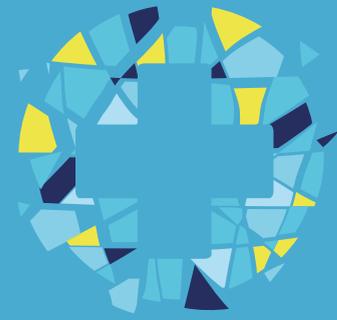


*A guide to  
Post-traumatic  
Stress Disorder  
& your Physical  
Health*



**PTSD Initiative**  
Research to restore lives



**An Initiative of the Gallipoli Medical Research Foundation and RSL Queensland**



RETURNED & SERVICES  
LEAGUE OF AUSTRALIA  
QUEENSLAND BRANCH

# RESEARCH TO RESTORE LIVES

Read on to find out how PTSD can affect your physical health >>

## A GAP IN WORLDWIDE KNOWLEDGE

Long considered and treated solely as a psychological condition, there was very little understanding or evidence of the extent of the physical toll of post-traumatic stress disorder (PTSD). For the sake of our veterans, and all those who suffer from PTSD, this needed to change.

## THE PTSD INITIATIVE

In 2013, the Gallipoli Medical Research Foundation (GMRF) and RSL (Queensland Branch) commenced an ambitious undertaking to help veterans and their families. The PTSD Initiative was a world-first research project investigating both the long-term physical and psychological toll of PTSD in Vietnam veterans. Over 300 Vietnam veterans participated in the study, which included 25 medical and psychological assessments.

## TRANSLATING RESEARCH INTO CLINICAL PRACTICE

We have launched a national education program to help general practitioners and other healthcare professionals better identify the symptoms of PTSD for veterans and the one in 20 Australians who suffer from this devastating condition.

Healthcare professionals earn Continuing Professional Development (CPD) points when they complete our education from the ThinkGP platform, an accredited education provider with the RACGP. Help us spread the word by mentioning this education to your general practitioner and other healthcare providers.

*The education can be accessed here:*  
[www.thinkgp.com.au/gmrf](http://www.thinkgp.com.au/gmrf)

- PTSD is a debilitating psychological disorder that develops following exposure to a traumatic event
- It can severely affect quality of life, including negative impacts on relationship, social and vocational functioning, and physical health
- Its prevalence is approximately 5 per cent among the Australian population, and up to 20 per cent among military veterans

### Participants with PTSD...

Were **two times** more likely to have abnormal liver texture, suggestive of **liver disease**.

Had a **two to three times** increased risk of suffering from **gastrointestinal problems** including irritable bowel syndrome and its associated symptoms, in addition to reflux and stomach ulcers.



If you have any concerns about your health, see your GP

## KEY FINDING #1

Participants with PTSD were almost four times more likely to have suffered a heart attack in the past.

### WHAT IS A HEART ATTACK?

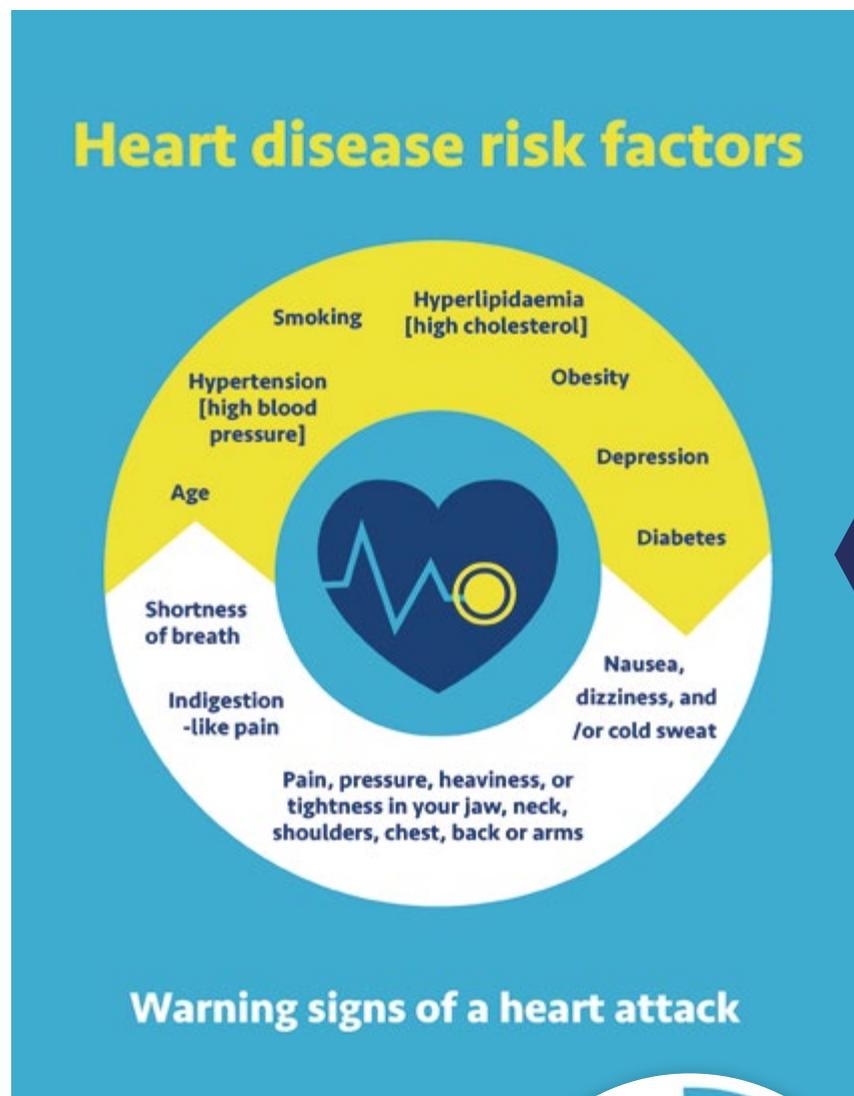
Your heart is a muscle that pumps blood around your body. To do this, it needs a continuous supply of oxygen. A heart attack is when an artery that supplies blood to your heart partially or completely blocks, stopping blood flow to an area of the heart. As a result, the heart muscle begins to die. Without early medical treatment, this damage can be permanent.

### TOP HEART HEALTH TIPS:

- Follow a real Mediterranean diet and eat vegetables, fruit and yoghurt every day, less meat, cheese in moderation and two servings per week of legumes and oily fish.
- Consider adopting a canine companion. Studies have shown that owning a dog will decrease your likelihood of a heart attack.
- Drink in moderation. Consume one to two drinks per day for optimum heart health and have a couple of alcohol-free days per week.
- Exercise regularly. Even incidental exercise is better than nothing. Choose the stairs instead of the lift, walk to the shops.
- Quit smoking. Talk to your GP or pharmacist about options to help you quit.

### GET AN ANNUAL CHECK-UP

See your GP annually (at minimum) to check your blood pressure and cholesterol levels. Your GP may also recommend a coronary artery calcium score. This CT scan measures the amount of calcium in the walls of the arteries that supply your heart muscle and tells you about your risk of a heart attack or stroke (brain attack) in the next five to 10 years.



"The Vietnam War may have officially stopped decades ago, but many of our Australian veterans are still suffering. Their lives have been destroyed as a result of the psychological trauma. With the results of our study, we will be able to establish novel therapies for veterans with PTSD."

- Associate Professor David Colquhoun, leading cardiologist and PTSD Initiative investigator



## KEY FINDING #2

Participants with PTSD had a two to three times greater risk of suffering from gastrointestinal problems, including irritable bowel syndrome and its associated symptoms. Reflux and stomach ulcers were also common.

### **Reflux**

Reflux is when acid from the stomach moves up into your oesophagus causing burning chest pain (often referred to as “heartburn”) and regurgitation causing a sour or bitter taste in the mouth. If symptoms occur more than twice a week, this is called gastro-oesophageal reflux disease or GORD.

Mild reflux can be managed with lifestyle changes, such as losing weight and avoiding foods and alcohol that can trigger symptoms. GORD may be relieved by lifestyle modifications and the use of acid suppressive medications.

### **Stomach ulcers**

A stomach ulcer is an acid burn on the lining of your stomach or duodenum (part of the small intestine). A dull or burning pain in your stomach is the most common symptom and you may feel the pain anywhere between your belly button and breastbone.

Stomach ulcers can be caused by the long-term use of anti-inflammatory drugs such as aspirin and ibuprofen, a bacterial infection or can be associated with tumours in the stomach.

Even if your symptoms are mild you may have a stomach ulcer, which could worsen without treatment.

### **Irritable bowel syndrome**

Characterised by abdominal pain, bloating, mucus in the stool and alternating diarrhoea and constipation, irritable bowel syndrome (IBS) is a functional gut disorder.

If you have symptoms you may benefit from important lifestyle and dietary changes, although ultimately anti-diarrheal medication, anti-spasmodic or laxatives may be required. IBS is not the same or as serious as inflammatory bowel disease (IBD), which causes inflammation, ulcers and other damage to the bowel.

Gastrointestinal symptoms can have a significant impact on your wellbeing, so speak to your GP if you have any concerns.

A balanced diet and good nutrition is important not just for good gut health, but for your overall health. Consider following a Mediterranean diet (see our top heart health tips) and limit your intake of fat, salt, sugar and alcohol.



### **DARLENE'S EXPERIENCE**

Darlene joined the Navy in 1999 in the area of communications. In 2001, she experienced depressive and adjustment disorder symptoms and in 2005 was discharged.

“I had my breakdown in August 2003 and started having problems by December. Until then I had always been regular, but I started getting cramps and bad wind and then I would purge everything. I had never experienced soft stools to this extent and for so long. I was anxious and upset as this had never happened to me before. I saw a dietitian and had an endoscopy and colonoscopy and was eventually diagnosed with IBS.

“When I was working on base, I didn't make it to the toilet and had an accident in my white shorts, which was so embarrassing. After this, I always worried about what I was eating and where the closest toilet was. Within a half hour of getting stressed I would be on the toilet purging. It was horrendous, but it's a lot better now.

“That's why I value the research being done at GMRF. The education program means GPs are more likely to consider the physical symptoms of PTSD and treat it sooner.

“There were times when I wanted to give up – it didn't matter what I did, it didn't last or it didn't work – but now I'm getting the right treatment and that makes me appreciate how far I've come.”



## KEY FINDING #3

Participants with PTSD were two times more likely to have abnormal liver texture, suggestive of liver disease, and had a four times higher risk of fatty liver.



The liver is the largest solid organ in the body and is responsible for removing toxins, making important proteins and producing chemicals needed for digestion. So, it's pretty important.

Liver health can be affected by PTSD – not necessarily by the effects of chronic stress per se, but more commonly due to associated risk factors such as obesity (which can be due to some medications) and excess alcohol use.

One in three adult Australians will develop fatty liver disease, but many will be unaware they have it as it often presents no symptoms until it's at a progressed stage. Fatty liver is caused by the deposition of fat in the liver above normal levels of 5-10 per cent. Major risk factors include heavy alcohol consumption, being overweight or obese, hyperlipidaemia, diabetes and there is some inherited risk as well.

Fatty liver is usually reversible if identified early and treated by behavioural modification: improved diet combined with exercise to lose weight.

If you do drink, Australian guidelines recommend no more than two standard drinks on any day to reduce your risk of harm from alcohol-related disease, and no more than four standard drinks on a single occasion.

If fatty liver continues, damage can cause permanent scarring, called fibrosis. If scar tissue takes over the whole liver, advanced fibrosis progresses to cirrhosis and the liver function may begin to deteriorate. Cirrhosis greatly increases the risk of liver cancer.

More than 70 per cent of patients who develop liver cancer do so because they have cirrhosis of the liver. Of those, 85 per cent will die within five years of their cancer diagnosis.



"From undertaking this research, we would now describe PTSD as a systemic illness and recognise that there are clusters of physical symptoms that frequently emerge in patients with PTSD.

"One of the most rewarding steps of this initiative has been translating the research into clinical practice by the implementation of the education program, with the support of RSL (Queensland Branch). We hope that by making health care professionals who look after patients with PTSD aware of the general health issues and the strategies to reduce the risk of them developing that, we will improve quality of life and survival."

*- Professor Darrell Crawford (GMRI Director of Research & PTSD Investigator) helped design and coordinate the PTSD Initiative.*

### What is one standard drink?

- One pot or middy (285mL) full strength (4.8%) beer
- 375mL bottle or can mid-strength (3.5%) beer
- 100mL wine (11.5% to 13%)
- 30mL spirits (40%)

### How many standards are in my bottle?

- 750mL bottle of wine or champagne (13.5%): 8 standard drinks
- 700mL spirits (40%): 22 standard drinks



Source: [www.alcohol.gov.au](http://www.alcohol.gov.au)



“Your sleep quality can have a major adverse effect on daytime functioning. The fragmentation of sleep at night as a result of sleep apnoea can also worsen sleep problems like dream enactment behaviour. Untreated, obstructive sleep apnoea can have far-reaching effects on many different body organs and functions.”

– Dr Robyn O'Sullivan, respiratory and sleep physician and PTSD Initiative Investigator

## KEY FINDING #4

Participants with PTSD were three times more likely to suffer from obstructive sleep apnoea.

Obstructive sleep apnoea (OSA) is a sleep disorder in which your breathing stops periodically during sleep due to airway obstruction from relaxation of the tongue or airway muscles. Many people with OSA are unaware they have it.

If you are at risk of OSA, it is important to be diagnosed and treated. Treating OSA can you make you sleep better and feel better during the day, and it can also reduce your longer-term cardiovascular risk.

OSA is screened by a sleep study in which a variety of measurements are taken while you sleep, such as your breathing pattern, heart rate and blood oxygen levels. A specialist in sleep medicine then analyses your results to determine the severity of your OSA and whether you require treatment.

There are a variety of treatment options for OSA, but, as the causes can vary, there is no single treatment that works for everyone. If you have OSA, your sleep specialist will help you determine what treatment is right for you.

### Symptoms

- Snoring
- Waking up unrefreshed
- Daytime tiredness
- Slowed or stopped breathing during sleep
- Waking up choking or gasping for air

### Diagnosis

- OSA is diagnosed by a sleep study

### Treatment

- Weight loss if you are overweight
- Reducing alcohol consumption
- Changing body position for sleep
- Oral appliances
- Continuous positive airways pressure (CPAP)

### Risks of OSA

- Heart disease
- High blood pressure
- Stroke
- Diabetes
- Depression
- Impotence



Normal, open airway



Partially closed airway



Closed airway during an apnoea



## Sleep tips

- Stick to a **bedtime routine**: Make sure you are feeling sleepy when you go to bed, and don't go to bed too early or too late. Aim to be up at the same time each morning and avoid napping during the day.
- Follow a **relaxing activity before bedtime**: Reduce excitement, stress or anxiety by having a warm bath or shower, reading or meditating before you sleep.
- **Avoid food** for two hours before bedtime, **limit caffeine and alcohol** intake and avoid caffeine later in the day.
- **Exercise regularly**: Burn off extra energy by engaging in moderate to vigorous exercise in the morning or early in the evening.
- **Early morning sunlight**: Exposure to natural light early in the morning promotes hormones that help set the body clock and promote a wakeful state.
- **Limit use of devices** with screens before bed.
- Make sure you are **comfortable** with a good mattress, pillow and fresh bedding.

### TONY'S EXPERIENCE

Tony Dell was a national serviceman from 1966 to 1968 and deployed to Vietnam with 2RAR in 1967/68. Forty years after he returned from Vietnam he was diagnosed with PTSD, and only then did he realise the reasons for the multitude of things that had gone wrong in his life.

"The irony is I'm writing this at three o'clock in the morning and I've woken up my partner Sally as I sneakily try to slide out of bed. That's just one of the hazards of this condition. I haven't had a normal night's sleep for as long as I can remember. A normal, "decent night's" sleep for me is two blocks of a couple of hours, with a session on the computer and a warm shower in between. Before I was diagnosed, I didn't know the reason, but I seemed to function okay so I didn't bother getting it checked out. After a night at the sleep unit as part of the GMRF research, a report went to my GP with some recommendations. Personally, I think it's connected to the workaholic symptom that seems to make us rather hyper vigilant as well."



## KEY FINDING #5

Participants with PTSD had decreased lung function.



The respiratory system is responsible for the delivery of oxygen to the blood stream and the removal of carbon dioxide. The process of breathing in and out involves the upper airways, the lungs and the muscles of the chest wall and abdomen.

Patients suffering PTSD have an increased risk of developing problems with breathing. Airway inflammation can cause narrowing of the bronchial tubes or airways, making it harder for air to move in and out of the lungs. Two common symptoms are wheezing and shortness of breath. Patients with PTSD

are also more likely to smoke, making the inflammation worse.

**Wheezing** is a high-pitched whistling sound that occurs when you breathe through narrowed airways.

**Shortness of breath** is more obvious during increased activity when we require more oxygen. Our body responds by breathing harder and faster in an attempt to get more oxygen to the muscles. The long-term effects of inadequate oxygen due to lung diseases can cause heart disease.

It is common for people who suffer these symptoms to avoid activities

such as exercise. If you get breathless during everyday activities, exercise to improve fitness can help you with daily tasks such as getting dressed or walking to the bus stop.

For healthy lung function, don't smoke, engage in regular exercise at the right level for you and eat a balanced diet.

Get involved in social activities with friends and family that promote body movement in a fun and supportive environment. Introduce activities like walking the dog and gardening into your exercise routine.

**A healthy lifestyle is recommended to manage the physical symptoms associated with PTSD and can contribute to general wellbeing.**



- **Improve your diet**



- **Exercise regularly**



- **Maintain a healthy weight**

- **Reduce alcohol consumption and quit smoking**

- **Visit your GP regularly**

RSL (Queensland Branch) has established tangible pathways for ex-serving personnel to engage in active lifestyles across Queensland through partnerships with Mates4Mates and Sporting Wheelies & Disabled Association and with programs including the RSL Queensland Surfing Initiative and the RSL RAEMUS Rover Off Road Racing Program.

If you or someone you love is suffering from anger or anxiety, trouble sleeping, increased aches and pains, alcohol or gambling addictions, suicidal thoughts or social isolation, these may be signs of PTSD or a mental health issue. The important thing to remember is that you aren't alone and help is available from a number of organisations.

**Veterans and Veterans Families Counselling Service (VVFCS)**

24 hours/7 days a week  
T: 1800 011 046  
W: [www.vvcs.gov.au](http://www.vvcs.gov.au)

**Lifeline**

Counselling services for anyone at any time  
T: 13 11 14  
W: [www.lifeline.org.au](http://www.lifeline.org.au)

**Beyond Blue**

Information on depression and anxiety  
T: 1300 224 636  
W: [www.beyondblue.org.au/get-support/get-immediate-support](http://www.beyondblue.org.au/get-support/get-immediate-support)

**Parentline**

Confidential telephone counselling support for parents and carers of children  
T: 1300 301 300  
W: [www.parentline.com.au](http://www.parentline.com.au)

**RSL (Queensland Branch)**

T: 134 775 (business hours)  
W: [www.rslqld.org](http://www.rslqld.org)  
Or contact your local RSL Qld Veteran Services Officer.

To learn more about the Gallipoli Medical Research Foundation visit our website at:

**[www.gallipoliresearch.com.au](http://www.gallipoliresearch.com.au)**

The PTSD Initiative is an initiative of Gallipoli Medical Research Foundation in partnership with RSL (Queensland Branch). We would like to acknowledge and thank the Vietnam veterans who participated in this study. We thank and recognise the support of experts from these organisations towards the PTSD Initiative:

