

Strongyloidiasis

What is strongyloidiasis?

Strongyloidiasis (pronounced **strong**-a-loyd-eye-a-sis) is an infection caused by a type of worm called *Strongyloides stercoralis* that establishes itself in the gut.

How is it spread?

The infective form of the worm, the larva, lives in soil which has been contaminated by faeces of an infected person. If a person comes in contact with this soil, the larvae may burrow through the person's skin and make their way to the lungs and then the gut where they eventually become adult worms. These then produce eggs that hatch and develop into the infective larvae. The larvae can pass out in the faeces but sometimes burrow into the skin near the anus and continue to re-infect the individual (auto-infection).

Transmission from person-to-person can occur but this is uncommon.

Strongyloidiasis spreads only when there is human faeces in the environment so it is usually confined to places where sanitation is poor. However, because of the possibility of continued auto-infection, strongyloidiasis can last for many years after leaving the contaminated environment.

What are the symptoms?

Many people infected with *Strongyloides stercoralis* do not have any symptoms. Some people get a migrating itchy rash when the larvae are burrowing under the skin and some have chest symptoms such as wheeze and cough when the larvae reach the lungs.

When gut symptoms are present the common features are abdominal pain, diarrhoea, and bloating. Some people may experience, nausea, vomiting, weight loss, weakness or constipation. In chronic infections skin and chest symptoms can persist.

The time from infection until a person might develop symptoms is variable. Importantly the disease can become more severe if the person's immune system is weakened by other illnesses or medication (eg chemotherapy or steroid therapy). People infected but without symptoms may become unwell many years after they acquired the disease if their immune systems are weakened.

Very rarely, when the immune system is weakened enough to allow large numbers of larvae to migrate throughout the body, a severe form of the disease can occur. This is called 'disseminated strongyloidiasis' and is life-threatening. This rare complication is almost exclusively seen in immunocompromised people, most commonly in those on high dose steroids for more than 2 weeks. In addition disseminated strongyloidiasis has been associated with HTLV-I infection which is present in Central Australian Aboriginal people.

What is the infectious period?

As long as there are female worms in the gut excreting eggs, an infected person can pass the infection on to others via the soil cycle.

Some infected people may require medication but many people clear the worms without anti-worm treatment. Because of the possibility of auto-infection, *Strongyloides* worms can persist in people for many decades and therefore be a source of transmission to others. Once treated people are no longer infectious to others.

It is possible to become re-infected if exposed to contaminated soil again, as the body does not become immune to the *Strongyloides* worm.

Who is at risk?

In Australia, strongyloidiasis is most commonly seen in those living in or travelling to Aboriginal communities, World War II veterans, immigrants

from SE Asia, Africa and South American tropical and subtropical regions.

People in these groups who are about to start medications that affect the immune system, such as steroids or chemotherapy, should talk to their doctor and be tested for strongyloidiasis before starting treatment.

What is the treatment?

Strongyloidiasis is treated with specific anti-worm medication, depending on the age of the person with the infection.

Anyone with diarrhoea should drink extra fluids to avoid dehydration. Children with diarrhoea, who vomit or refuse fluids should see a doctor. Anyone with prolonged or severe diarrhoea, or who is concerned, should see a doctor.

Medicines to prevent vomiting or diarrhoea should not be given, especially to children, except when prescribed by a doctor.

How can strongyloidiasis be prevented?

Good hygiene and sanitation is the best way to prevent Strongyloidiasis. The provision of functioning sewerage systems and avoiding

faecal contamination of the soil are the most important preventative measures.

In settings where strongyloidiasis is prevalent it is important to avoid skin contact with contaminated soil by:

- wearing footwear in areas known or likely to have contaminated soil
- wearing gloves when handling soil known or likely to have been contaminated
- thorough and frequent hand washing.

In these settings it is always important to check for *Strongyloides* infection in at risk people before starting immunosuppressive medication (steroids, chemotherapy).

Other preventative measures include:

- washing hands thoroughly after going to the toilet, after changing soiled linen and after every nappy change
- ensuring there are effective and well maintained septic systems in place to dispose of faeces in a safe manner.

There is no vaccine available for the prevention of *Strongyloides* infection.

For more information contact the Centre for Disease Control in your region

Alice Springs	8951 7540
Darwin	8922 8044
Katherine	8973 9049
Nhulunbuy	8987 0357
Tennant Creek	8962 4259

or

<https://health.nt.gov.au/professionals/centre-for-disease-control/cdc-contacts>