



LA-MRSA Update

- LA-MRSA was found in an isolated case in Northern Ireland in 2014 and more recently on a pig farm in England.
- There is a very low risk of contracting LA-MRSA from eating meat if handled hygienically and cooked thoroughly to kill any bacteria.
- Livestock keepers are advised to observe good husbandry, hygiene and biosecurity practices, including adherence to principles of responsible antibiotic use.

Background

- Methicillin-resistant staphylococcus aureus (MRSA) is a type of bacterial infection that is resistant to a number of widely used antibiotics.
- *Staphylococcus aureus* (also known as staph aureus) is a common, often resident bacteria of the skin, nostrils and throat and can cause mild infections of the skin such as boils and impetigo.
- Carriage of the organism in the nose, throat, or skin is not the same as being infected. Infection only occurs when the bacteria gets in through the skin, which may cause a mild skin infection such as boils or impetigo; however this is rare.
- MRSA infection has primarily been hospital-acquired (HA-MRSA). This is because surgical wounds are a common route of entry for the bacteria to get into the body.
- However, more recently, another type of MRSA has emerged. Livestock-associated (LA)-MRSA, particularly sequence type CC398, has been reported in pigs, poultry and cattle in many countries. LA-MRSA causes little to no clinical disease in livestock.
- LA-MRSA and HA-MRSA are genetically distinct from one another¹. LA-MRSA is not the same as those strains that cause the healthcare associated infections that affect people.
- LA-MRSA rarely causes disease in people and in most cases the bacteria clear within 24 hours. It can potentially pass from animals to humans through direct contact or through dust in animal housing and is therefore primarily an occupational risk for those in regular contact with affected livestock such as vets and farmers.
- LA-MRSA is relatively widespread in livestock in Europe. However, there are no known cases² of people contracting MRSA from eating meat.

¹ Ballhausen P., et al. LA-MRSA CC398 differ from classical community acquired-MRSA and hospital acquired-MRSA lineages: Functional analysis of infection and colonization processes. International Journal of Medical Microbiology, 304 (7)

² <https://www.gov.uk/government/news/livestock-associated-mrsa-found-at-a-farm-in-east-anglia>



- Government is constantly reviewing the range of control options available to it in response to new and emerging disease situations, including those involving antimicrobial resistance.
- Surveillance of MRSA is mandatory in all NHS trusts in England, including targeted screening of patients admitted to hospital. Therefore, it is likely that a patient's carriage of LA-MRSA will be detected prior to any surgery and infection risk will be minimised.
- LA-MRSA was only identified for the first time in pigs in the UK in July 2014. The bacteria was found in one piglet on a farm in Northern Ireland.
- In January 2015, LA-MRSA was found in two piglets with skin lesions at post mortem from a farm in Eastern England. This isolated outbreak affected 60 piglets, of which six died.

Pig Industry position

- LA-MRSA is different from the strain of MRSA associated with healthcare infections.
- HA-MRSA and LA-MRSA have different epidemiology and risk-factors associated with them.
- There is a very low risk of contracting LA-MRSA through eating meat when good hygiene and thorough cooking practices are observed.
- LA-MRSA is a poor coloniser in humans and does not spread as easily as HA-MRSA in hospitals.
- Pig farmers and other people with regular close contact with livestock are at increased risk of LA-MRSA carriage, but true infection is rare. The risk to members of the general public of contracting LA-MRSA from a pig is very low.
- Good hygiene will reduce spread of the bacteria. Important measures are hand-washing and cleaning & disinfection of contaminated surfaces.
- NHS control measures for MRSA infection, such as screening, isolation and monitoring of patients, hand hygiene and environmental decontamination will further limit the risk of LA-MRSA to public health.
- Whilst it has been established that resistant organisms in human medicine are primarily the result of antibiotic use in people, rather than the use of antibiotics in animals, any isolation of resistant organisms in food producing animals is of concern.
- Therefore, the government and the British pig industry is committed to following an action plan to monitor and minimise the amount of antimicrobials used in pig production.

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