

TICK POLICY & INFORMATION



RATIONALE

This policy attempted to bring together the most up-to-date and practical information for students and staff in bushland areas. This policy does not offer advice on health care. It remains the responsibility of parents and individuals to assess and manage risk based on their own needs. Always follow directions on recommended products.

AIM

The purpose of this policy is to provide informative information to all Parents, Staff and Board Members and asked them to read carefully the following policy objectives.

- a) Protect the right of parents to consent (or not) to their children being treated by staff for the removal of ticks at school
- b) To raise awareness of the dangers of tick allergies and reactions, and to manage their treatment at school.
- c) To set protocols to ensure tick exposure on campus in minimal
- c) Ensure that there is education on reducing the risk of tick bites.

IMPLEMENTATION

SOME IMPORTANT TIPS FOR PREVENTING TICK BITES INCLUDE:

- Wear a wide brimmed hat to protect your head and neck.
- Wear light-coloured clothing so you can see small ticks, especially nymphs.
- Wear a long-sleeved shirt and tuck it inside your pants.
- Tuck your pants into your socks so ticks can't get onto your legs.
- Apply insect repellent to your skin containing (Rid®, Tropical strength Roll on. We currently use RID at Farmhouse Montessori Nth Balgowlah and an organic spray at the Nth Head Campus supplied by one of the current parents.
- Always walk on the tracks and or paths to decrease the chance of brushing past a tick bearing plant.
- Tick checks are vital. Children will be check by staff when they return from hiking or walking around the Nth Head Campus by conducting a thorough search especially behind the ears, in the hair and on the back of the head.
- Brush skin and clothing before entering the school.
- If you've been outdoors, do not absentmindedly scratch anything that itches until you've examined it.
- NSW Government Health Brochures on the Preventing and Managing of Tick Bites are available to all parents at both campuses in the reception area.

WHAT ARE TICKS?

Ticks are parasites that feed on animal and human blood. There are more than 800 species of ticks around the world, with 70 found in Australia and 16 species have been reported as feeding on humans.

There are two major groups of ticks: hard ticks and soft ticks.

Hard ticks (family: *Ixodidae*) have a hard flat body and elongated mouthparts with rows of backward pointing teeth. This group includes the most important species that bite humans.

Soft ticks (family: *Argasidae*) have a wrinkled leathery appearance. Only a few species of this type are found in Australia and they rarely come into contact with people.

The most important tick in Australia is the Paralysis Tick, *Ixodes holocyclus*, and over 95% of tick bites in Eastern Australia are due to this species. Most tick-borne illnesses are due to this species.

THE PARALYSIS TICK

The Paralysis Tick, *Ixodes holocyclus*, is found along the eastern seaboard of Australia east of the Great Dividing Range, and possibly into Tasmania. It is commonly referred to as the grass tick, seed tick and bush tick depending

upon its stage of development. It is not known to occur in South Australia, Western Australia or the Northern Territory.

While *I. holocyclus* is the most common, there are two other *Ixodes* species in Australia which cause paralysis: *I. hirsti*, which occurs in South Australia and also has been documented in NSW and Tasmania, and *I. cornuatus*, which occurs in Tasmania and Victoria.

There are four stages in the life cycle of a tick; the egg, larvae (around 1mm and light brown in colour when not full of blood), nymph (around 2mm and pale brown) and the adults (4–5mm in length, without blood). The Paralysis Tick needs to feed on blood to develop through its lifecycle from the larvae stage to a nymph and to an adult. The adult female takes blood to obtain protein for the laying of eggs.

When fully engorged it is grey-blue in colour up to around 1cm in length.

The Paralysis Tick is most common in moist, humid coastal areas with abundant native animals that serve as hosts for the tick. Long grasses and bushland provide ideal environments for ticks, and if you live close to these areas, it is not uncommon to have Paralysis Ticks in your garden. This tick has a distinct seasonality; the larval stage is most active during the autumn months, the nymph during winter and the adult during the spring. This tick is most active during periods of high humidity, especially after rain, and this is when you should take particular care to avoid tick bites.

Paralysis Ticks are not particularly mobile, and rely on passing animals for a blood meal. The Paralysis Tick will crawl up the stems of grasses or along branches and 'perch' ready to latch on to a passing animal, including humans. They rarely climb higher than 50cm in their habitat, so do not drop out of trees, despite this common belief. However, after landing on a person or animal they can walk up the body and attach to the head area.



HOW DOES THE PARALYSIS TICK AFFECT HUMANS?

A tick attaches itself by piercing its sharp mouthparts into skin. It then injects an anticoagulant (a substance that prevents blood from forming clots) saliva which allows it to feed without the blood clotting. In the case of the Paralysis Tick, the saliva may be highly toxic to some animals and, potentially, humans.

Most tick bites pose no medical problems apart from some localised swelling and redness at the bite site if the tick is removed promptly. However, in some cases people can experience more severe conditions such as tick paralysis or allergic reactions including anaphylactic shock. Early symptoms of tick paralysis may include rashes, headache, fever, influenza like symptoms, tenderness of lymph nodes, unsteady gait, intolerance to bright light, increased weakness of the limbs and partial facial paralysis. Tick paralysis, while rare, is usually seen in children

rather than adults. Allergic reactions can result in swelling of the throat and may lead to breathing difficulties or collapse. It is important to seek medical attention quickly if such symptoms occur. If you have had similar symptoms in the past after being bitten by a tick, then it is a good idea to always be prepared.

Some serious tick-borne diseases also occur in Australia including, Queensland tick typhus and Flinders Island spotted fever. There are concerns that other serious illnesses, such as a Lyme disease-like syndrome, may be caused by exposure to Australian ticks, however there is no evidence yet this is the case ([Lyme Disease](#)).

Recently a new syndrome known as “tick-induced mammalian meat allergy” has been described, whereby people bitten by the Paralysis Tick, which is found in coastal Eastern Australia, can subsequently develop an anaphylactic reaction to consuming meats and animal by-products such as gelatine. This syndrome has also been described overseas.

NORTH HEAD CAMPUS

- As the school is located in a National Park, the spraying of insecticides on campus is prohibited. This includes the school playground.
- Unfortunately the existing playground fencing measurements are specifically designed to allow the safe passage of protected bandicoots through the schools grounds. The fence is therefore unable to be lowered to prevent the host animals coming into the school yard where they can drop ticks
- Both Campuses to regularly remove plant debris and undergrowth to remove moist vegetation where ticks thrive.
- The grounds of the school will have the grass cut and the shrubs and small trees trimmed on a regular basis as deemed necessary by the school this will be at least two times a term (to allow sunlight to saturate the lawn).
- Parent are asked to advise the school if they suspect their child has suffered a tick bite on school ground, The school will then advise other parents via email or on the school noticeboard that another incident has occurred so extra care can be taken preparing children for school and checking them upon their return home.
- The Farmhouse would like to plant insect/tick repelling plants such as chrysanthemums, citronella, lavender, sage and garlic on the school grounds. Unfortunately, the National Park location limits the types of plants the school may plant. A list of plants has been provided by the Trust to the school. We are in negotiations at the moment about the above plants if they are not on the list.
- During periods when tick bites are occurring more frequently play time maybe moved from the grassy playground to the paved parade ground if possible. During such times Friday sports days will also be held on the parade ground or other hard surfaced area.
- Children at the Nth Head campus will be encouraged to wear light coloured clothing which makes it easier to see ticks in the high season.
- North Head parents have the options of using an all-natural homemade tick repellent spray. This homemade repellent consists of Geranium Bourbon essential oil, Witch Hazel, Purified water and castile soap. As it is a water based spray, it must be applied to the children immediately before going outside for sports or playtime. Activation is immediate. The school has a supply of this on site.
- Authorisation notes to be sent out at the beginning of each year for the use of the natural tick repellent with a list of the ingredients in this spray, these are to be placed in the children’s files in the school office.
- The staff will apply to children that have parental permission to use the all-natural homemade tick repellent spray heavily before playtime, concentrating particularly on their feet and heads.
- All children on re-entry to the classroom after both lunch time and the play period will have a cursory inspection by staff for any possible signs of ticks.
- All parents will be advised to check there child each night for ticks during tick season.

- Parents will be discouraged from allowing their children to play on the hill by the side of the school grounds at pick up time during the tick season.

NORTH BALGOWLAH CAMPUS

- The services of a professional pest controller will be employed annually to conduct a pest inspection of the campus, and to spray for ticks in high risk areas when required on a regular basis.
- Sunlight must be allowed to saturate the playground lawn as ticks do not like dry conditions. The grounds must have the grass cut short and the shrubs and small trees trimmed
- The Farmhouse must ensure plant debris and undergrowth are removed regularly. Ticks thrive in moist vegetation.
- The school will plant insect/tick repellent plants such as chrysanthemums, citronella, lavender, sage or garlic on the school grounds

TICK REMOVAL PROCEDURE AT SCHOOL

Avoidance of tick bites is the best option.

- This involves “dressing for the occasion” (see and download the pamphlet “Preventing and Managing Tick Bites”) and the use of repellents from the tiara website. <http://www.tiara.org.au/>
- For small ticks (larvae and nymphs), the school will be using permethrin cream (available at pharmacies).
- For adult ticks, the parent will be called straight away so that the child can be collected and the tick handled by the parent as the best method is now to freeze them with an ether-containing spray (available at pharmacies) these are not recommended for the use in schools.
- Wait for the tick to drop off or remove it taking the utmost care to not compress the tick (as this will squirt allergen, toxin and possibly infection into you).
- Under no condition will tweezers be used to remove a tick from a child at the school.

TICK REMOVAL PROCEDURE AT HOME

Avoidance of tick bites is the best option.

- This involves “dressing for the occasion” (see and download the pamphlet “Preventing and Managing Tick Bites”) and the use of repellents.
- If you are bitten by a tick, kill the tick where it is:
- For small ticks (larvae and nymphs), use permethrin cream (available at pharmacies) &
- For adult ticks, freeze them with an ether-containing spray (available at pharmacies).
- Wait for the tick to drop off or remove it taking the utmost care to not compress the tick (as this will squirt allergen, toxin and possibly infection into you).

THERE ARE THREE MAJOR ALLERGIC CONDITIONS CAUSED BY TICK BITES

1. Large local reactions

The least dangerous allergic reaction to ticks, local reactions usually occur within 4-12 hours of being bitten. Identified by swelling and redness, extending from the bite site above the bite to the one below. Recommended treatment includes rest, elevation of the affected area, ice application, antihistamines and cortisone. This type of reaction can take up to 10 days to resolve, but typically has no ongoing effects.

2. Anaphylactic

This presents as a sudden and severe allergic reaction to a tick bite, and can be life threatening. Although fatal anaphylaxis to tick bites is rare, allergic reactions to ticks are more common than those to bees and wasps. Allergens in tick saliva provoke this anaphylaxis, but it is imperative to note that this reaction only occurs when the tick is disturbed.

3. Mammalian meat allergies

Tick bites can cause mild to life threatening allergic reaction to mammalian meats such as beef, pork, lamb, kangaroo, goat and venison, The allergen in the meat to which people react is called alphagal. The allergic reaction to meat is typically delayed for 2-10 hours after eating the meat. Some people are so sensitive to alphagal they react too all mammal products including mils and gelatine. Ay products derived from mammals may cause allergic reactions. Making avoidance very difficult as the allergen may be found in a wide range of agents used in medical treatments, as well as in foods.

PROCEDURE FOR THE REMOVAL OF TICKS FROM A CHILD WITH NO ALLERGIES PRESENT

Although no clinical studies have been conducted into the best methods of tick removal, there is a range of practical advice available based on a consensus of expert opinion and clinical experience?

- Never remove a tick with tweezers, forceps, a tick removal gadget or your fingers,. “Household tweezers are tick squeezers!” Squeezing a tick causes tick saliva to enter the blood stream, increasing the risk of tick induced allergies Parent now have the choice whether or not to approve the removal of ticks from their child on their annual child information sheets. The school recommends the none removal by staff at school and only the application of the Lyclear cream that will be kept on site for this.(See below for more information).
- In the case of the smaller nymph and larval ticks the application of a permethrin cream such as Lyclear directly to the tick will kill it. Then, either wait for it to drop off, or seek medical attention for removal. All parents at both campuses will be required to give written permission fo the application of this cream to their child by staff. This will permission note will be kept on the child file until the parents advised the school to cancel it.
- In the case of larger adult ticks. , the use of an ether containing spray is recommended to freeze the tick such as Wart off. As all ether contain sprays and other aerosols are unfortunately not recommended for use in a school environment for safety reasons (see MSDS Material Safety Data Sets) for more information), in the case of adult tick bites, staff should call the child’s parents for further instructions.. (The school would prefer to leave the tick until the child is collected by the parent.)
- Please note that killing ticks with an ether containing or permethrin cream (Lyclear) and then removing them as soon as is practicable in as safe a setting as is possible, may reduce the possibility of the child developing an allergy to ticks. It may also reduce the risk of the child contracting a tick borne infectious disease or developing tick paralysis.

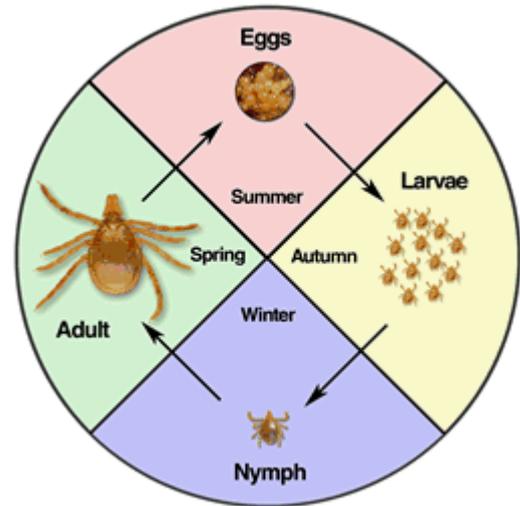
PROCEDURE FOR THE REMOVAL OF TICKS FROM A CHILD WITH TICK ALLERGIES PRESENT

- Any child presenting with an allergy to ticks must carry emergency mediation (e.g. an adrenaline auto injector such as an Epi Pen).
- If such a child has an allergic reaction to a tick bite, staff are to follow their ASCIA action Plan, including the use of an adrenaline auto injector (EpiPen) that must be supplied annually by the child’s family to the school in case symptoms of anaphylaxis occur.
- In any child allergic to ticks, the tick should always be killed and removed in a safe place (e.g. an emergency department of a hospital) until it is established that the process of killing the tick and removing it can be performed safely by the tick allergy sufferer. Once this is established, ticks may be killed and removed outside of a hospital, depending upon the individual circumstances and lonely after consultation with a medical specialist. Some individuals are so highly allergic to ticks that medical support should always be sought. In such cases it is best to seek medical advice. Seek urgent medical attention for any child presenting with their first allergic reaction to a bite bite (The school will call for an ambulance, and then contact the parents.)
- As mentioned above, ether containing sprays are currently recommended for killing ticks.

TICKS HAVE FOUR DISTINCT STAGES OF DEVELOPMENT:

egg – larva – nymph – adult. Larvae, nymphs and adult females must have a blood meal from a host. After the blood meal larvae and nymphs drop off the host and rest in the environment as they develop into the next stage; adult females drop off the host and lay eggs.

The whole cycle usually takes about a year.



TICK REMOVAL AEROSOLS & CREAMS

Lyclear®

Also recommended by the University of Sydney is Lyclear®, a scabies cream containing 5% permethrin. The application should be repeated after one minute. The tick should be left in place until it drops off. If the tick is still in place after 24 hours, gently remove it with fine tipped tweezers. Lyclear is a topical cream containing 5% permethrin and there is a chance that you can develop an allergic reaction to the active ingredient, hence it is best used infrequently or for serious infestations only. Possible to use in schools with permission.

Aerostart® & Elastoplast Cold Sprays

Aerostart® contains 24% ether. It is recommended by the University Of Sydney Department Of Medical Entomology, and the Australian Society of Clinical Immunology and Allergy. (ASCIA) Apply a small squirt directly onto the tick, taking care to minimise contact with the surrounding skin. It is designed for car engines—not people, and is classed as a skin irritant. If you are using it regularly you probably should consider ways to reduce tick exposure. Both Aerostart® & Elastoplast are highly flammable and must be kept away from naked flames or lit cigarettes. Not recommended for use in schools.

Wart-Off Freeze

ASCIA recommends Wart-Off Freeze® www.wartoff.com.au/products.html. Not recommended for use in schools.

Permethrin clothes wash:

Some very good success from ABBR treating their clothes with a permethrin clothes wash called Debugger. This product kills ticks on contact. The manufacturer states that this product is effective for at least six months, or 5 to 6 washes. "Any material can be treated with Debugger. Hats can be soaked in it along with clothes to give full protection." www.equip.com.au/Products/

IT IS IMPORTANT TO NOTE THAT:

- Some of these products are not registered for use as therapeutic products for humans
- Some of these products are highly flammable, and thus should not be used near a naked flame or whilst smoking.
- They are also not permitted for use on school grounds due to their flammable nature.
- Use of these products may cause rapid cooling of the skin and there may result in skin irritation.
- More information on these products may be obtained from the manufacturers.
- Pending future studies of the effectiveness
- Pending future studies on the effectiveness of various tick removal and killing methods, such advice is based on a consensus of expert opinion rather than derived from formal clinical studies,

- Freezing ticks may also have the advantage of reducing the risk of tick sensitisation, and the later development of a tick allergy or related allergic syndromes.

IN SUMMARY

Regardless of the type of reaction experienced after a tick bite, the principles of management are:

- Try to reduce the risk of tick bites during the high season:-have another area set aside to play in.
- If you've been outdoors, do not absentmindedly scratch anything that itches until you've examined it:-Staff to do a cursor check of all students upon re-entry to the school after being outside for lunch and play and sport.
- Know what to do if you find a tick lodged in the skin:- Apply cream if permitted.
- Know how to manage allergic reactions to tick bites (including anaphylaxis):- follow the child's Action plan and administer the EpiPen- call an ambulance, call the parents.

SOURCES	CREATED/REVIEW DATES
ASCIA 2014-The Australasian Society of Clinical Immunology and Allergy	Created 2/5/2016
AABR-Australian Association of Bush Regenerators 2014	2018
NSW Department of Health	
Tiara(Tick Induced Allergies Research & Awareness)	

CREATED/REVIEW	MODIFICATIONS	REVIEW DATES
Created 2/5/2016		2018
March 2018	New formatting and school logo added	2019
April 2020	What are ticks inserted The Paralysis Tick inserted Updated Tick Life Cycle pictures added How does the Paralysis Tick affect humans inserted?	2022