



# Mosquitoes are a Health Hazard

## Communicable Diseases Factsheet

Mosquitoes aren't just a nuisance - they can transmit serious diseases. To protect yourself: cover-up with a loose-fitting long sleeved shirts and long pants when outside; apply mosquito repellent to exposed skin; take special care during peak mosquito biting hours, especially around dawn and dusk; remove potential mosquito breeding sites from around the home and screen windows and doors. Take extra precautions when travelling overseas in areas with a high risk of serious mosquito-borne diseases.

### Avoid mosquito bites

Mosquitoes can transmit a number of serious human diseases. In NSW, some types of mosquitoes can transmit viruses such as [Ross River](#) and [Barmah Forest](#) and, rarely, the virus that causes [Murray Valley encephalitis](#). Some parts of northern Queensland have a type of mosquito that can transmit [dengue fever](#), [chikungunya](#) and [Zika](#) infections.

Overseas travellers may be at risk of mosquito-borne diseases such as [malaria](#), [dengue](#), [yellow fever](#), [chikungunya](#) or [Zika](#). While vaccines are available for some diseases (e.g. [yellow fever](#) and Japanese encephalitis) and chemoprophylaxis medicine can help prevent [malaria](#), all travellers should also use repellents

and other general protective measures to avoid mosquito bites.

### Wear appropriate clothing

Minimising the amount of exposed skin reduces the risk of mosquito bites by wearing loose, light-coloured clothing with long sleeves and pants. Also wear socks and shoes where possible.

Some mosquitoes will bite through clothing. Consider using clothing pre-treated with insecticides but remember that repellent must still be applied to exposed skin.

### Apply mosquito repellent to exposed skin

Use a mosquito repellent on all exposed skin areas.

Reapply the repellent according to instructions or when you notice mosquitoes biting.

Avoid putting repellent near the eyes and mouth, or over open wounds, broken skin or abrasions. Always follow the product label instructions.

The most effective mosquito repellents contain Diethyl Toluamide (DEET) or Picaridin. Repellents containing oil of lemon eucalyptus (OLE) (also known as Extract of Lemon Eucalyptus) or para menthane diol (PMD) also provide adequate protection.

The strength of a repellent determines the duration of protection with higher concentrations providing longer periods of protection. Always check the label for reapplication times. Note that botanical-based products (such as Eucalyptus or Citronella) provide limited protection and require frequent reapplication.

Use just enough repellent to cover exposed skin. After returning indoors, rinse off repellent with soap and water.

Mosquito repellent needs to be reapplied after swimming. The duration of protection from repellent is also reduced with perspiration, such as during strenuous activity or hot weather so it may need to be reapplied more frequently.



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If you're using sunscreen (and you should), apply the sunscreen first and then apply the repellent. Be aware that DEET-containing repellents may decrease the sun protection factor (SPF) of sunscreens so you may need to re-apply the sunscreen more frequently.

And for children - most skin repellents are safe for use on children aged 3 months and older when used according to directions, although some formulations are only recommended for children aged 12 months and older - always check the product label for recommended age use.

Never allow young children to apply their own repellent. Infants aged less than 3 months can be protected from mosquitoes by using an infant carrier draped with mosquito netting that is secured along the edges.

Protection during pregnancy - registered mosquito repellents used according to product label instructions are considered safe for use during pregnancy and while breast-feeding.

## Use appropriate insecticides

Aerosol insecticide sprays, mosquito coils (used outdoors) and insecticide vapour dispensing units (used indoors) can help to clear rooms or areas of mosquitoes or repel mosquitoes from an area. These products should be used in addition to, not in place of, other measures such as appropriate clothing and skin repellents.

New personal (e.g. clip-on) spatial repellent products containing active ingredients such as metofluthrin are likely to augment the effect of other measures but most have yet to be fully evaluated.

Devices that use light to attract and electrocute insects have not been proven to be effective in reducing mosquito numbers and often kill more harmless insects.

## Be aware of the peak risk times for mosquito bites

Take extra care during peak mosquito biting hours to reduce the risk of infection. Avoid the outdoors or take preventive actions (such as appropriate clothing and skin repellent). In NSW, most mosquitoes become active at dawn and dusk, and into the evening.

When travelling overseas it is important to be aware of the biting patterns of the local mosquitoes which transmit diseases. For example:

- The mosquitoes that transmit diseases such as dengue, chikungunya, Zika will bite all through the day.
- The mosquitoes that transmit malaria are most active at dawn and dusk, and into the evening.

## Reduce mosquito risk at home

Stop adult mosquitoes entering the home by using flyscreens on windows and doors, and screening chimneys, vents and other entrances. Repair any damaged screens.

Also consider using a surface insecticide spray in areas where mosquitoes like to rest. During the day, mosquitoes rest and hide in cool shady areas such as in and around the home before emerging at dusk to feed. Make sure you avoid aquaria and fish ponds as fish are acutely sensitive to these insecticides.

Mosquitoes need water to breed and some mosquitoes can breed in very small amounts of water, such as in the water that collects in a discarded soft-drink can. Measures to reduce the risk of mosquitoes breeding in around the home include:

- cleaning up your backyard and removing all water-holding rubbish, including tires and containers
- keeping your lawns mowed
- flushing and wiping out bird baths and water features once a week.
- filling pot plant bases with sand to avoid standing water
- storing anything that can hold water undercover or in a dry place, and keeping bins covered
- flushing out the leaves of water-holding plants such as bromeliads once a week
- keeping drains and roof guttering clear to avoid standing water
- covering or securely screening the openings of septic tanks and rainwater tanks.



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Properly cleaned and chlorinated swimming pools are rarely a source of mosquito breeding but neglected pools can be a haven for mosquitoes.

### Reduce mosquito risk around the farm

If you live on a farm, additional precautions are needed to reduce opportunities for mosquitoes to breed. These include:

- keeping dams and ground pools free of vegetation
- checking dam walls and irrigation bays for leaks
- being careful not to over-irrigate to avoid water collecting in low-lying areas for long time periods
- not allowing irrigation water to flow into and lie undisturbed in roadside table drains.

### Reduce mosquito risk while travelling

In addition to the general protection measures above, travellers should also:

- stay in screened or air-conditioned rooms
- use a bed net if the area where you are sleeping is exposed to the outdoors. Nets are most effective when they are treated with a pyrethroid insecticide, such as permethrin. Pre-treated bed nets can be purchased before travelling, or nets can be treated after purchase.
- avoid known areas of high mosquito-borne disease transmission or outbreaks. This is particularly important for people at higher risk of complications from mosquito-borne diseases, such as pregnant women if exposed to [Zika](#) or [malaria](#).

[See the Staying healthy when travelling overseas factsheet](#) for further information on travel.

The [Smartraveller website](#) also has health information for specific destinations.

For further information please call your local public health unit on 1300 066 055 or visit the [NSW Health website](#).