contraction and relaxation which may be visible under the skin. Associated with lower motor neuron pathology (e.g., amyotrophic lateral sclerosis).
- Pseudo athetosis: abnormal writhing movements (typically affecting the fingers) caused by a failure of proprioception.
- Chorea: brief, semi-directed, irregular movements that are not repetitive or rhythmic but appear to flow from one muscle to the next. Patients with Huntington's disease typically present with chorea.
- Myoclonus: brief, involuntary, irregular twitching of a muscle or group of muscles. All individuals experience benign myoclonus on occasion (e.g., whilst falling asleep) however persistent widespread myoclonus is associated with several specific forms of epilepsy (e.g., juvenile myoclonic epilepsy).
- Tardive dyskinesia: involuntary, repetitive body movements which can include protrusion of the tongue, lipsmacking and grimacing. This condition can develop secondary to treatment with neuroleptic medications including antipsychotics and antiemetics.
- Hypomimia: a reduced degree of facial expression associated with Parkinson's disease.
 - Ptosis and frontal balding: typically associated with myotonic dystrophy.
- Ophthalmoplegia: weakness or paralysis of one or more extraocular muscles responsible for eye movements.

Ophthalmoplegia can be caused by a wide range of neurological disorders including multiple sclerosis and myasthenia gravis.



Pronator drift

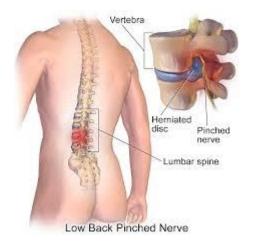
Assessment

Checking for pronator drift is a useful way of assessing for mild upper limb weakness and spasticity:

• This test is done by holding the arms in front of us with the palms facing upwards for 20-30 seconds and repeat it with the closed eyes to observe for any pronation.











Interpretation

If the forearm pronates, with or without downward movement, the patient is considered to have pronator drift on that side. The presence of pronator drift indicates a contralateral pyramidal tract lesion. Pronation occurs because, in the context of an UMN lesion, the supinator muscles of the forearm are typically weaker than the pronator muscles.

Tone

Assessment

Assess tone in the muscle groups of the shoulder, elbow, and wrist on each arm, comparing each side as you go:

- Support the person's arm by holding their hand and elbow then ask the person to relax when you fully take control of their arm to move the muscle groups of shoulder, elbow, and wrist through their full range of movements.
- We can feel and assess foe spasticity, rigidity, cogwheeling, hypotonia as abnormalities.

Spasticity vs rigidity

Spasticity is associated with pyramidal tract lesions (e.g., stroke) and rigidity is associated with extrapyramidal tract lesions (e.g., Parkinson's disease). Spasticity and rigidity both involve increased tone, so it's important to understand how to differentiate them clinically.

Spasticity is "velocity-dependent", meaning the faster you move the limb, the worse it is. There is typically increased tone in the initial part of the movement which then suddenly reduces past a certain point (known as "clasp knife spasticity"). Spasticity is also typically accompanied







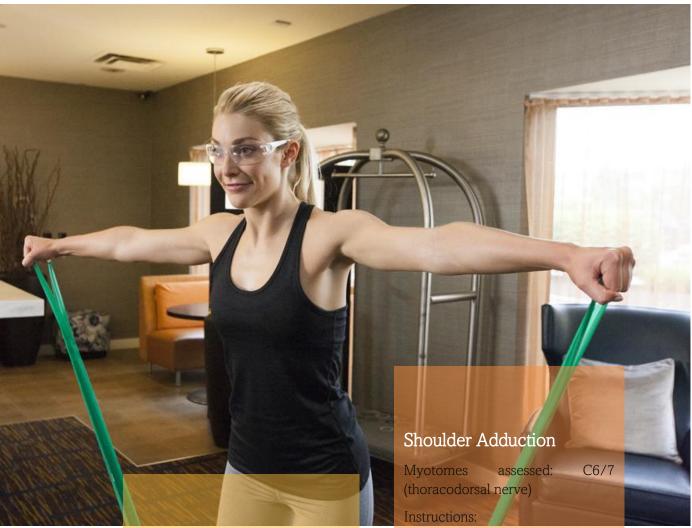
The assessment of muscle power is a key part of a neurological examination of the upper or lower limbs.

MRC Muscle Power Scale

Score	Description	
0	No contraction	
1	Flicker or trace of contraction	
2	Active movement, with gravity eliminated	
3	Active movement against gravity	
4	Active movement against gravity and resistance	
5	Normal power	







Shoulder

Shoulder Abduction

Myotome assessed: C5 (axillary nerve)

Instructions:

- 1. Ask the person to flex their elbows and abduct their shoulders to 90°: "Bend your elbows and bring your arms out to the sides like a chicken."
- 2. Apply downward resistance on the lateral side of the upper arm whilst asking the person to maintain their arm's position: "Don't let me push your shoulder down."

- 1. Ask the person to Adduct their shoulders to 45° bringing their elbows closer to their body: "Now bring your elbows a little closer to your sides."
- 2. Apply upward resistance on the medial side of the upper arm whilst asking the person to maintain their arm's position: "Don't let me pull your arms away from your sides."





Elbow

Elbow flexion

Myotomes assessed: C5/6 (musculocutaneous and radial nerve)

Instructions:

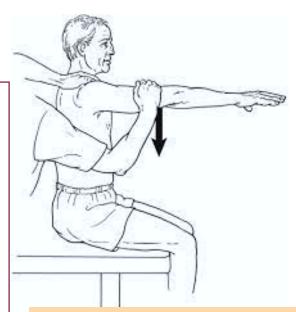
- 1. Ask the person to flex their elbow: "Put your hands up like a boxer."
- 2. Apply resistance by pulling the forearm whilst stabilising the shoulder joint: "Don't let me pull your arm away from you."

Elbow extension

Myotome assessed: C7 (radial nerve)

Instructions: With the person's elbows still in the flexed position, apply resistance by pushing the forearm towards the person whilst stabilising the shoulder joint: "Don't let me push your arm towards you."





Wrist

Wrist extension

Myotome assessed: C6 (radial nerve)

Instructions:

- 1. Ask the person to hold their arms out in front of them with their palms facing downwards: "Hold your arms out in front of you, with your palms facing the ground."
- 2. Ask the person to make a fist and extend their wrist joints, keeping their wrists in this position whilst you apply resistance: "Make a fist, cock your wrists back and don't let me pull them downwards."

Wrist flexion

Myotomes assessed: C6/7 (median nerve)

Instructions:

With the person still holding their arms out in front of them, now ask them to flex their wrist joints and keep them in this position whilst you apply resistance: "Ok now point your wrists downwards and don't let me pull them up."





Fingers

Finger extension

Myotome assessed: C7 (radial nerve)

Instructions: Ask the person to hold their fingers out straight whilst you apply downwards resistance: "Hold your fingers out straight and don't let me push them down."

Finger Abduction

Myotome assessed: T1 (ulnar nerve)

Instructions:

Ask the person to abduct their fingers against resistance. You should assess abduction in FDI and ADM separately using the equivalent finger of your own to apply resistance: "Splay your fingers outwards and don't let me push them together."



Thumb Abduction

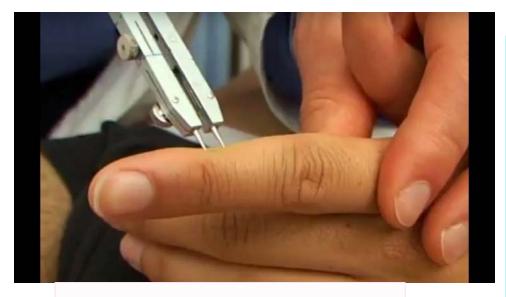
Myotomes assessed: T1 (median nerve)

Instructions:

Ask the person to turn their hand over so their palm is facing upwards and to position their thumb over the midline of the palm. Advise them to keep it in this position whilst you apply downward resistance with your own thumb: "Point your thumbs to the ceiling and don't let me push them down."







Sensation test:

The key points to examine sensation are listed a s follows:

- 1. Check at least one method each from the dorsal columns and spinothalamic tracts.
- 2. Ensure that the eyes are closed for the assessment.
- 3. Demonstrate the normal sensation on the person's sternum.
- 4. Assess sensation across each of the upper limb dermatomes, comparing left to right at equivalent regions as we progress.

Dermatomes

It is important to avoid assessing sensation close to dermatomal boundaries to minimize risk of misinterpretation. Here are some locations we can use to assess each of the upper limb dermatomes:

- C5: the lateral aspect of the lower edge of the deltoid muscle (known as the "regimental badge").
- C6: the palmar side of the thumb.
- C7: the palmar side of the middle finger.
- C8: the palmar side of the little finger.
- T1: the medial aspect antecubital fossa, proximal to the medial epicondyle of the humerus

Light touch sensation

Light touch sensation involves both the dorsal columns and spinothalamic tracts.

- We use a wisp of cotton wool to touch a person's sternum with their closed eyes and ask them if they feel the sensation.
- Using the wisp of cotton wool, begin to assess light touch sensation across each of the upper limb dermatomes, comparing each side as we go by asking the person if it feels the same.









Pin-prick sensation

Pinprick (pain) sensation involves the spinothalamic tracts.

We repeat the previous assessment steps used for light touch sensation, but this time use a sharp end of a neuro-tip.

If loss of sensation is noted distally, test for "glove" distribution of sensory loss (associated with peripheral neuropathy) by moving distal to proximal.

Vibration sensation

Vibration sensation involves the dorsal columns.

We will need a 128 Hz tuning fork for this assessment.

- Start with tapping the tuning fork and place onto the person's sternum then grasp the ends of the tuning fork to cease the vibration. Check if the person can identify when the vibration starts and when does it stop with closed eyes.
- Repeat the same steps onto interphalangeal joint of the person's joint and both upper limbs. If vibration sensation is impaired at the interphalangeal joint of the person's thumb, continue to sequentially assess more proximal joints (e.g., carpometacarpal joint of the thumb \rightarrow elbow joint \rightarrow shoulder joint) until the person can accurately identify vibration.









Proprioception

Proprioception, also known as joint position sense, involves the dorsal columns.

- We begin this assessment at the interphalangeal joint of the thumb by holding distal phalanx of the thumb by its sides (avoid holding the nails). Demonstrate movement of the thumb "upwards and downwards" prior to the assessment whilst they watch.
- Repeat this with their eyes closed for 3-4 times randomly until they can correctly identify the joint position. Continue to sequentially assess more proximal joints (e.g., carpometacarpal joint of the thumb, wrist, elbow, shoulder).

Patterns of sensory loss

Mononeuropathies result in a localised sensory disturbance in the area supplied by the damaged nerve.

Peripheral neuropathy typically causes symmetrical sensory deficits in a 'glove and stocking' distribution in the peripheral limbs. The most common causes of peripheral neuropathy are diabetes mellitus and chronic alcohol excess.

Radiculopathy occurs due to nerve root damage (e.g., compression by a herniated intervertebral disc), resulting in sensory disturbances in the associated dermatomes.



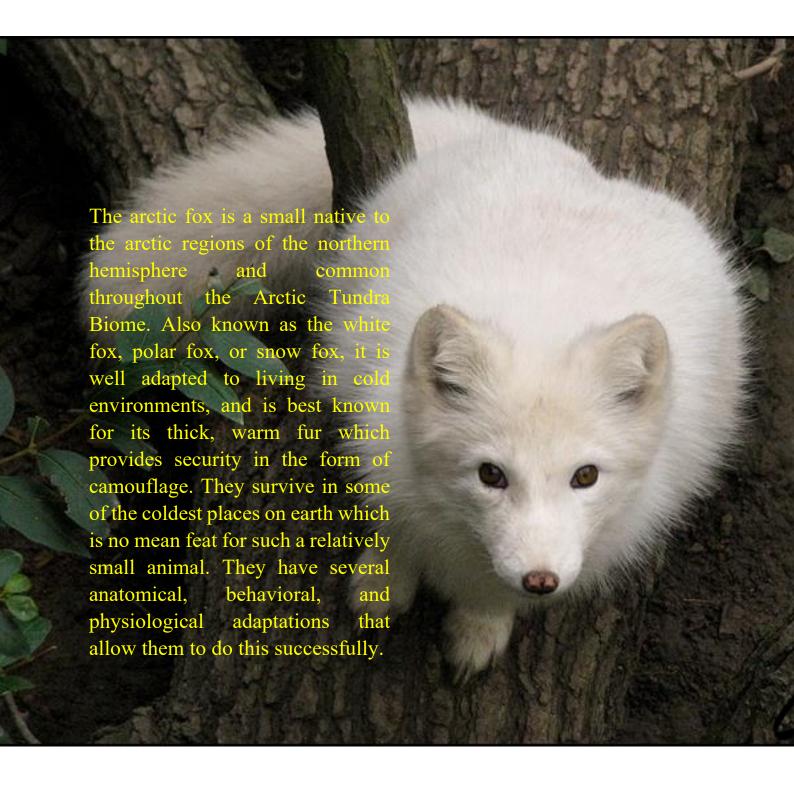




Osteopath, Director of Marquee Health Clinic











Origins

The origins of the arctic fox have been described by the "out of Tibet" hypothesis. On the Tibetan Plateau, fossils of the extinct ancestral arctic fox from the early Plioene were found along with many other precursors of modern mammals that evolved. The Tibetan plateau experienced tundra-like conditions during the Pliocene and harboured cold-adapted mammals that later spread to North America and Eurasia 2.6 million years ago.

Size

The average size from head and body length of a male is 55 cm, while the female averages 52 cm. the tail, which is very fluffy, is about 30 cm in both sexes. The height at the shoulder is 25 – 30 cm. on average the male weighs 5-6 kg, while the female will average 2.5-3 kg.



Physiology

The arctic fox contains advantageous genes to remain impervious and to overcome extreme cold and starvation periods. There have been two genes identified, glycolipid transfer protein which is involved in fatty acid metabolism, V-akt murine and thymoma viral oncogenehomolog 2, which pertains to the glucose metabolism and insulin signalling.

The average mass specific BMR (basal metabolic rate) and total BMR are 37% and 27% lower in the wither than the summer. The arctic fox decreases its BMR via metabolic depression in the winter to conserve fat storage and minimize energy requirements. The lower critical temperature of the arctic fox is believed to be at -7degrees Celsius in Winter and 5 degrees Celsius in summer.

About 22% of the total body surface area of the artic fox dissipates heat readily, compared to other subspecies such as the red fox at 33%. The regions with the greatest heat loss are the nose, ears, legs, and feet, which is useful in the summer for thermal regulation. The arctic fox has a beneficial mechanism in their nose for evaporative cooling, like other canines, which keeps the brain cool during the summer and physical exertion.

The thermal conductivity of the arctic fox fur in the summer is the same in the summer and winter months, however, the thermal conductance of the arctic fox in the winter is lower than the summer since fur thickness increases by 140%. In the summer, the thermal conductance of the arctic fox's body is 114% higher than winter, but their core body temperature is constant year – round.





One way that arctic foxes regulate their body temperature is by utilising a counter current heat exchange in the blood of their legs. They can constantly keep their feet above the tissue freezing point (-1 degree Celsius) when standing on cold substrates without losing mobility or feeling pain. This is achieved by increasing vasodilation and blood flow to a capillary rete in the pad surface, which is in direct contact with the snow rather than the entire foot. They selectively vasoconstrict blood vessels in the centre of the foot pad, which conserves energy and minimises heat loss. Arctic foxes maintain the temperature in their paws independently from the core temperature. If the core temperature drops, the pad of the foot will remain constantly above the tissue freezing point.



Vulpus lagopus is a "true fox" belonging to the genus Vulpus of the fox tribe Vulpini, which consists of 12 extant species. It is classified under the subfamily Caninae of the canid family Canidae. Genetic evidence places the arctic fox in the genus Vulpes along with most other foxes. The arctic fox generally eats any small animal they can find, including lemmings, voles, other rodents, ringed seal pups, waterfowl, hares, birds, eggs, fish, and carrion. They also scavenge on carcasses left by predators such as wolves and polar bears. They also eat berries, seaweed, insects, and other small invertebrates. The arctic fox survives harsh winters and food scarcity by either hoarding food or storing body fat, which is deposited subcutaneously and viscerally.





Reproduction

The spring is when attention switches to reproduction and a home for their potential offspring. Breeding takes place in April and May, and the gestation period is about 52 days. Litters may contain up to 25 pups. The size of the litter is often determined through the availability of food often not reproducing when supplies are scarce. The young emerge from the den when 3-4 weeks old and are weaned by 9 weeks of Arctic foxes age. primarily monogamous and both parents will care for the Complex social offspring. structures can be developed with larger packs of foxes consisting of breeding and non-breeding males females to guard territory more proficiently to increase pup survival. The offspring often remain within their parents' territory until one year of age.

Habitat

They live in large dens in frost free slightly raised ground. These are often complex tunnels covering as much as 1,000 sqm, and are often in eskers, long ridges of sedimentary material deposited in formerly glaciated regions. These dens may be in existence for many decades and are used by many generations of foxes.

Arctic foxes tend to select dens that are easily accessible with many entrances, and that are clear from snow and ice making it easier to burrow in. they build and choose dens that face southward towards the sun, making the den warmer. The den is often maze like for protection against predator evasion and a quick escape. Natal dens are typically found in rugged terrain, which may provide more protection for the offspring. Shelter quality is more important to the arctic fox than the proximity of Spring prey to the den.

The arctic fox has a circumpolar distribution and occurs in arctic tundra regions in northern Europe, northern Asia, and North America. Its range includes Greenland, Iceland, Fennoscandia, Svalbard, Jan Mayen and other islands in the Barents Sea, northern Russia, islands in the Bering Sea, Alaska, and Canada as far south as Hudson Bay. It mostly inhabits tundra and pack ice, but is also present in Canadian boreal forests, and the Kenai peninsula in Alaska. They are found at elevations up to 3,000m above sea level and have been located on sea ice close to the north pole. The arctic fox is the only land mammal native to Iceland.





Adaptations

The arctic fox lives in some of the most frigid conditions on the planet, but they do not start to shiver until the temperature drops to -70 degrees Celsius. Among its adaptations for survival in the cold is its dense, multilayered pelage, which provides excellent insulation. Additionally, the arctic fox is the only canid whose foot pads are covered in fur.

There genetically are two distinct coat colour morphs; white and blue. The white morph has seasonal camouflage, white in winter and brown along the back with light grey around the abdomen in summer. The blue morph is often a dark blue, brown, or grey colour year-round. Although the blue allele is dominant over the white allele, 99% of the arctic fox population is the white morph.

The artic fox has a low surface area to volume ratio, as evidenced by its generally compact body shape, short muzzle and legs, and short thick ears. Since less surface area is exposed to the arctic cold, less heat escapes form its body.







Sensory modalities

the arctic fox has a functional hearing range between 125 Hz-16 kHz with a sensitivity that is < 60 dB in air, and an average peak sensitivity of 24 dB at 4kHz. Overall, the arctic foxes hearing is less sensitive than the dog and the kit fox. The arctic fox can easily hear lemmings burrowing under 4-5 inches of snow. It has a keen sense of smell. They can smell a carrion or predators up to 40 kms away.



Migrations and travel

During the winter 95% of arctic foxes utilise commuting trips, which remain within the fox's home range. Commuting trips last less than three days and occur around three times a month. Nomadism is found in 4% of the foxes, and loop migrations are the least common.

Arctic foxes in Canada that undergo nomadism and migrations voyage from the archipelago to Greenland and northwestern Canada. When closer to goose colonies they are less likely to migrate. When experiencing low density populations of lemmings, they are more likely to migrate. Migratory foxes have a >3 greater mortality rate.







Conservation and status

the conservation status is generally good with several hundred thousand estimated in total. The IUCN lists the arctic fox as least concern. However, in the Scandinavian mainland population is acutely endangered, despite being protected for several decades. The population is indicative of other animal prey ecological cycles, habitat, and predators.

The natural predators of the arctic fox include golden eagles, polar bears, wolverines, red foxes, and grizzly bears.

The arctic fox is losing ground to the red fox due to climate change and habitat reducing camouflage capability and the decline in the grey wolf population which is the main predator of the red fox.

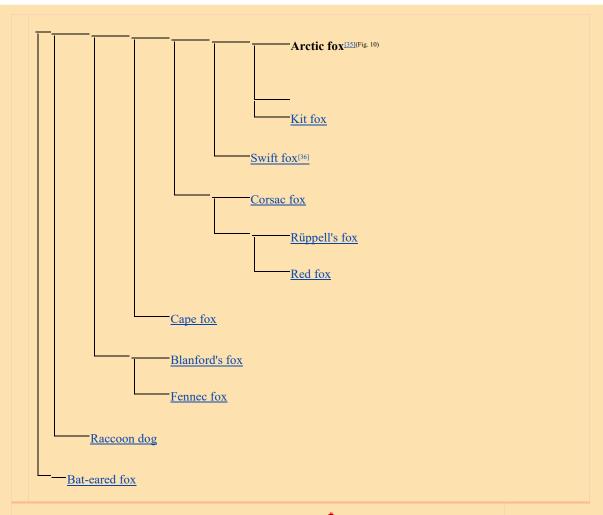
There has also been parasitic infestation in areas of Russia which has resulted in mange currently being treated through drugs with results uncertain. The protection through the Scandinavian countries from hunting due to fur prices has had minimal effect on decline of numbers through that region. The main conservation regime remains ecological balance of prey and predators with elimination of hunting for their fur.











Scientific classification.	
Kingdom:	Animalia
Phylum:	Chordata
Class:	Mammalia
Order:	Carnivora
Family:	Canidae
Genus:	Vulpes
Species:	V. lagopus
Binomial name	

















Sel-Roti does not need any introduction in Nepali cuisine - it is one of the most "unique Nepali" dishes, a sweet rice bread, distinct from any other breads of the world. It is Nepali traditional bread. Sel-Roti are rounded edibles, compared to the shape of round donuts. However, Sel-Rotis are thin and bigger in size and has a crispy texture. It is prepared by grinding soaked rice to create a thick batter. It is then mixed with sugar, clarified butter, water. It is a popular as a festive bread for many different occasions. Sel-Roti is made and served though out Nepal in the festival of Tihar (Dipawali), during wedding parties and other ceremonies. It is essential food in most of Nepalese cultural and traditional events. Sel-Roti is served as confectionery bread generally with tea and/ or other hot beverages or with curry and pickles.

Traditional Nepali cooks grind the soaked rice in a heavy rectangular stone mortar and pestle (silauto-baccha), which produces a perfectly texture batter, because it provides the right pressure while grinding. These days people grind the rice in a blender for convenience.







Ingredients

- ♠ 2 cups uncooked rice or you can buy instant rice flour from market
- ♠ 3 tbsp sugar
- ♠ 3tbsp ghee (clarified butter)
- Water as required to make the batter
- ♠ 500 ml of oil

Optional ingredients

- o Flour one cup
- o Backing soda to make sel-roti rise- ½ tbsp
- o Cardamom powder

Method of Preparation

- 1) Soak the rice at least 4 hours or overnight. Drain and place in a blender or food processor with the sugar & ghee adding up to 1 & ½cups of water to make a semithick puree.
- Remove the batter and place in a mixing bowl and mix with hand continuously for 2 to 3 mins to make it fluffy semi-thick smooth batter. Cover and leave it for 15 minutes.
- 3) When the batter is well rested, mix it again with your hand until all the ingredients in the batter are fully mixed. The consistency should be like thick pourable heavy cream. If the batter is too runny, add 1 to 2 tablespoons of rice flour and mix well. If it seems too thick, gradually add 1 to 2 tablespoons of water, and mix well.
- 4) Heat the oil in a kadai or flat pan over medium-high heat until it is hot. Test the readiness by placing a small drop of batter into the hot oil. If it bubbles and rises to the surface immediately, it is ready.
- 5) Pour about 1/4 cup of batter into the oil slowly, making a large circle. You can use your hand, or a squeezable paper or plastic cup or







Ways of Improving Mental Health

All individuals know the importance of being healthy modern and well. In society, mental health awareness among people improved however, has more work must be done to make people understand that mental health is just as **important** physical as health.

Below are some of the ways to improve mental health and wellbeing

Eat healthy food

Consume well balanced diet and avoid drugs and alcohol. Unhealthy eating habits affects physical health which indirectly can have negative impact on mental health. Having a healthy and well-balanced diet containing fats, fibre, and nutrients will help to manage stress and anxiety levels, improve sleep, positively impact ability to concentrate and help you feel better in general. Reducing excessive alcohol and/or drug consumption can help to improve mental health as these substances might affect the way your brain feels and works, harming your ability to think, feel, create, and even make decisions.

Have enough sleep

Always try to sleep at regular early time. Several health problems including both physical and mental are associated with sleep. Sleep problems are sometimes caused by psychological or psychiatric issues, however, not getting enough sleep itself can also exacerbate preexisting conditions such as depression, stress, and anxiety. Having enough sleep every night and going to bed early is one of the best ways to live a healthy life.







Limiting use of media and technology on daily basis

It is difficult to reduce using media and technology in daily life as almost everyone cannot imagine life without technology and medias. Excessive use of social media and other media including over following of news can have negative impact on mental health. It is important to limit use of these and people must be aware of using it in appropriate manner. Reducing its usage can not only improve mental wellbeing but also increase socialisation.

Importance to friends

Always try to socialise and maintain relationship with friends. Having good friends can always prevent you feeling lonely and having negative thoughts. Making friends and connecting people is an important part of life.

Exercise regularly

Exercise or other forms of physical activity enhance body and mind just like healthy diet and sleep. Keeping active by either playing sport, going for long walks, practicing yoga, dancing, going to the gym, or running, not only help to reduce stress and anxiety but also increase self-esteem. As doing exercise might not be easy for everyone, always try to find different ways to motivate you.











enjoySet time for the activ

Do something you

Set time for the activities that you love to do such as reading, dancing, gardening, singing, painting, and others. It contributes to emotional wellbeing by alleviating stress and making your mind focus on something else that makes you happy.

Sit on the sunlight

Soak up the rays of sunlight for some time

Ask for help in need

All individuals need help in their life. There is nothing wrong with seeking help for your mental health and wellbeing. Whether you want to share with you friend or feel the need to get the support of professional, it is always a healthy thing to seek help. Now, people are realising how important and normal it is to seek for help.



Sumita Gurung

Front Office Receptionist & Social Support work







Every year we see an increase of patients whose immune system is so weak that they constantly struggle to avoid getting sick. Understandably, there is also a growing reluctance to keep popping pills and antibiotics which alleviate the symptoms without addressing the inner cause of the dysfunction which is the inability of the body to defend itself against pathogens. So, what is the alternative? It pays to remember that Traditional Chinese Medicine originated over 3000 years ago as a preventative form of therapy. In this Oriental medicine framework, one is trained to treat imbalances in the body well before sickness manifest itself. According to legend, in these ancient times, the locals used to financially reward their traditional practitioner to keep them in good health, with the understanding that the payments would stop as soon as they got sick.





Recent research has now confirmed the veracity of this ancient tale. In two medical studies conducted by reputable universities in Japan (1) and Portugal (2), there was clear evidence that acupuncture could boost the number of natural killer (NK) cells and augment neural immune response in both healthy and cancer affected patients. In another research, Japanese scientist discovered a statistically significant increase in both the number and components of leucocytes (immune cells) in patients after acupuncture treatments Finally, a team at the Royal Marsden Hospital in the UK researching the effects of acupuncture on patients with breathlessness caused by cancer found improvements in respiratory rates, oxygen saturation, pulse rate, as well as a decrease in anxiety levels at the end of the study (4).

We can better understand how inserting very fine needles under the skin can affect the body on so many different levels, when we look at the principles behind it. Chinese medicine is based on the concept that a form of energy, called Qi, travels throughout the body via a network of channels called meridians, stimulating the function of our tissues, muscles, and organs. Every inch of our body is nurtured and protected by this energy.

When it becomes depleted or blocked, physical illness, emotional imbalances, or injuries occur. There are many different forms of Qi which are acquired through breathing, eating, and from our parent at the time of our birth. The most superficial form of this energy, called Wei Qi, is the immune force which travels on a under our skin. It is our first line of defence against foreign and internal illnesses. pathogens, Chinese medical terms, the lungs are responsible for our immunity, but the kidneys and the spleen have also a strong influence on our immune strength. It one wants to obtain more than short term symptomatic relief with acupuncture, one has to accurately diagnose which organs, or channels are responsible disharmony. In short, where is the blockage or lack of supply coming from? The practitioner has many diagnostic tools at his, or her, disposal. For example, each organ is associated with a specific emotion, so one can gain valuable insight on the cause of an illness through the underlying emotional health of the patient.

Once the cause of the disharmony has been established, the practitioner needs to select which acupuncture points on the affected channels which will have the strongest influence on the body. This is where acupuncture becomes an art, and why it is so difficult to evaluate with scientific research





There are over 360 points on the body, and there are hundreds of synergetic interactions actions between specific points when they are combined with others. Hypothetically you could have half a dozen expert acupuncturists treating the same patient, and each of them would be using a different approach and point combination. Traditional Chinese medicine is more than acupuncture, it also includes Chinese herbal medicine, diet, and physical therapy like Qi Gong. When the immune problem is chronic, acupuncture will often be combined with these other modalities. While acupuncture works on restoring the energetic balance between the organs via their channels, Chinese medical herbs are classified according to their effects on the body (warming, cooling, drying, moisturizing) to treat the organs directly through the digestive system. Diet is also an important form of Oriental medicine and food items are classified like medical herbs according to their properties and effects on the body.







Qi Gong is a form of exercise designed to promote the circulation of Qi throughout the channels. It has a similar effect to acupuncture, but with a more general and widespread effect on the body. It promotes correct breathing, helping to strengthen the lungs which are the organs of immunity in Chinese Medicine. Qi Gong being a form of meditation has a calming effect on the mind. It helps combat stress built up which is one of the causes of poor immunity. There are now specific forms of medical Qi Qong developed to address illness, like cancer.

Next time you find yourself feeling years beyond your age, keep in mind, that your Chinese medical practitioner can build up your immunity, strengthen your overall health, and improve your quality of life without the side effects associated with modern medications.

Info

Yamaguchi, N, et al Evidence based Complementary and Alternative Medicine. December 2007

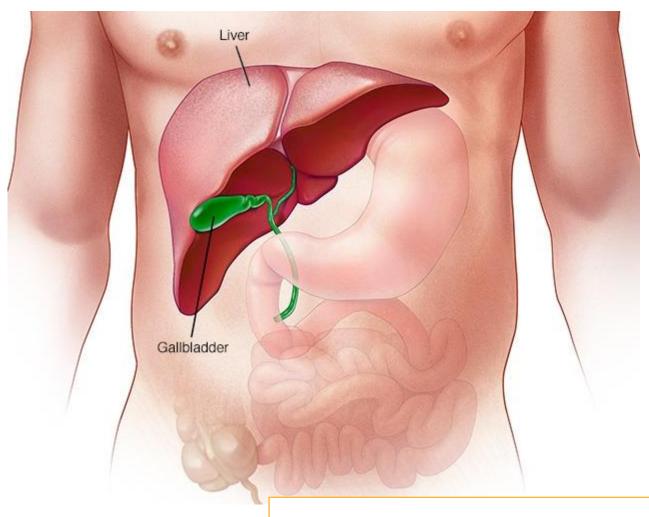
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MARQUEE HEALTH ORGAN OF IMPORTANCE

THE LIVER



Dr. James C. Phillips

Osteopathy, Director of Marquee Health Clinic





The liver is the largest gland in body weighing the approximately 1500gms in the average adult and after the skin is the second largest organ. The liver lies predominantly on the right and to the left of the upper abdominal quadrant inferior to diaphragm, which separates it from the pleura, lower lobes of the lungs, pericardium, and the heart.

The liver provides a myriad of

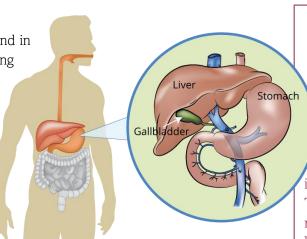
activities. In addition to these the liver stores glycogen and secretes bile through the left and right hepatic ducts, which is then stored in the gallbladder. addition to storing bile, the gallbladder

metabolic

concentrates it by absorbing water

and salts, as food arrives in the duodenum, concentrated bile is sent through the cystic and bile ducts to the duodenum.

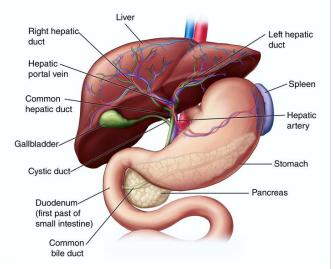
The liver is also a major lymph producing organ, with up to one-half of lymph received by the thoracic duct comes from the liver.



ANATOMY

he liver is covered by isceral peritoneum, a dense irregular connective tissue. The liver is divided into a large right lobe and a smaller left lobe, which make up the lobes and principal are divided falciform by а ligament. The accessory lobes include the posterior caudate and inferior quadrate lobe which based on internal morphology belong to the left lobe.

The falciform ligament extends from the under surface of the diaphragm between the two principal lobes to the superior surface assisting to suspend the liver. In the open border of the falciform ligament is the ligamentum teres a remnant of the umbilical vein of the foetus. The collateral coronary ligaments are parietal peritoneum that suspend the liver from the diaphragm.



Anatomy and Functions of Liver





HISTOLOGY

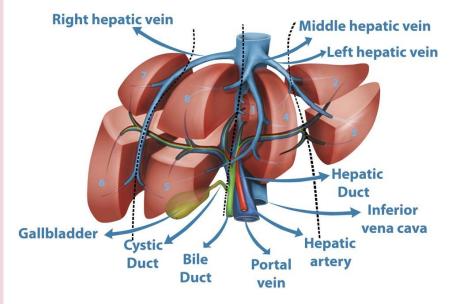
The lobes of the liver are made up of functional units called lobules. A lobule consists of specialised epithelial cells called hepatocytes, arranged in irregular interconnected plates around a central vein. Instead of capillaries the liver has sinusoids, large endothelium lined spaces, through which the blood passes. Also present in the sinusoids phagocytes which destroy worn out leukocytes and red blood cells, and other foreign matter in the venous blood draining from the gastrointestinal system.

Bile, which is secreted by hepatocytes, enters narrow intercellular canals called canaliculi which empty into ductules, which pass into bile ducts at the periphery of the hepatic lobules. The bile ducts merge and eventually form the right and left hepatic ducts, which unite on exit of the liver forming the common hepatic duct. The common hepatic duct joins the cystic duct, from the gallbladder to form the common bile duct. Bile enters the cystic duct and is temporarily stored in the gallbladder.

FUNCTION

The liver plays an essential role in nutrient metabolism, including the control and maintenance of the blood glucose level, detoxification and excretion of hydrophobic metabolites and xenobiotics.

The liver also synthesises most plasma proteins, and in digestion through synthesis biliary secretion and conservation of bile acids that are essential both for digestion and intestinal absorption of fats and other lipids including fat soluble vitamins.



Liver Surgery

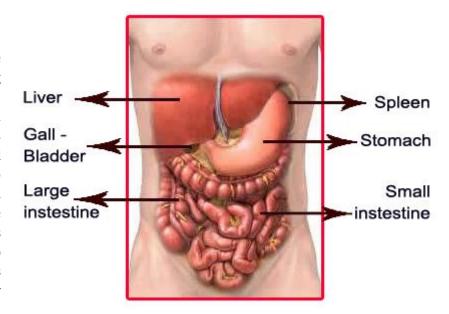


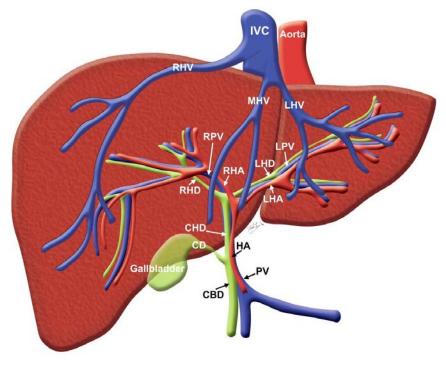
Carbohydrate metabolism, the liver is important in maintaining a normal blood glucose level. The liver can break down glycogen to glucose which is then released into the blood stream when low. The liver also converts certain amino and lactic acids to glucose, while converting sugars such as fructose and galactose into glucose. When blood glucose is high, e.g., after a meal, the liver converts glucose to glycogen and triglycerides for storge.

Lipid metabolism, hepatocytes store triglycerides, break down fatty acids to generate ATP, synthesis lipoproteins which transport fatty acids, triglycerides, and cholesterol to and from body cells. The liver synthesis of cholesterol goes to making bile salts.

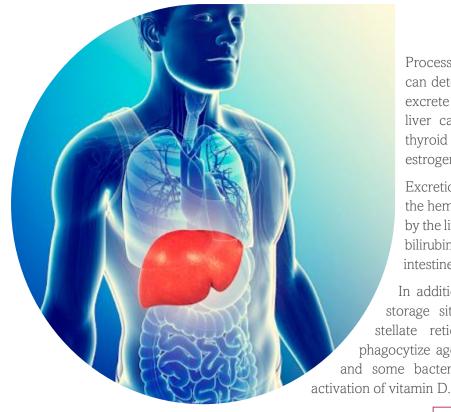
Protein metabolism, hepatocytes deaminate or remove amino acids for use in ATP production or the conversion to carbohydrates and fats. The resulting toxic ammonia is then converted into the urea, which is excreted

in urine. Hepatocytes also synthesise most plasma proteins e.g., alpha and beta globulins, albumin, prothrombin, and fibrinogen.









Processing of drugs and hormones, the liver can detoxify substances such as alcohol and excrete drugs and certain heavy metals. The liver can also chemically alter or excrete thyroid and steroid hormones such as estrogen and aldosterone.

Excretion of bilirubin, bilirubin derived from the heme of aged red blood cells, is absorbed by the liver, and secreted into bile. Most of the bilirubin in bile is metabolised in the small intestine by bacteria and eliminated in feces.

In addition to glycogen, the liver is a prime storage site for vitamins and minerals. The stellate reticuloendothelial cells of the liver phagocytize aged red blood cells, white blood cells and some bacteria. The liver also synthesises the ration of vitamin D

Hepatic Vein Oxygen-poor blood Bile Duct Hepatic Portal Vein Nutrient-rich blood TO BODY Gastrointestinal Tract

Blood supply

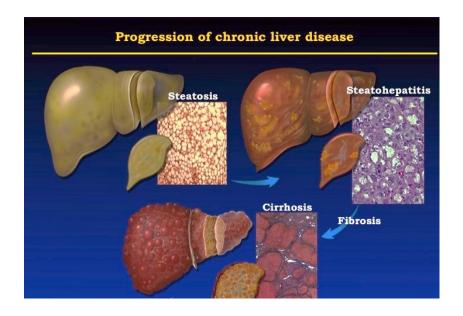
The liver receives blood from the hepatic artery which is oxygenated blood and deoxygenated blood containing newly absorbed nutrients, drugs and microbes and toxins from the gastrointestinal tract from the hepatic portal vein.

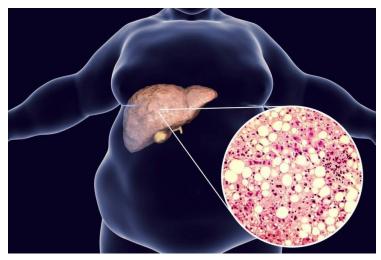
The branches of the artery and the vein carry blood into the sinusoids, where oxygen, nutrients and toxic substances are taken up by the hepatocytes. Products manufactured by the hepatocytes and nutrients required by cells are secreted back into the blood, which then drains into the central vein. Branches of the hepatic portal vein, hepatic artery, and bile duct typically accompany each other in their distribution through the liver. Collectively these tree structures are called the portal triad.





Liver Blood Flow





Whether single or additive, obesity is a significant risk factor for chronic liver disease.

PATHOLOGY

The clinical manifestations of hepatic disease are directly attributable to alterations in the metabolic, excretory, synthetic, and digestive functions of the liver. Conventional tests for hepatic disease provide information about the integrity of the hepatocytes and the status of the biliary system. Hepatic function can be assessed by estimating the excretory capacity and synthetic functions of the liver.

Because blood from the gastrointestinal tract passes through the liver as part of the hepatic portal circulation, the liver is often a site for metastasis of cancer that originates in the GI tract.

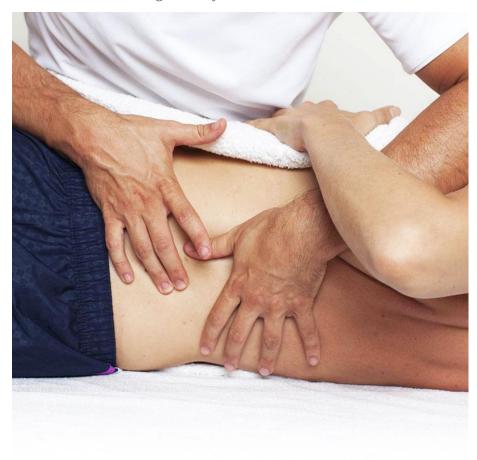
With the diverse range of metabolic and systemic functions, the incremental hepatic pathology, and the complexity of both direct and indirect affect relative to disease can become daunting. The implicit circulatory network and cellular imposition creates a system of effect to most tissue of the body. Chronic abuse of drugs, medication, alcohol, poor eating habits and a diet high in refined sugars can create an environment of meta-inflammation leading to chronic disrepair.

Hepatitis, necrosis, tumours, and cancer can all be considerations of both a direct and indirect pathogenic condition. Chronic insidious cellular deterioration because of unreasonable load and poor recovery can create a myriad of systemic dysfunction leading to disease.

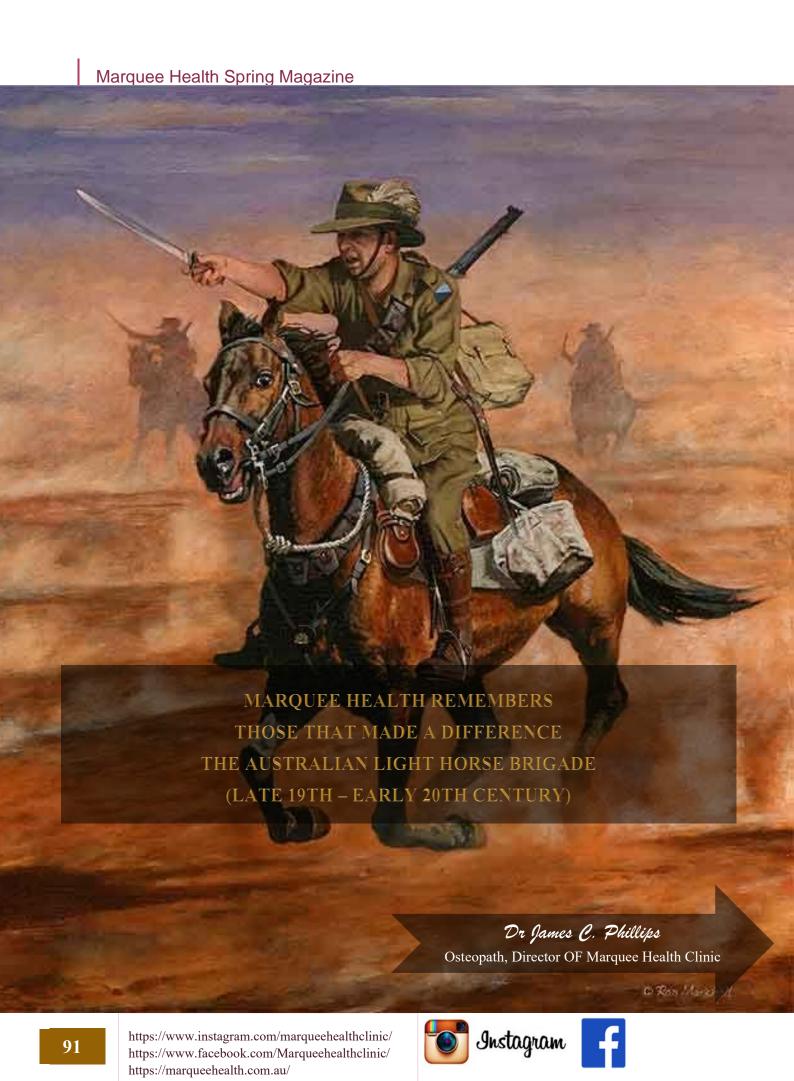




Osteopathic considerations the hepatic portal system heavily relies upon sufficient, consistent circulation to fulfill the functional capacities and requirements. the hepatic flexure relies on recesses and potential space for adequate organ articulation and motility and expansion of the diaphragm from the thoracic to abdominal cavity to stimulate fluid dynamics on a consistent and regular basis. This requires channels to remain unimpeded with visceral parietal tissue free from adhesion, structural joints free from compression and connective tissue free from congestive accumulation. The maintenance of potential space to facilitate expansion of tissue and thoroughfare of vascular and neural elements is primary to a system working unified absent of segmental block. A centrally balanced structural format from the trunk to the torso, through to the thoracic outlet and cranial vault plays a major role in systemic and autonomic regulation providing and overcoming any deviation whether through illness or habit in realising recovery.







Introduction

The Australian light horse brigade were mounted troops established in military circles with characteristics of both cavalry and mounted infantry who served around the late 19th and early 20th century in the second Boer war and world war I.

Most armies across the world were dominated by large land massed infantry supported by artillery. For Australia, with vast spaces on a sparsely populated continent, wracked by drought and depression, a different model of defence force had to be developed.

horse regiments Light were established around Australia by the movement which club provided trained reinforcements for various formations. Should these formations be called upon to Australia, defend the local commander was charged with maintaining resistance using the commando formation which envisaged large scale guerrilla war.

The prospect of an endless and strength sapping guerrilla war was the key deterrent factor which relied heavily upon mobile soldiers. The mounted infantry was the key to the Australian defence posture which envisaged formations that could be slotted into an imperial expeditionary force with two mounted divisions.

By the outbreak of World War I, there were 23 light horse regiments within Australia's military force, consisting of 9,000 personnel. The regiments were organised into brigades with the following: formations.

1st Light Horse Brigade (Queensland): 1st (Central Queensland), 2nd (Queensland Mounted Infantry), 3rd (Darling Downs), 4th (Northern Rivers and 27th (North Lancers) Queensland) Light Horse Regiments

2nd Light Horse Brigade (New South Wales): 5th (New England) and 6th (Hunter River Lancers) Light Horse Regiments

3rd Light Horse Brigade (New South Wales): 7th (New South Wales Lancers), 9th (New South Wales Mounted Rifles), 11th (Australian Horse) and 28th (Illawarra) Light Horse Regiments

5th Light Horse Brigade (Victoria): 13th (Gippsland), 15th (Victorian Mounted Rifles), and 16th (Indi) Light Horse Regiments

7th Light Horse Brigade (Victoria): 17th (Campaspe), 19th (Yarrowee), and 20th (Corangamite) and 29th (Port Phillip Horse) Light Horse Regiments

8th Light Horse Brigade (South Australia): 22nd (South Australian Mounted Rifles), 23rd (Barossa), and 24th (Flinders) Light Horse Regiments

25th (Western Australian Mounted Infantry) Light Horse Regiment

26th (Tasmanian Mounted Infantry) Light Horse Regiment.

Origins and early years

Horses have played a special role in the story of Australia. For the first hundred years of European settlement, they were the only means of transport across a vast continent. Outside the few cities, ability to ride a horse was almost as basic as the ability to walk.

The value of the mounted soldier in Australia was first shown in 1804 when redcoats of the New South Wales Corps set out in pursuit of a large force of rebel convicts who had broken out of the Castle Hill Prison Farm in NSW.

That same year, three colonial governments created their own small cavalry forces, partly from fear of Russian invasion. This began the tradition of Australia's mounted citizen soldiers – men who rode their own horses and trained in their spare time.

When war broke out in 1899 between Britain and the Boers of South Africa ("Boer" was Dutch for "farmer") the Australian colonies sent troops to fight in the Imperial cause.

At first Britain was wary of using untried, unprofessional colonial cavalrymen. But she quickly saw that the slouch-hatted Australian "bushmen" were a match for the fastmoving and unconventional mounted commandoes of the Boers. Soon even Australian infantry were put on horseback.







Australian Light Horse in World War I

The Australians proved themselves to be expert roughriding horsemen and good shots. Bush life had hardened them to go for long periods with little food and water. They also showed remarkable ability to find their way in strange country and use its features for cover, in both attack and defence.

When a squadron of England's famous 17th Lancers was wiped out by Boers, this was seen as part of a noble "death or glory" tradition. When a few hundred Australians and some Rhodesians held out successfully against several thousand encircling Boers at Elands River, they were helping create a new and better tradition.

Lord Kitchener who commanded the relieving troops commented, "Only colonials could have held out and survived in such impossible circumstances."

Australia became a Commonwealth in 1901 and the foundations were soon laid for the Commonwealth military forces.





Recruiting the light horse men

By 1914, when Australia joined the war against Germany, there were 23 Light Horse regiments of militia volunteers. Many men from these units joined the Light Horse regiments of the Australian Imperial Force (AIF).

Initially Australia promised four regiments of Light Horse, 2000 men, to fight in the British cause. By the end of the war, 16 regiments would be in action.

The Light Horse were seen as the "national arm of Australia's defence" and young men, most from the country, flocked to join. Many brought their own horses and some even brought their dogs. It all seemed like a great adventure.

The recruits took a riding test which varied from place to place. At one camp they had to take a bareback army horse over a water jump and a sod wall. In another, they had to jump a log fence.

Recruits had to pass a very strict medical test before they were accepted.

They were then sworn in and issued with their uniforms – the normal AIF jacket, handsome cord riding breeches, and leather "puttee" laggings bound by a spiral strap. They wore the famous Australian slouch hat and a distinctive leather bandolier that carried 90 rounds of ammunition.

If a man's horse met army standards, it was bought by the Commonwealth for about £30 (\$60). Many men were given remounts – army horses bought by Commonwealth purchasing officers from graziers and broaders.



Light Horse Training, C1910





Each horse was branded with the Government broad arrow and initials of the purchasing officer, and an army number on one hoof.

In front of each horse was placed its saddle and equipment. The men slept close by in bell tents – eight men to a tent, feet to the centre like the spokes of a wheel.

At the start of each day, the light horsemen watered, fed, and groomed their horses and cleaned the horse lines before breakfast. Then they did their training. Most were already expert horsemen and riflemen. The rest was drill and mastery of the mounted infantry fighting technique.

Each regiment lived and fought as a series of four-man "sections". When they went into action, three men would dismount to fight as infantry while the fourth man led the four horses to cover until they were needed for a further advance or withdrawal.

The effectiveness of this fighting method had been shown in the Boer War. But some of Britain's highest-ranking officers opposed the technique – perhaps because other high-ranking officers supported it.

Meanwhile, the Light Horse eagerly awaited their chance to fight on the battlefields of France and Belgium – where cavalrymen were already dying in their hundreds, true to the terrible old "death or glory" tradition.





The Light horsemen 1987





TRADITION and CONNECTION

Man, and horse

Everything the Light Horse trooper needed for living and fighting had to be carried by him and his horse.

His extra clothing, food and personal possessions were in a canvas haversack carried over the shoulder. Across the other shoulder hung a one-litre water bottle. As well as the 90 rounds of ammunition in his bandolier, he carried ten rounds in the .303 ("three-oh-three") rifle slung over his shoulder and another 50 rounds in pouches on his belt, which also supported the bayonet and scabbard.





The horse was carefully fitted with the special military saddle, designed to carry a remarkable array of equipment with the least possible discomfort.

The saddle was built on a pair of felt-padded wooden "bars" which sat on either side of the horse's spine. These were joined by steel arches with a shaped leather seat laced between them. The same basic design had been used by the British army for many hundreds of years. Each century had improved it.

Across the front was strapped a rolled greatcoat and waterproof ground sheet. Mess tin, canvas water bucket and nosebag with a day's grain ration, were slung at the back of the saddle. There was also a heel rope, removable length of picket line and a leather case with two horseshoes and nails.

The man's blanket was sometimes carried in a roll, more often spread under the saddle on top of the saddle blanket or "rug". Most men added to this collection of equipment a billy and a tin or enamel plate.

Later in the war, troopers were issued with leather saddle wallets to strap at the front of the saddle. Some also received swords and leather rifle "buckets" or scabbards. Often, the horse carried an extra bandolier of ammunition around its neck, a large grain sack (called a "sandbag") strapped across the saddle wallets, and an extra nosebag slung behind.

When fully loaded, walers often carried between 130 and 150 kilos. And, in the years of war to come, they would have to carry these huge loads for long distances, in searing heat, sometimes at the gallop, sometimes without water for 60 and even 70 hours at a stretch.

In the first days of the war, even men who had owned horses since early childhood could hardly imagine the bond that would grow between man and horse as each came to depend on the other for their very lives.





TO EGYPT AND ANZAC

On 1 November 1914, Australia's First Infantry Division and the first four Light Horse regiments sailed for England in a fleet of transport ships. Special stalls were built for the horses below decks and the light horsemen worked very hard to care for their mounts and exercise them in the limited space available.

Some walers died on the voyage and all of them suffered terribly in the tropics. Each man spent much of his spare time tending his horse. This helped reduce the death rate and strengthened the relationship between them. Plans were changed and the Australians landed in Egypt to complete their training there. They were soon joined by another two brigades – six regiments – of Light Horse.

When the Australian infantry left to take part in the invasion of Germany's ally Turkey, the light horsemen remained in Egypt. But soon afterwards, they too sailed for Gallipoli as infantrymen, leaving their horses behind.

A trooper wrote: "We were hoping that in a couple of weeks at the latest, once more mounted, we would canter gaily along the Gallipoli Road to Constantinople (capital of Turkey). We were mostly young and optimistic! We were soon to find what a long, long road it was."

The first of the Light Horse arrived at Gallipoli in May. Anzac Cove, scene of the first infantry landing, was already a bustling little port. Hundreds of men swam in the cove, ignoring the Turkish shells that burst over them.

As the light horsemen clambered to their camping areas up the steep, winding ravine of Shrapnel Gully, Turkish bullets cracked high over their heads. Infantrymen, who were old hands by now, laughed when the newcomers ducked. Very soon, they too were old hands. They quickly proved themselves to be excellent soldiers and readily adapted to the dreadful living conditions at the Anzac front.

By August, when a huge attack was launched on the Turks, there were ten regiments of Light Horse at Anzac. The 3rd Brigade – the 8TH 9th and 10th Regiments – was to make a dawn charge across a narrow ridge called The Nek. Plans went horribly wrong, and nine tiers of Turkish trenches packed with riflemen and machine-gunners waited for the Australian attack.

The first line of the 8th Light Horse charged and was shot to pieces. Most men ran only a few yards before they fell. The second line of the 8th went over the top and they too were cut down. The first line of the 10th Regiment went to their deaths in the same way. The second line waited for the attack to be cancelled. Then, through an error, they too charged.

In three quarters of an hour 234 light horsemen were dead and 138 wounded in a futile action. They had shown remarkable courage and discipline. Never again would these qualities be wasted so tragically.

The light horse brigade was like mounted infantry, in that they fought dismounted, using the horse as transport to the battlefield and as a means of swift disengagement when retreating or retiring. A famous exception was the charge of the 4th and 12th Light Horse Regiments at Beersheba on 31 October 1917.

In 1918, some light horse regiments were equipped with sabres, enabling them to fight in a conventional cavalry role in the advance on Damascus. The light horse also performed cavalry roles, such as scouting and screening, while mounted.

The Australian Waler horse was the common mount for the light horsemen, as it was strong and hardy, which was needed in the harsh desert climate. This was facilitated by the horses being left behind in Egypt while the light horsemen went to Gallipoli, allowing them to climatise.





The 13th Light Horse Regiment and one squadron of the 4th Light Horse Regiment served on the Western Front as the 2nd, 4th, and 5th Divisions of the cavalry squadrons. A squadron of the 4th provided the divisional cavalry for the 1st division and one of the 14th Light Horse Regiment for the 3rd division. After the Australian Corps was formed in November 1917, the Anzac 1st Corps Mounted Regiment became known as the 13th Light Horse Regiment. The Australian squadrons of XXII Regiment were amalgamated with Australian Light Horse Regiment.

Sinai and Palestine

Elements of the light horse brigades also took part in a campaign against the Senussi in the western desert region of Egypt with actions commencing in late 1915 and continuing through until 1917. The light horsemen were then involved in some of the most intense battles against the ottoman forces in the Sinai and Palestine campaign until 1918.

Reunited with their horses in Egypt after the evacuation of Anzac, the Light Horse regiments watched the Australian infantry leave for France. They were envious. But only two regiments – the 13th Light Horse and part of the 4th – were sent to the Western Front in Europe.

The rest of the Light Horse endured further training and patrols and outpost duty. Many felt they were missing out on "the real war". But there were good reasons for keeping them there.

Egypt was of great strategic importance to England and France because of the Suez Canal linking the Red Sea with the Mediterranean. And Palestine, (present-day Israel) which had been part of Turkey's empire for hundreds of years, lay at Egypt's north-eastern border, across the Sinai Desert.

Before the Australians left for Gallipoli, the Turks had launched an unsuccessful attack on the Canal from across the Sinai. Now, in August of 1916, a massive Turkish force prepared for a second attack on the vital waterway.

British forces headed out into the Sinai to block the Turks from Romani – a crucial group of oases in a great waste of sand dunes.

The Turks struck on the night of 3 August and tried to sneak around the end of the British line. But their move had been anticipated by General Chauvel, commander of the Anzac Mounted Division (three brigades of Light Horse and one of New Zealand mounted riflemen). He had placed the 1st Light Horse Brigade across their path.

Outnumbering the Australians by more than ten to one, the Turks pushed them back. But the light horsemen made fighting withdrawals in classic mounted infantry style. Another Brigade took up the fight at daybreak. Towards sunset, the Australians were so close to their camp that cooks were serving tea straight to men in the firing line.

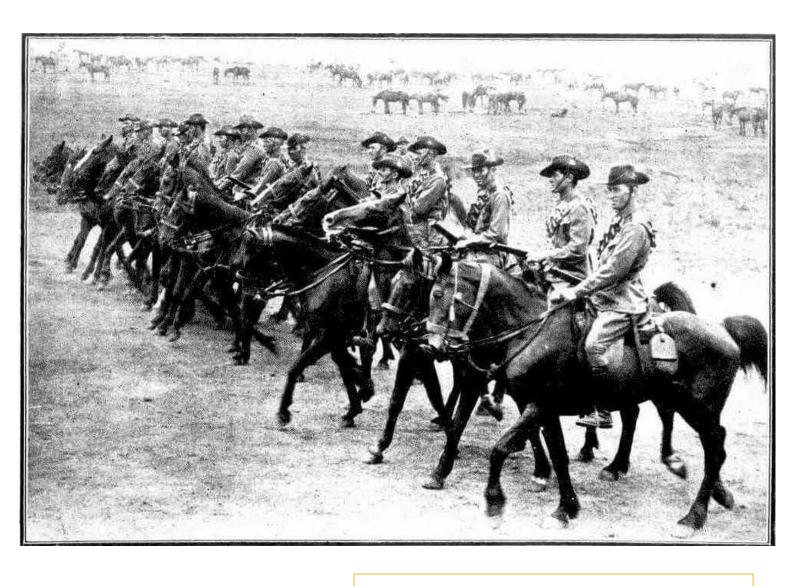
Almost at nightfall, New Zealanders, British cavalry, and infantry struck at the Turkish flank and by dawn the Turks were in full retreat.

During the Battle of Romani, Brigadier "Galloping Jack" Royston, one of the great "characters" of the Light Horse, had gone through 14 horses. Once, when Chauvel tried to find Royston, he was told: "He's wounded and gone to get another horse."

Now came two actions which set the pattern for the desert battles to follow. On 22 December the Anzac Mounted Division made a long, night march and at dawn attacked the big Turkish post at Magdhaba. Unless Magdhaba fell in one day, the attackers would be without water.







The Turks fought stubbornly and, almost at sunset, Chauvel ordered withdrawal. When shown the order, Brigadier Cox of the 1st Brigade said: "Take that damn thing away. And let me see it for the first time in half an hour." A dismounted bayonet charge saved the day and Magdhabe fell.

Two weeks later there was an almost identical attack at Raffa. Again, near sunset, the retreat to water was ordered. Again, the order was ignored, and a final bayonet charge won the battle.

Observers noted a remarkable thing. As the final charge of fiercely yelling troopers was almost on top of the trenches, the Turks dropped their guns and surrendered. It seemed too late to stop the apparently crazed Australians.

But the light horsemen jumped down into the trenches and shook hands with the startled Turks.

They were delighted not to have to kill the enemy they had learned to respect at Anzac.





"THE KINGS OF THE FEATHERS"



AUSTRALIAN WAR MEMORIAL

The light horsemen who now rode into Palestine along the desert battle paths of Napoleon and the Crusaders and the ancient Romans and Egyptians, were very different from the eager young men who had flocked to the muddy training camps of winter Australia.

They were quickly developing their own "style" – something very different from their early attempts to imitate British military bearing. One observer found them "tired-looking" as they moved around "with the slouching gait of the Australian countryman at home". But when ready for action, he saw the same men show "an almost miraculous note of expectant eagerness".

Another thought that the light horseman moved with a "lazy, slouching gait like that of a sleepy tiger" but described how the promise of battle "changes that careless gait into a live some athletic swing that takes him over the ground much quicker than other troops".

They had already proved themselves as formidable infantrymen. The Turks called them "the White Ghurkas" – a reference to their deadly skill with the bayonet.

Now the Arabs called them "The Kings of the Feathers".





When the Light Horse went to Egypt, Queenslanders, Tasmanians, and South Australians wore splendid emu plumes in their hats – actually, small squares of emu hide with the long, brown-tipped white feathers still attached.

The plume had originally been a battle honour of the Queensland Mounted Infantry for their work in the shearers strike of 1891. Now it was adopted by almost all the Light Horse Regiments.

Even when a Regiment did not wear the plume on parade or in battle, the men kept one in their kit and tucked it in the hatband when they went on leave. It was the proud badge of the light horseman.

Already the Billjims, as they called themselves, had become glamorous figures in the desert war. Australian troopers seemed almost as much at home in the desert as the Bedouin, the Arab nomads.

Many of the desert Arabs had the reputation of being great thieves – ready to take what they could from those who invaded their lands. But these same Arabs soon had a saying: "The Kings of the Feathers, they steal your bread". Food, firewood, poultry, livestock – all were

General Chauvel of the Light Horse had been knighted for his fine leadership. At the Battle of Romani, he had kept in touch with the battle on horseback, often under heavy artillery fire, while some other senior British officers stay by telephones, some kilometres from the action.

Now, in March 1917, as the British launched their attack on the key Turkish fortress town of Gaza, problems of leadership became more obvious. The attack was delayed by fog and by poor communication between some British officers.

When the light horsemen eventually attacked, they swung in behind the main Turkish positions and fought the Turks in a maze of tall cactus hedges marking laneways and fields on the outskirts of Gaza. Shots exploded from fleshy cactus walls and troopers hacked through them with their bayonets to reach the enemy.

They had fought their way into the town before sunset and the Turkish commander thought the battle was lost. But when word reached British headquarters that Turkish reinforcements were on the way, the order was given to withdraw – just as the major Turkish strongpoint was taken by British infantry.

Chauvel protested and some Light Horse officers refused to believe the orders. They had entered Gaza. They had found water for their horses. The order must be an enemy trick. But the signal came back: "Retire! Retire! Retire!" They slipped away from Gaza in the darkness, many men asleep in their saddles. The British commander, General Murray, reported the battle to London as though it was a victory and, the next month, attacked Gaza again.

This time, no effective use was made of the Light Horse. Some joined the British infantry in almost suicidal advances across naked ground swept by artillery and machine-gun fire. The only cover was the shallow holes they could scrape with their bayonets.

One trooper commented: "Many times we had to jump away from the nose caps of shells speeding along the hard surface of the ground, like a cricket ball hit at terrific speed, but I didn't see anyone try to stop them."

The 10th Light Horse, built up to strength after the massacre at The Nek, was again badly mauled. Half the regiment was killed or wounded.

Further unnecessary casualties were avoided when a sergeant of the 10th refused an order for a bayonet charge across 300 metres of open ground. He told the officer who had ordered the charge "not to be so bloody foolish and to go somewhere".

The attack was eventually broken off and the Light Horse withdrew. Now, for five months, the British and Turkish armies would face one another along a 50-kilometre line from Gaza on the coast to Beersheba in the forbidding drylands between the Sinai and the Dead Sea.





BULL LOOSE

Many light horsemen were disillusioned with the way they had been used. They now hoped for a chance to meet the famed Turkish cavalry. But after ambushing some small Light Horse patrols and being ambushed in return, the Turks avoided major clashed and retreated to their base at Beersheba.

In these months, the light horsemen became familiar with the arid lands on the Beersheba flank – rolling brown country with eroded wadis, or creek beds, very much like huge areas of Australia.

They manned lonely outposts by day and night, dug trenches, scoured the country to find enough wood to boil their billies and learnt the position of every well and waterhole. Then, in June, everything changed. A new English Commander-in-Chief arrived – General Sir Edmund Allenby, a big, stubborn, energetic cavalryman who quickly earned the nickname, "The Bull".

Up to this time, British headquarters had been at the Savoy Hotel in Cairo. "We're a bit too far from our work here," Allenby announced. "I'd like to get up closer where I can have a look at the enemy occasionally."

He proceeded to move everything 240 kilometres nearer the front line. He then inspected everything from cook houses to flying schools, racing from one unit of his army to the next in his Rolls Royce staff car. Signallers warned of his whirlwind approach by transmitting a cryptic "B.L." for "Bull Loose".



Torquay Light Horse camp, 1940





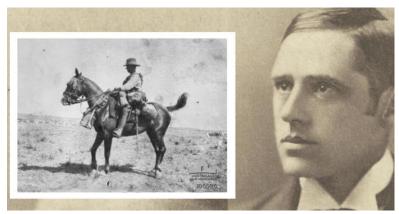


The famous poet "Banjo" Paterson was running a Light Horse remount depot. He watched Allenby arrive — "a great, lonely figure of a man, riding silently in front of an obviously terrified staff". Allenby had lost his son in the war and witnessed horrible slaughter on the Western Front. He told Paterson: "I am afraid I am becoming very hard to get on with. I want to get this war over and if anything goes wrong, I lose my temper." In his drive for greater efficiency, Allenby formed all his mounted units into the desert mounted corps under Chauvel.

The Light Horse respected Allenby. And, for his part, Allenby respected the Light Horse. He had commanded a squadron of Australians in the Boer War. He knew what they were capable of; and they were to play a vital role in his plan to break the Turkish line.

Instead of attacking Gaza again, he would strike at the other end of the line, Beersheba. First, he arranged for a British officer to "lose" some faked papers which made the Turks believe that a new assault on Gaza would be covered by a mock attack on Beersheba.

Then he planned a series of secret night marches in which the British infantry prepared to attack Beersheba from the west and south while the Desert Mounted Corps under Chauvel would sweep out to the waterless east and attack from the desert. If Beersheba's famous 17 wells could not be taken in one day, nearly 60,000 men and tens of thousands of animals would be desperately short of water.



Australian bush poet A.B. 'Banjo' Paterson. Inset: Light Horseman Private Richard Harwell Bryant on his waler

The attack on Beersheba was launched at dawn on 31 October 1917 and lasted throughout the day. The British infantry captured most of their objectives. But the Australians and New Zealanders had to make dismounted advances across open ground against two strongly defended hillforts.

By late afternoon, the two strong points had fallen, but there were still heavily manned trenches protecting the town. Time had almost run out. Brigadier General Grant of the 4th Light Horse Brigade suggested to Chauvel that two of his regiments, the 4th and 12th, make a mounted charge against these remaining defences.

Such a thing had never been heard of – a mounted charge across three kilometres of open ground against entrenched infantry supported by artillery and machine guns. But the sun was almost setting and many of the horses had already been without water for nearly 48 hours. Chauvel agreed.

The two regiments formed up behind a ridge and moved off into a classic, three-line charge formation, going from walk-march, to trot, then canter.

The Turks recognised the advancing horsemen as mounted infantry and the order was given, "Wait until they dismount, then open fire". Field guns were sighted on the cantering lines, ready to fire. Then suddenly, about two kilometres from the trenches, the light horsemen spurred to a gallop with wild yells, drawing their bayonets and waving them in the dying sunlight.





The Turkish artillery opened fire and shrapnel exploded above the plummeting lines of horsemen. Some were hit, but the Turks couldn't wind down their guns fast enough and soon the shells were bursting behind the charge.

Two German planes firing machine-guns swooped over the horsemen and dropped bombs. But they exploded between the widely spaced lines. About 1600 metres from the trenches, rifles and machine guns opened fire. Again, some men and horses fell. But the Turkish soldiers were unnerved by the huge mass of light horsemen thundering closer and they forgot to adjust their sights. Their bullets began to whistle harmlessly over the heads of the charging troopers.

The light horsemen jumped the trenches, and some leapt to the ground for an ugly hand-to-hand fight with the Turks. Others galloped through the defences into the town as demolition charges started to blow up the precious wells and key buildings.

But, within minutes, the German officer in charge of the demolition had been captured by a light horseman. The wells were saved. By nightfall, Beersheba was in the hands of Allenby's army. Of the 800 men who rode in the charge, only 31 had been killed. Mounted infantrymen and their superb walers had carried out one of the most successful cavalry charges in history – against what seemed impossible odds.

The fall of Beersheba swung the battle tide against the Turks in Palestine; and changed the history of the Middle East.

TO JERUSALEM AND BEYOND

Now the Turkish line could be broken and, soon after, Gaza was taken. The Turks fell back in a rapid but hard-fought retreat and the Light Horse pushed after them. In a series of bitter fights and constant searches for water, Chauvel's great mounted army swept northwards across the ancient Philistine Plain – towards Jerusalem.

The British Prime Minister had asked for Jerusalem as "a Christmas present to the nation". The battle moved into the rocky Judaean Hills which are crowned by the Holy City.

By now, it was bitterly cold and chill rain swept across bare ridges, making every gully a creek, every road a quagmire. The Light Horse scrambled into this bleak battleground as infantry, with no shelter but their waterproof sheets, no food but army biscuits and tinned bully beef – and very little of these.

One regiment moved into the Judaean Hills to relieve British infantry for a single night. They stayed for five weeks, rainsoaked, frostbitten, half starved. The ground was too rocky to dig trenches and the men sheltered behind "sangars" – walls of loose rock, about a metre high.

A light horseman recalled that he and his mates were crouched behind their flimsy rock barricade one freezing night, waiting for a big Turkish counterattack. Suddenly they heard bagpipes as a Scottish regiment came marching to relieve them in the front line.

"It was the most beautiful sound I'd ever heard," the trooper said. "It was salvation."

Jerusalem is holy to Christian, Jew, and Muslim. The Turks eventually surrendered it to the British on 9TH December rather than risk its sacred places being destroyed by battle. The 10th Light Horse were the first mounted troops to enter the city. Early in the New Year, the 1st Light Horse and New Zealand Mounted Rifles supported British infantry in the capture of Jericho – key town of the Jordan Valley.







The great drive continued against the Turks' last remaining bastion, Damascus in Syria. Covering 700 kilometres in 12 days, the Desert Mounted Corps thrust at the ancient city.

The Valley is 400 metres below sea level and more than 1000 metres below the surrounding ranges. As summer came, temperatures climbed into the forties. Few Europeans had ever endured summer in this hellish place. The soil powdered to choking white dust, flies and malarial mosquitoes filled the air. Then, as it grew even hotter, there were fewer flies. The Turks dropped a message to the Australians: "This month the flies die. Next month men die".

But the light horsemen didn't die. They had already ridden in two spectacular raids across the Jordan River. The second of these was a near disaster as the 3rd Brigade made a brilliant strike at the mountain town of Es Salt while the 4th Brigade fought to keep their line of retreat open. Both narrowly escaped.

It seemed a foolhardy manoeuvre. But Allenby was convincing the Turks that this eastern sector would see the major British attack, while he prepared to strike in the west. The Light Horse were "smuggled", regiment by regiment, to the coast.

THE LORD OF ARMAGEDDON

At Beersheba, the Light Horse had shown themselves to be superb cavalrymen. Now, at their own request, nine regiments were armed with swords and rushed through cavalry training. Then they waited, hidden among coastal orange and olive groves, while Allenby – like a brilliant chess player – prepared for his winning move.

Everything told the Turks he was getting ready to attack in the east. Empty camps and long lines of dummy horses were laid out in the Jordan Valley. Infantry marched down into the Valley each day – and marched out again each night. A Jerusalem hotel was taken over and set up as a fake headquarters.





Then, in September 1918, Allenby struck near the coast. He pounded the Turks with an artillery bombardment, broke their line with the infantry, and Chauvel sent his huge, mounted force through the gap to sweep around behind the enemy.

The retreating Turks were further battered by aerial attacks. Dazed, bewildered, they streamed down from the Samarian Hills in their thousands. In three days, 15000 prisoners were taken. Within the fortnight, three complete armies were smashed and there were 75000 prisoners.

"Banjo" paterson had brought horses up for the great drive. He described how captured Turkish soldiers who hadn't eaten for three days, sat down silently to accept their fate. He commented: "Neither English nor Australian troops had any grudge against the Turks, and the captured 'Jackos' were given more food and more cigarettes than they had enjoyed during the whole war".

The Turkish commander had refused to eat until his troops were fed. Said Paterson: "Even in his worn and shabby uniform he could have walked into any officer's mess in the world, and they would have stood up to make room for him". This crippling defeat was centred on the plain of Megiddo – the Biblical Armageddon where a last terrible battle would be fought on the Day of Judgement.

When Allenby was made a Lord, he took as his title Viscount Allenby of Megiddo. He was, literally, the Lord of Armageddon.

After a terrible massacre of retreating Turks in the Barada Gorge, Damascus fell on 1 October, almost without a fight. The 3rd Brigade, which had been shot to pieces at The Nek three years before, rode straight through the city, pausing only to receive its surrender. A single squadron of the 4th Regiment took 10000 prisoners with only a few shots fired and an officer and three men wounded.

Damascus was a crowded, unhealthy place and epidemics of influenza and malaria swept through the Desert Mounted Corps. Dozens of men who had survived Anzac and the desert campaigns, died in hospital beds. But the great move to the north continued – almost to the Turkish border. The Turks saw that further resistance was hopeless and signed an armistice. On October 31 the war in the east was over – 11 days before the armistice on the Western Front.

Victory had a sour note for the men of the Light Horse. Many had planned to buy their horses from the army. They dreamt of the good times they and their beloved walers could enjoy back home. But the word quickly spread. "The horses stay behind." Because of quarantine regulations, it was impractical to take tens of thousands of army horses back to Australia.

Major Oliver Hogue of the 14th Regiment, who wrote as "Trooper Bluegum", summed up the feelings of many men in one of his poems. Then an order was issued that all walers were to be classified A, B, C and D, according to their condition and age. All C and D horses were to be shot.

They were first to have their shoes removed and their manes and tails cut off. Iron and horsehair were saleable. Worse, the horses were to be skinned after being shot. Seven pounds of salt was allowed for the salting of each hide, to be sold as leather.

Horrible as these orders seemed, many men thought that this would be better than leaving their horses to be cruelly treated. Some tried to have their walers included in the C and D group. Others asked permission to take their horse for a last ride and returned carrying saddle and bridle, with the explanation: "He put his foot in a hole and I had to shoot him".







The 10th Light Horse Regiment

Hundreds of the walers who had charged Beersheba or endured the Sinai or carried their Billjim on the last great advance, were taken to olive groves outside Tripoli and tethered in picket lines. They were then given a last nosebag of fodder and shot. Without panic. To the last they trusted the familiar uniformed figures. And gunfire held no fear for them.

Soon after, the men prepared to return to Australia. But most would be delayed for months, helping suppress a rebellion in Egypt. Some were killed.

Before the Light Horse left for Australia, Allenby wrote a remarkable tribute to them. It concluded: "The Australian lighthorseman combines with a splendid physique a restless activity of mind. This mental quality renders him somewhat impatient of rigid and formal discipline, but it confers upon him the gift of adaptability, and this is the secret of much of his success mounted or on foot. In this dual role . . . The Australian lighthorseman has proved himself equal to the best. He has earned the gratitude of the Empire and the admiration of the world." Eventually, late in 1919, the last of the Light Horse were back in Australia. The regiments broke up. The men returned to homes and families and farms and jobs.

The Light Horse of the 1st AIF had existed for five remarkable years.

The two Light Horse regiments which served in France and Belgium – the 4th and 13th – are often forgotten; because they rarely fought as complete units and because they sometimes worked in support of British, French, and Canadian troops.

In 1916 they came from Egypt to France's worst winter for more than 30 years. Some men had only summer uniforms and their horses weren't issued with rugs. One resourceful Quartermaster Sergeant simply "scrounged" a truckload of tarpaulins from a nearby army depot and cut them into horse rugs. He was punished. But the horses were able to endure that terrible winter.





In France the light horsemen often went into the trenches as infantry reinforcements, as they had done at Anzac. They helped control tangled military traffic, escorted prisoners and rounded up lost soldiers after major battles.

They were sometimes sent to reconnoitre enemy positions or the Allied front line. On several occasions, small Light Horse patrols discovered that, due to poor communication between different armies, a section of our front line was deserted. A few men manned the empty trenches while others rode out to the units on either side and drew them together.

In June 1917, when a huge attack was launched on the formidable, Germanheld Messines Ridge, men of the 4th Light Horse rode in support of the Australian advance. As they charged across the shell-cratered wilderness to take up positions on the long ridge, many men and horses were killed by artillery fire. Others had miraculous escapes when shells burst directly below them in muddy craters and blew them into the air without serious injury.

In 1918, light horsemen came to play a vital role in the Allied offensive. As the Germans fell back, they left machine-gun posts to delay the Allied advance. Small Light Horse patrols went forward to locate these posts. The technique was to select a "dangerous" ridge or piece of exposed ground, then to ride forward in a widely scattered group.

When the enemy gunners opened fire, the light horsemen galloped to cover, swung out wide to each flank, then moved on the gun positions from both sides at once. The German gunners usually surrendered.

In the closing stages of the 1918 advance, many roads were impassable and bad visibility prevented aerial reconnaissance. Mounted troops became the "eyes" of our armies. When the armistice was declared on 11 November 1918, light horsemen were in the spearhead of the allied advance.

One of them, Lance Corporal Vic Grist, was the last Australian soldier wounded in World War I.

Post War

After the war, the light horse regiments were distributed to the following regions.

1st Cavalry Brigade -Toowoomba Queensland; 2nd, 5th, 11th, 14th 2nd, 5th, 11th, 14th Light Horse Regiments

2nd Cavalry Brigade – Maitland New South Wales; 12th,15th,16th, Light Horse Regiments

3rd Cavalry Brigade – Melbourne; 8th,13th, 20th Light Horse Regiments

4th Cavalry Brigade Paddington New South Wales; 1st,6th, 7th, 21st Light Horse Regiments

5th Cavalry Brigade Melbourne; 4th,17th, 19th Light Horse Regiments

6th Cavalry Brigade Adelaide; 3rd, 9th,18th 23rd Light Horse Regiments

At the outbreak of World War II, there were 25 light horse regiments. Of these, 17 were still horsed and partially mechanised, while 4 had been converted to machine gun regiments.







4th Light Horse Regiment



As the threat of invasion passed most units were disbanded in 1943-44 and their personnel redistributed. By 1945 two units remained, the first of these was the 20th Light Horse Regiment, which as the 20th Motor Regiment, served overseas, at Merauke, later converted into a pioneer regiment.

The second unit was the 1st Light Horse Regiment, which became the 1st Tank Battalion, later fighting in New Guinea and Borneo.

After the war, Light Horse units played a key role in the Australian Government's compulsory military training programme. For a time in the sunny years of the 1920s, the Citizen Military Forces thrived on the glamour of the wartime Light Horse tradition. Enthusiastic trainees and high-ranking officers alike could ignore the possibility that motor vehicles would soon replace horses in both peace and war.

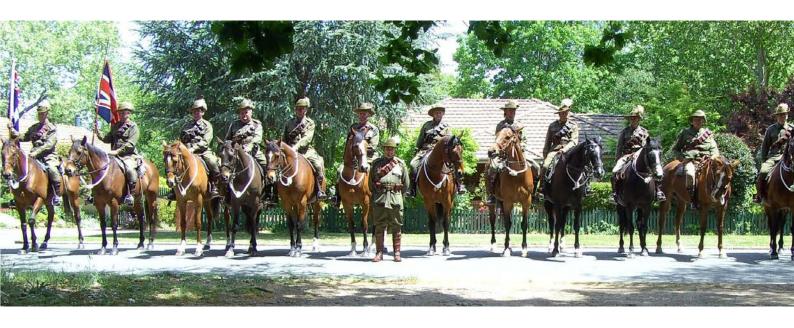
When training was no longer compulsory, the C.M.F. regiments declined and the Depression of the 1930s further weakened them. Horses became more of a luxury in those years of poverty and unemployment. Some regiments were motorised. Then, in 1939, Australia joined Britain in another world war. Each infantry division of the 2nd AIF had a Light Horse regiment attached to it. But these light horsemen rode in tanks.

In the second year of the war, the last Light Horse C.M.F. regiments were dismounted. But the day of the Australian mounted soldier hadn't quite passed. During the World War II, there was extensive cavalry action on the Russian front. The Russian cavalry – sometimes more than 200 000 strong – made lightning raids on the highly mechanised German armies. And even the Germans employed mounted troops until the end of the war.

The last of the cavalry units fought in Syria. Here, Australia's 6th Cavalry Regiment formed a mounted unit they called "The Kelly Gang" which did valuable scouting work.







In New Guinea, a mounted Light Horse Troop did patrol duty and helped carry supplies. Some fully equipped walers were flown into Borneo for reconnaissance in rugged mountain country. But by the end of the war, in 1945, the horse had disappeared from the Australian Army. Three years later, armoured units with Light Horse titles were revived in the new C.M.F. and another generation of light horsemen grew up to fight in Vietnam.

Today, armoured regiments still carry the Light Horse name, and their members often maintain valued links with the last survivors of the original units. Perhaps the men and horses are carrying a bit more condition than the Billjims and the walers. Perhaps the equipment is a bit more "by the book" than in those days of the desert campaigns when you lived on your horse.

But it's good to see the horses stepping proudly; and the men riding to "attention" with one hand Several Australian light horse units are still in existence today, generally as Royal Australian Armoured Corps Cavalry units. Including the 1st / 15th Royal New South Wales Lancers, 2nd / 14th Light Horse Regiment – Queensland Mounted Infantry, 3rd / 9th Light Horse South Australian Mounted Rifles, 4th / 19th Prince of Wales Light Horse, 10th Light Horse Regiment, and the 12th / 16th Hunter River Lancers.

The men of the Light Horse were dramatic, almost glamorous figures and it is still easy to see their exploits as some splendid adventure.

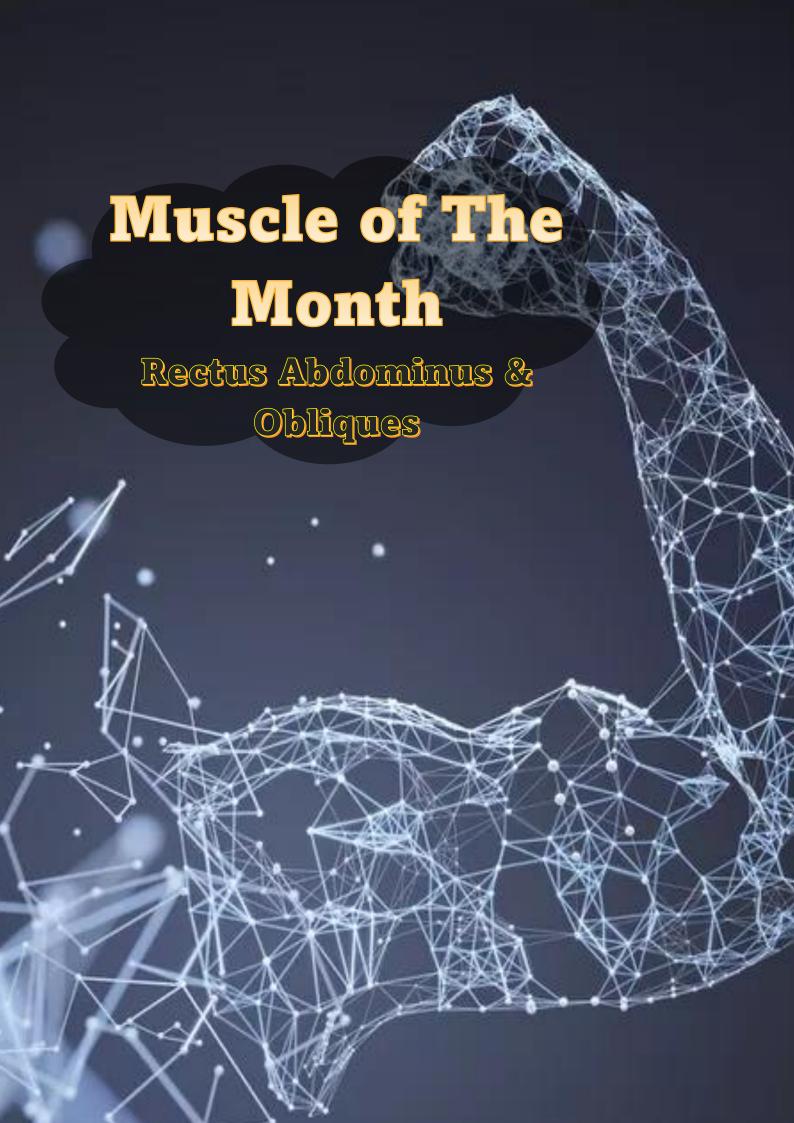
Much of it was adventurous and in the hardest campaigns, light horsemen still found time to laugh and play jokes on their mates, hold race meetings, organize concert parties, annoy British military police in Cairo – and generally made the best of their gruelling life.

But almost every man in the Light Horse had endured hardships that are scarcely imaginable to us today. They had lived for weeks, sometimes months at a time with only one litre of water a day.

They had survived for long periods on tough army biscuits and tinned bully beef that melted to a greasy mess in the heat of the desert.

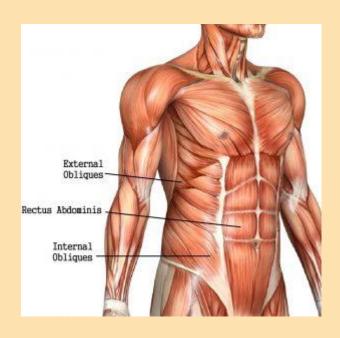


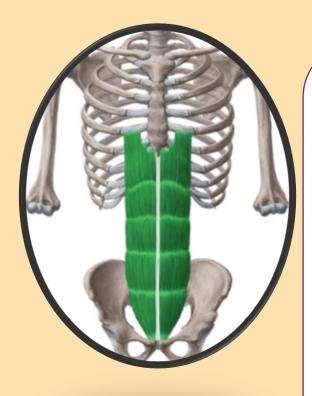




Rectus Abdominus

Rectus abdominis, informally known as the abs muscle, is a long muscle of the anterior abdominal wall. When this muscle is exercised and layers of fat disappear from the abdomen, the exposed rectus abdominis muscle creates the look of a "six pack". It extends from the rib cage the way to the pubic bone. Strengthening the muscle also improves performance in sports that require jumping. The muscle is activated while doing crunches because it pulls the ribs and the pelvis in and curves the back. The muscles are also used when a child is delivered, during bowel movements, and coughing. Breathing in and holding the rectus abdominis in pulls the abdomen.





Origins and Insertions

The three muscles of the lateral abdominal wall, the internal oblique, the external oblique, and the transverse abdominis have fibrous connections that create the rectus sheath. which crosses over and under the rectus abdominis. When doctors perform ultrasoundguided techniques on patients (such as a liver biopsy), they sometimes start scanning at the rectus abdominis muscle to distinguish between the internal oblique, transverses abdominis, and the peritoneal cavity. The rectus abdominis muscle is innervated by the thoracoabdominal nerves, which enter the rectus sheath by piercing its anterior surface. They pass between the transversus abdominis and internal oblique muscle layers and pierce the sheath of the rectus abdominis muscle.





The nerves are simply the anterior divisions of the 7th to 11th lower intercostal nerves, that continue to supply the abdominal wall after intercostal spaces they supplied end medially. Rectus abdominis flexes the torso anteriorly. Moreover, working together with other abdominal muscles, this muscle compresses the abdominal viscera and increases the intra-abdominal which has pressure, important function in processes such as forced breathing, labour, defecation, and micturition. The rectus abdominis also stabilizes and controls tilt of the pelvis (antilordosis).

Exercise Prescription

Strengthening exercises: Sit up exercise which required raising the trunk against gravity to the midline and slowly lower it down repeatedly in multiple sets, and to isolate the rectus abdominis, do the exercise while bending the knees to minimize the engagement of hip flexors. (For rectus abdominis, raising the trunk should be performed straight).

External Abdominal Oblique

External abdominal oblique is a paired muscle located on the lateral sides of the abdominal wall. Along with internal abdominal oblique and transversus abdominis, it comprises the lateral abdominal muscles. Abdominal muscles work together to produce movements of the spine as well as to compress the abdominal viscera.

The external obliques on either side not only help rotate the torso, but they perform a few other vital functions. These muscles help pull the chest downwards, which compresses the abdominal cavity. Although relatively minor in scope, the external oblique muscle also supports the rotation of the spine. Bilateral contraction flexes the trunk anteriorly, increasing intraabdominal pressure, which is useful in processes such as breathing, defecation. singing and The external oblique muscle is one of the largest parts of the trunk area. Each side of the body has an external oblique muscle. Since the muscle contributes to a variety of torso movements, strain or injury to the muscle can be debilitating. This may include movements that do not directly use the muscle. For example, ambulatory motions such as walking or running, which cause slight movements in the torso.

Exercise Prescription

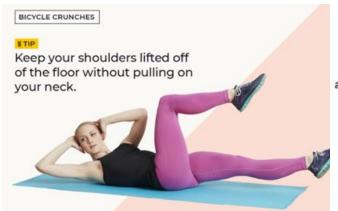
The best oblique muscle workout is the bicycle crunch. In this exercise, the person lies on the ground, places both hands behind the head, bends the knees, and brings one elbow toward the opposite knee. Those who have done this exercise without warming up the muscles first may find themselves having to deal with an oblique injury. When performed correctly, this exercise reduces the risk of acquired abdominal hernias, as does losing belly fat.

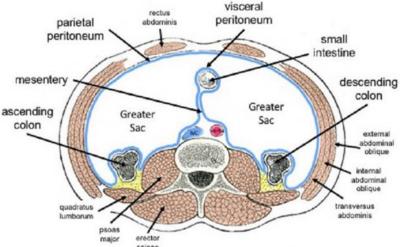
Injuries/ Poor Functionality and Pain Treatment

Oblique muscle strain most commonly occurs on the opposite side to the direction of motion. For example, if turning the torso quickly to the right, the left obliques are most likely to be strained. Abdominal oblique injuries or side strains are associated with sports that involve rotation. particularly torso Α enthusiastic swing of the tennis racket, golf club or baseball bat can cause a strain injury in the abdominal anterolateral wall muscles. Symptoms are a sudden, sharp pain on the contralateral side close to the lower ribs. Oblique muscle pain treatment includes alternating heat and cold therapy, remedial massage, gentle exercise, and compression.





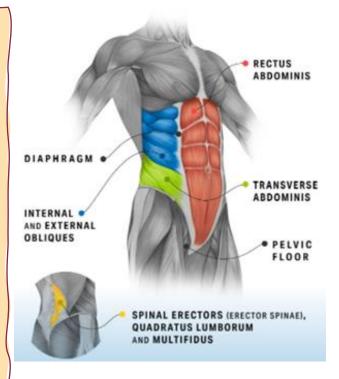




Core Exercises and Benefits of Strong Core

When you picture a strong core, you probably imagine someone doing tons of crunches to grow their muscles. But building ab strength is about so much more than physical appearance: It can help you go about everyday tasks with more ease and improve your overall wellbeing.

Think of your core muscles as the sturdy central link in a chain connecting your upper and lower body. Whether you're punching a boxing bag or doing housework, the necessary motions either originate in your core, or move through it. No matter where motion starts, it ripples upward and downward to adjoining links of the chain. Thus, weak or inflexible core muscles can impair how well your arms and leg's function. And that saps power from many of the moves you make. Properly building up your core cranks up the power. A strong core also enhances balance and stability.



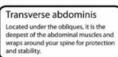


The core of your body revolves around the muscles in your abdomen, sides and back. Your core also includes most of your spine. If your core muscles are weak, your back is at a greater risk of injury from heavy exercise. While heavy exercise at the gym or physical hard labour at work requires a strong core, even simple tasks such as carrying groceries or lifting a child can tax your core muscles and your spine.

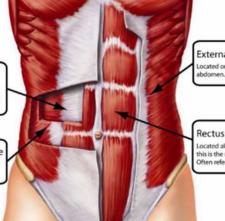


Benefits of having strong core muscles:

- It supports better skeletal structure
- It improves balance and stability
- It protects your organs
- It makes everyday life easier
- •It can reduce or prevent pain
- •It supports good running form
- It boosts your power
- It supports strength training



Internal abdominal oblique Located under the external obliques, running in the opposite direction.



External abdominal oblique Located on the side and front of the abdomen.

Rectus abdominis

Located along the front of the abdomen, this is the most well-known abdominal. Often referred to as the "six pack."

•It helps you

age well - it stabilizes your entire body and gives you better balance and skeletal structure, all of which can help prevent falls, decrease back pain, and keep you mobile as you get older.

Ramon Tupac Perez
Remedial Massage Therapist









A creamy scrub enriched with pure expressed oil of apricot kernels and Persian walnut shell grains that buff the skin gently and slough away dry, dead, and flaky skin.



















The movement ability of the head on the cervical spine over the thoracic outlet or the base of the neck remains of utmost importance for benefit of view and attention to condition in the various tissue that maintains or moves through the region.

The cranial vault or head pivots off the atlas or the first cervical vertebrae creating a joint articulation process that both tilts and slides forward and backward. The upper cervical units will allow rotational mobility with the lower segments articulating flexion and extension. The posterior and lateral muscle groups will facilitate these movements depending on condition, symmetry and whether dysfunction plays a role in restriction.

The symmetrical position of the head will determine proportional load transference through the structural pillars facilitating elements of joint articulation within motion segments of the vertebral bodies enabling optimal line of action of the musculature within good context of connective fascial tissue.

These biophysical, metabolic interactions will mostly be contingent on the alignment of the central structural format of the torso – thoracic cage, and the trunk – pelvis. The contributing factors in cervical / head / neck movement may be resultant because of pressure building from these regions of the system.

Exercises to maintain agility and circulation, moving blockages and pressure can be simple and effective on a short intermittent basis. The encouragement of the primary movements of flexion / extension / side bending and rotation, not only create positive stimulus, but can release static pressure while analysing equality of symmetry through end range of movement.

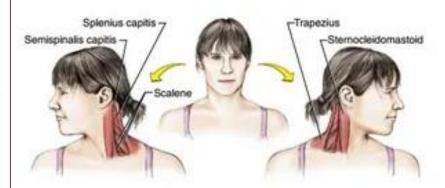




A soft relaxed feel towards end range of movement is preferred indicating elastic tissue with good circulation against a hard restrictive block indicating compression and adhesion.

The "Yes / No / Maybes" of cranial / cervical mobilisation can be good active movement to stimulate areas of tension in a mild manner to remove heaviness. The movement is always rhythmical without force, working through a long or elongated neck, i.e., not slouched, and avoiding contraction or compression. The exercises only need to be performed until a positive change has been recognised. When major restriction of the neck / cervical region regarding mobility is persistent or no movement is able, initial movement of the eyes up and downside to side can neurologically potentiate movement inducing stimulus to affect the region that may be under restraint.

The movement created through the nodding, rotation, and inclining of the head should be perceived and approached in a gentle rocking movement, without force to create a pumping or massaging effect to remove limitations, encourage circulation, and therefore soften connective tissue. This can incrementally start to create space for dynamic pressure to proceed with continuity of movement with a well-regulated constitution.



The cervical region being the most vulnerable part of the spine requires attention on a gentle passive basis. All exercises attempting to maintain movement, sensory perception, proprioception, and deflection of force should be prescribed on an incremental, gradual basis without sudden drastic change or shock resulting in spasm or injury.

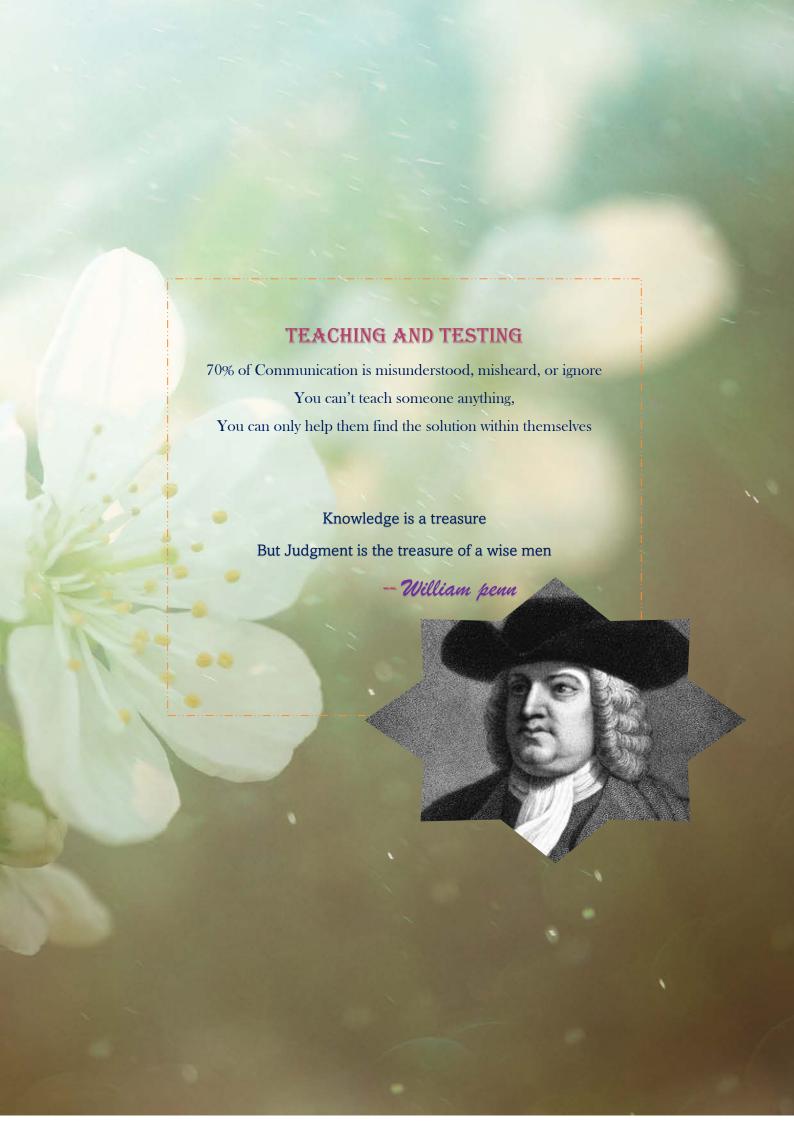
A good general range of movement in the different planes can be looking over parallel with your acromioclavicular AC joint in rotation, chin able to be placed on the chest for flexion with a comfortable moving up and backward to a soft end range restriction in extension. The side bending movement can be symmetrical with ears coming onto the top of the shoulder comfortably without raising the shoulder towards the ear. Movement should feel soft with minimal resistance with comfort and confidence in both directions.











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