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SEPSIS: What is it and how can we avoid this silent killer?

Many people have never heard of sepsis, but it kills more Australians every year than road traffic accidents or stroke. Every year, over 55,000 Australians are diagnosed with sepsis and more than 8,700 will lose their lives to the condition.

Sepsis is the body's life-threatening response to infection, causing damage to its own tissues and organs, and potentially leading to death. It is vital that all Australians know about sepsis, act quickly if they have any of the warning signs, and ask their healthcare professional "could it be sepsis?"

Spotting the warning signs of sepsis can be tricky, as they can overlap with other conditions. Sepsis survivors report feeling 'worse than ever before', while parents of children with sepsis often report a high level of concern that their child is very unwell in a way that is different to previous childhood illnesses.

The [Australian Commission on Safety and Quality in Health Care](#), which drives improvements in the safety and quality of health care, has released the first national standard of care for sepsis patients. The new [Sepsis Clinical Care Standard](#) will improve the recognition and management of sepsis and its after-effects.

Q+A

What is sepsis?

Sepsis is a life-threatening condition that occurs when the body's response to an infection damages its own tissues and organs. Organ dysfunction can cause organ failure (heart, lungs, kidneys, liver) and lead to death. Sepsis is a complication of infection and deterioration can occur with common infections.

How does a person get sepsis?

Sepsis can arise with any infection. The most common causes are respiratory infections, gastrointestinal infections (for example, after kidney or gall stones) and urinary infections. For some people, sepsis starts with an infection that gets worse instead of better, while others may not even know they have an infection.

What types of infection cause sepsis?

Most cases of sepsis are caused by bacterial infections. Sepsis can also be the result of a viral infection, such as COVID-19 or influenza, a fungal infection (such as thrush) or a parasitic infection (such as malaria). Some people can develop sepsis without realising they have an initial infection.

Where does sepsis usually start?

An infection that leads to sepsis often starts in the lung, urinary tract, skin, or gastrointestinal tract. The infection triggers a chemical reaction in the bloodstream which causes inflammation throughout the body.

Who gets sepsis?

Anyone can get sepsis but young children, older people, Aboriginal and Torres Strait Islander peoples, people living in remote communities, and people living with cancer or immunosuppression are disproportionately affected. Globally, more than 50% of sepsis cases are in children and adolescents. Older people who get sepsis have high mortality rates of 50–60%.

How do you know if you have sepsis?

Sepsis is difficult to recognise, especially in the early stages. Its signs and symptoms can be subtle and overlap with other conditions. Some of the signs and symptoms of sepsis can appear similar to common infections at first, but people feel worse quite quickly. The symptoms in children can be vague, and parental concern that something is wrong is an important sign. Go to hospital if you think you or your child might have sepsis. (See **Table 1** below for some of the signs.)

How is sepsis diagnosed?

To diagnose sepsis, doctors will measure your temperature, heart rate and breathing rate, and may do blood tests. There is no single test to diagnose sepsis. Some tests may be done to help doctors to work out the type of infection, where it is located and what part of your body has been affected.

How serious is sepsis?

Sepsis is a life-threatening condition which can lead to organ failure and death. Sepsis patients usually deteriorate quickly, and many are admitted to the intensive care unit due to the seriousness of their condition. Sepsis has a high mortality rate. In 2020, about half of Australian adults treated for sepsis were left with a disability or impaired function.

What is the treatment for sepsis?

Sepsis is a medical emergency that needs treatment in hospital straight away to reduce the risk of death or serious complications. Antibiotics (usually intravenous) should be started within one hour. If sepsis is not treated early, it can get worse quickly and turn into septic shock and cause your organs to fail.

What is the cost of sepsis?

Sepsis is a major cause of illness and death, with more than 8,700 sepsis-related deaths each year in Australians of all ages. Each year, the direct hospital cost of sepsis is about \$700 million, with indirect costs of more than \$4 billion. Many people who survive sepsis have ongoing health problems and disabilities, such as living with limb amputations, or impaired cognitive function. About half of adults treated for sepsis in hospital are readmitted within 90 days and more than 70% are readmitted within a year.

What is the impact of sepsis on children?

About one quarter of Australian children admitted to the ICU with sepsis die. Each year around 50 children in Australia die of sepsis. The loss of a child to sepsis is devastating and has a long-lasting impact on bereaved parents and families.

Why haven't I heard of sepsis?

Awareness of sepsis in the community is low. In 2020, 41% of Australian adults had never heard of sepsis. People in the 18–34-year-old age group, who are most likely to have young children, have lower awareness of sepsis than adults aged 50+. The new standard will help to raise awareness of sepsis.

Can sepsis be prevented?

You can help prevent sepsis by preventing infection. Get vaccinated against the flu and other potential infections, ensure wounds are treated appropriately, and practice good hygiene by washing hands and regular bathing. If you have an infection, watch out for warning signs such as fever and chills, breathing problems, feeling faint or dizzy. If your infection is getting worse, seek immediate medical attention at hospital or via an ambulance, and ask 'could it be sepsis?'.

What should I do if I suspect someone has sepsis?

The new standard highlights the importance of advocating for someone if they are showing signs or symptoms of sepsis and you are seeking medical care. It is important to ask, '**Could it be sepsis?**' Escalate your concerns to a more senior clinician if they are not addressed urgently and you continue to be concerned.

What is the long-term impact for people who have had sepsis?

Sepsis has an ongoing impact on people's lives. Up to half of adult sepsis patients experience ongoing problems, sometimes called '**post-sepsis syndrome**', and need ongoing support in the community. Effects include fatigue, cognitive effect ('brain fog'), physical pain, poor mobility and impaired heart, kidney or lung function and may continue for months or years.

People can lose limbs due to sepsis and need to live with ongoing disability. Children with sepsis may have neuro developmental problems. Psychological effects include symptoms of post-traumatic stress disorder and anxiety.

Due to a lack of awareness of post-sepsis syndrome, people may not receive appropriate follow-up care. The *Sepsis Clinical Care Standard* will help improve awareness of ongoing care needs and better discharge planning for after people leave hospital.

Table 1:

SIGNS OF SEPSIS IN ADULTS	COMMON SEPSIS SIGNS IN CHILDREN
<ul style="list-style-type: none"> ▪ Fast breathing or breathlessness ▪ Fever and chills ▪ Low body temperature ▪ Low or no urine output ▪ Fast heartbeat ▪ Nausea and vomiting ▪ Diarrhoea ▪ Fatigue, confusion or sleepiness ▪ A lot of pain or 'feeling worse than ever' 	<ul style="list-style-type: none"> ▪ Fast breathing or long pauses in breathing ▪ Blotchy or discoloured skin ▪ Skin that is abnormally cold to touch ▪ Rash that doesn't fade when pressed ▪ Infrequent wet nappies ▪ Drowsiness – the child is difficult to wake up or confused ▪ Restlessness or floppy limbs ▪ Vomiting ▪ Fits or convulsions ▪ A lot of unexplained pain

To learn more about sepsis, visit: safetyandquality.gov.au/sepsis-ccs

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