



Advice on Mosquito Control During Floods and Public Events

Mosquito bites are not just a nuisance – they also have the potential to pass on disease to humans. In areas where mosquito numbers are high, people should try to avoid mosquito bites by using appropriate personal protection measures.

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Person protection measures include

- Avoid going outside when mosquitoes are most prevalent, including around dawn and dusk.
- Use an effective repellent on exposed skin areas. Re-apply repellent, according to the instructions on the product label. Repellent should be reapplied after swimming. Perspiration during strenuous activity or hot weather may reduce the duration of protection, so reapply more frequently.
- The best mosquito repellents contain Diethyl Toluamide (DEET) or Picaridin. Repellents containing oil of lemon eucalyptus, also known as extract of lemon eucalyptus or p-Menthane-3,8-diol (PMD) provide adequate protection. These formulations usually come in concentrations around 30-40%. Botanical based products (e.g. Eucalyptus, Citronella etc) provide only limited periods of protection and require regular reapplication.
- For use on children, please read and follow label directions. Most formulations containing DEET and Picaridin are safe to use on children over the age of 3 months. Some formulations are only suitable for children over 12 months. Note that prolonged or excessive use of repellents can be dangerous, particularly on babies and young children. Avoid putting repellent near eyes and mouth, spread sparingly over the skin, and rinse off once you are indoors.
- Provide mosquito netting, where necessary—both indoors and outdoors.
- Cover up as much as possible with loose fitting clothing and sensible footwear. Avoid tight clothes.
- Some mosquitoes will bite through clothing. Repellent can be applied to the outside of clothing but permethrin treatment of clothing will provide additional protection. Use mosquito coils outdoors and vaporising mats indoors. Note, however, that devices that use light to attract and electrocute insects have not been proved to be effective in reducing mosquito numbers.
- Limit the number of places around your home for mosquitoes to breed by getting rid of items that hold water or by emptying the containers.

During periods of flooding mosquito numbers could rapidly increase and cause nuisance. The following measures can be considered by the Councils and householders depending on the level of nuisance associated with mosquitoes, the environmental impact of insecticide use, and the availability of resources:

- Personal spraying of households with over the counter insecticides: A range of insecticides are currently registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) for use against mosquitoes.
- Council spraying of insecticides in public areas: Local Councils may need to seek a license to spray approved APVMA insecticides from the NSW Office of Environment and Heritage (OEH) under the Protection of the Environment Operations Act 1997 (POEO Act). There are other obligations that councils need to abide to when spraying outdoor public places. For further information, please contact NSW OEH on 131 555
- For organisations planning a major event (such as a concert or festival) in areas prone to mosquitoes, have mosquito repellent available (for sale) for personal uses of patron's, and have posters and information about how to avoid mosquito bites displayed prominently at and around the event. If practical, local Councils may consider fogging or spraying adulticides (e.g. synthetic pyrethroids) a night before major events or mass gathering.

Further information on mosquito bite avoidance can be accessed from the Mosquitoes are a Health Hazard factsheet.

- Spraying of residual insecticides (e.g. bifenthrin or deltamethrin; check the label to see if it is approved for such use) around accommodation sites, homes or business premises. These products are applied to indoor and outdoor areas where adult mosquitoes take refuge and can assist in reducing local mosquito abundance in proximity to treated areas.
- In situations where there is the potential for ongoing mosquito breeding (e.g. areas of stagnant water), the application of mosquito control agents targeting the immature stages (e.g. the biolarvicide *Bacillus thuringiensis israelensis* or insect growth regulator *s-methoprene*) can interrupt mosquito breeding and reduce the abundance of mosquitoes. Expert advice should be sought when selecting an appropriate product for local conditions as the timing of the application of these products is critical in order to achieve successful larval control.