Non-multiresistant MRSA (nmMRSA) can cause skin and other more serious infections. It can spread from person to person via direct contact, hands, towels and personal grooming items. Avoid sharing items and wash hands thoroughly, especially after touching skin infections.

**What is Methicillin Resistant Staphylococcus aureus?**

Everybody has a variety of bacteria (germs) on their skin. About a third of the adult population carry (either on their skin or in their nose or mouth) bacteria called *Staphylococcus aureus*. There are many different strains (types) of *S. aureus* (often referred to as ‘staph’ or ‘golden staph’) and most of the time they live and multiply on the body without causing any problems. However, under some circumstances, they can get inside the body through broken skin and cause infection that requires treatment with antibiotics.

Some strains of *S. aureus* are difficult to treat as they have become resistant to commonly used antibiotics. (This means the antibiotics are no longer effective). When this occurs it is described as Methicillin Resistant *Staphylococcus aureus* (MRSA).

**What is community-acquired MRSA?**

MRSA has traditionally not been a problem for healthy people living in the community but was strongly linked with being in hospital. In recent years this picture has changed. Over the last few years new strains of MRSA have been identified which are known to spread and cause infection in healthy people living in the community and who have not been in hospital. These strains are referred to as non-multiresistant MRSA (nmMRSA).

**What are the signs and symptoms of MRSA infection?**

nmMRSA strains most commonly cause skin and soft tissue infections, however more serious infections can occasionally occur if MRSA enter the bloodstream (from existing skin infection) or the lungs (following a respiratory illness). These infections can be life-threatening.

*Common signs of skin infection include:*

- Redness, swelling, pain, heat and the presence of pus. They often have the initial appearance of an insect bite, which can progress rapidly to become boils and abscesses that frequently require surgical drainage.

*Serious infections may include any of the following symptoms:*

- General malaise (feeling unwell), high fever, rigors (uncontrollable shakes), shortness of breath, or weakness and dizziness from low blood pressure when the infection spreads through the body.

**How is it spread?**

nmMRSA is usually spread from person to person through direct contact with a person who is infected or is carrying nmMRSA on their skin or in their nose (colonised). This can occur when people have close skin to skin contact. It may also spread by having contact with shared items (sharing towels) or from touching surfaces that are contaminated with nmMRSA. It is not usually spread through the air. If you follow the hygiene advice provided, spread to your friends, work colleagues and casual contacts is unlikely.

**Who is at risk?**

nmMRSA skin infections can affect anyone. Crowding and frequent skin to skin contact can increase the risk of infection, so outbreaks tend to happen in schools, dormitories, military barracks, households, jails, and childcare centres. Cuts or abrasions, scratching insect bites, contact with contaminated items and surfaces, and infrequent washing increase the risk of infection. People who have health problems such as diabetes or a poor immune system or who have broken skin due to wounds, or dermatitis are also more likely to get an infection.
How is it prevented?
Hand washing is important to prevent the spread of nmMRSA. You should thoroughly wash all parts of your hands with soap and running water for 10-15 seconds, and dry them with a clean towel or disposable paper towels:

- before and after touching/dressing an infected area
- after going to the toilet
- after blowing your nose or coughing into your hands
- before handling or eating food
- after handling soiled clothing or linen
- after handling animals including domestic pets and livestock

Cover boils or other skin infections with a waterproof dressing. If open skin wounds cannot be kept covered, temporary exclusion of food handlers from the workplace should be considered until the wound is dry or healed.

Don't share personal items such as clothes, towels, or bed sheets (if you share a bed with someone, keep sores or wounds covered overnight) or grooming items such as nail scissors, tweezers, razors and toothbrushes.

MRSA in childcare and schools
In addition to general hygiene, specific measures to prevent spread in schools and childcare include:

- teachers, children and families should understand the importance of hand washing, covering coughs and staying home if sick
- hand washing products (soap dispensers, running water and paper towel) should be available and accessible
- activities should allow time for hand washing (before eating and after going to the toilet)
- if open skin wounds cannot be kept covered, temporary exclusion from child care or school may be considered until the wound is healed or drainage of pus from the wounds can be contained using a waterproof dressing
- surfaces such as counters, desks and toys should be cleaned daily with detergent, and whenever visibly contaminated

MRSA in sporting groups
In addition to general hygiene, measures to prevent nmMRSA spread in sporting groups should include:

- People who have skin infections or open wounds that cannot be kept covered should not participate in contact sports until the wound has healed or drainage can be contained
- People who have skin infections or open wounds should be excluded from common spas or saunas
- People who have uncovered skin wounds should not share towels or sports equipment that is in contact with the skin

How is diagnosed?
Staph infections are usually diagnosed on the basis of their appearance and the presence of any related symptoms (eg fever). To diagnose an infection of nmMRSA, your doctor will need to take a swab or sample from the boil, wound, or other site of infection, for laboratory testing.

How is treated?
Your doctor will advise on the best treatment for your infection. Many nmMRSA skin infections can be treated by draining the abscess or boil. Letting the pus drain out safely is often the only treatment that is needed and the person often feels better once this has happened. Drainage of skin boils or abscesses should only be performed by a doctor, trained nurse or health worker under sterile conditions. It is important to keep the wound well protected with a waterproof bandage so that you don't spread the infection to others. In some circumstances nmMRSA is treated with special antibiotics. If you are given an antibiotic, take all of the doses as instructed by the doctor or pharmacist, even if the infection is getting better. It is possible for a nmMRSA skin infection to come back after it appears cured. You may also be required to wash with antiseptic containing soap or use an ointment in your nose for 5-10 days to assist with getting rid of the infection

What should I tell my household contacts?
‘Household contacts’ are those people who live in your house on a regular basis. nmMRSA is commonly spread within households, but just because a person lives in the same household does not mean they will acquire nmMRSA. You should inform your doctor if there have been ongoing or regular skin infections within your household. You should also inform your household contacts that you have a nmMRSA infection and share this information sheet with them. It is recommended that household contacts discuss this issue with their doctor, especially if they have a history of skin infections, such as boils or abscesses, or if they are at risk of infection due to other medical conditions (e.g. diabetes, cancer). They should seek prompt medical assessment if any infections develop.

Adapted from the:
2. New South Wales Health Communicable Diseases Fact Sheet: Staphylococcus aureus in the Community-Information for Clinicians (December 2008)