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MicroChem Plus™ Detergent Disinfectant Cleaner
NeutraCide 256™ Disinfectant Neutral Cleaner
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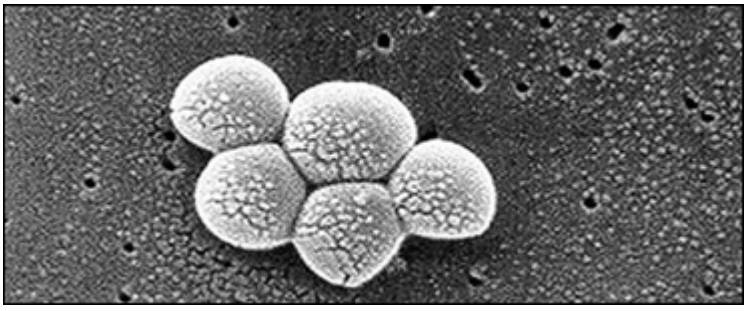
INFORMATION REGARDING MRSA - METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* - IN COMMUNITY-ASSOCIATED SETTINGS

From the Center for Disease Control (www.cdc.gov)



What is community-associated MRSA (CA-MRSA)?

Staph and MRSA can also cause illness in persons outside of hospitals and healthcare facilities. MRSA infections that are acquired by persons who **have not** been recently (within the past year) hospitalized or had a medical procedure (such as dialysis, surgery, catheters)

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are know as CA-MRSA infections. Staph or MRSA infections in the community are usually manifested as skin infections, such as pimples and boils, and occur in otherwise healthy people.

Are certain people at increased risk for community-associated staph or MRSA infections?

CDC has investigated clusters of CA-MRSA skin infections among athletes, military recruits, children, Pacific Islanders, Alaskan Natives, Native Americans, men who have sex with men, and prisoners.

Factors that have been associated with the spread of MRSA skin infections include close skin-to-skin contact, openings in the skin such as cuts or abrasions, contaminated items and surfaces, crowded living conditions, and poor hygiene.

What are the clinical features of CA-MRSA?

CA-MRSA most often presents as skin or soft tissue infection such as a boil or abscess. Patients frequently recall a “spider bite”. The involved site is red, swollen, and painful and may have pus or other drainage. Staph infections also can cause more serious infections, such as blood stream infections or pneumonia, leading to symptoms of shortness of breath, fever, and chills.

What are the criteria for distinguishing community-associated MRSA (CA-MRSA) from healthcare-associated MRSA (HA-MRSA)?

Persons with MRSA infections that meet all of the following criteria likely have CA-MRSA infections:

- Diagnosis of MRSA was made in the outpatient setting or by a culture positive for MRSA within 48 hours after admission to the hospital.
- No medical history of MRSA infection or colonization.
- No medical history in the past year of:
    - Hospitalization
    - Admission to a nursing home, skilled nursing facility, or hospice

  - Dialysis
  - Surgery
- No permanent indwelling catheters or medical devices that pass through the skin into the body.

What is the main way that staph or MRSA is transmitted in the community?

The main mode of transmission of staph and/or MRSA is via hands which may become contaminated by contact with a) colonized or infected individuals, b) colonized or infected body sites of other persons, or c) devices, items, or environmental surfaces contaminated with body fluids containing staph or MRSA. Other factors contributing to transmission include skin-to-skin contact, crowded conditions, and poor hygiene.

How is a MRSA infection diagnosed?

In general, a culture should be obtained from the infection site and sent to the microbiology laboratory. If S. *aureus* is isolated, the organism should be tested as follows to determine which antibiotics will be effective for treating the infection.

Skin Infection: Obtain either a small biopsy of skin or drainage from the infected site. A culture of a skin lesion is especially useful in recurrent or persistent cases of skin infection, in cases of antibiotic failure, and in cases that present with advanced or aggressive infections.

Pneumonia: Obtain a sputum culture (expectorated purulent sputum, respiratory lavage, or bronchoscopy).

Bloodstream Infection: Obtain blood cultures using aseptic techniques.

Urinary Infection: Obtain urine cultures using aseptic techniques.

How are CA-MRSA infections treated?

Staph skin infections, such as boils or abscesses, may be treated by incision and drainage, depending on severity. Antibiotic treatment, if indicated, should be guided by the susceptibility profile of the organism.

How do CA-MRSA and HA-MRSA strains differ?

Recently recognized outbreaks of MRSA in community settings have been associated with strains that have some unique microbiologic and genetic properties compared with the traditional hospital-based MRSA strains, suggesting some biologic properties (e.g., virulence factors) may allow the community strains to spread more easily or cause more skin disease. Additional studies are underway to characterize and compare the biologic properties of HA-MRSA and CA-MRSA strains.

There are at least three different *S. aureus* strains in the United States that can cause CA-MRSA infections. CDC continues to work with state and local health departments to gather organisms and epidemiologic data from known cases to determine why certain groups of people get these infections.

Information on MRSA on Environmental Services in Healthcare Settings (from the Center for Disease Control (www.cdc.gov) - Guidelines for Environmental Infection Control in Health-Care Facilities

Interest in the importance of environmental reservoirs of VRE increased when laboratory studies demonstrated that enterococci can persist in a viable state on dry environmental surfaces for extended periods of time (7 days to 4 months) and multiple strains can be identified during extensive periods of surveillance. VRE can be recovered from inoculated hands of health-care workers (with or without gloves) for up to 60 minutes. The presence of either MRSA, VISA, or VRE on environmental surfaces, however, does not mean that patients in the contaminated areas will become colonized. Strict adherence to hand hygiene/handwashing and the proper use of barrier precautions help to minimize the potential for spread of these pathogens. Published recommendations for preventing the spread of vancomycin resistance address isolation measures, including patient cohorting and management of patient-care items. Direct patient-care items (e.g., blood pressure cuffs) should be disposable whenever possible when used in contact isolation settings for patients with multiply resistant microorganisms.

Careful cleaning of patient rooms and medical equipment contributes substantially to the overall control of MRSA, VISA, or VRE transmission. The major focus of a control program for either VRE or MRSA should be the prevention of hand transfer of these organisms. Routine cleaning and disinfection of the housekeeping surfaces (e.g., floors and walls) and patient-care surfaces (e.g., bedrails) should be adequate for inactivation of these organisms. Both MRSA and VRE are susceptible to several EPA registered low- and intermediate-level disinfectants (e.g., alcohols, sodium hypochlorite, quaternary ammonium compounds, phenolics, and iodophors) at recommended use dilutions for environmental surface disinfection. Additionally, both VRE and vancomycin-sensitive enterococci are equally sensitive to inactivation by chemical germicides, and similar observations have been made when comparing the germicidal resistance of MRSA to that of either methicillin-sensitive *S. aureus* (MSSA) or VISA. The use of stronger solutions of disinfectants for inactivation of either VRE, MRSA, or VISA is not recommended based on the organisms' resistance to antibiotics. VRE from clinical specimens have exhibited some measure of increased tolerance to heat inactivation in temperature ranges <212°F (<100°C); however, the clinical significance of these observations is unclear because the role of cleaning the surface or item prior to heat treatment was not evaluated. Although routine environmental sampling is not recommended, laboratory surveillance of environmental surfaces during episodes when VRE contamination is suspected can help determine the effectiveness of the cleaning and disinfecting procedures. Environmental culturing should be approved and supervised by the infection-control program in collaboration with the clinical laboratory.

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