

# FACTSHEET

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## Multi-resistant organisms

### What are multi-resistant organisms?

Multi-resistant organisms (MROs) are bacteria that are resistant to a number of different antibiotics. Some are better known than others, and are often called by their initials. Examples are MRSA (methicillin-resistant *Staphylococcus aureus*); VRE (vancomycin-resistant enterococci), CRE (Carbapenem-Resistant Enterobacteriaceae) & ESBL (extended spectrum beta lactamase producing organisms).

### Where do they come from?

Multi-resistant organisms arise naturally, by spontaneous mutation or when the genes for resistance are passed on from other bacteria. Their presence is encouraged by the frequent use of “broad spectrum” antibiotics. The bacteria however can be spread from person to person, usually on hands.

### Where do you find them?

Some multi-resistant organisms, such as MRSA, are found mainly in people’s noses or on their skin. Others, such as VRE and ESBL, are found mainly in the gut (intestine). In all cases, they are most likely to be present without causing any disease at all, that is, they “colonise” the person who then is said to be a “carrier” of that bug. Only rarely do they invade and cause disease.

### Are they super-bugs?

The term super-bugs implies the bacteria are more powerful and cause more disease (doctors say “more virulent”) than other bacteria which are sensitive to antibiotics. This is not usually the case. Multi-resistant

organisms are no more likely to cause nasty infections than other sensitive bacteria. It is true that some MRSA can cause severe infection, but so can sensitive strains of the same bacterium, *Staphylococcus aureus*.

The main reason that doctors worry about multi-resistant organisms is that if a person colonised with a multi-resistant organism gets sick, we often have to start treatment with powerful, expensive antibiotics, which may have more side-effects, instead of our preferred antibiotics. If multi-resistant organisms become common in the community, commonly available and preferred antibiotics will not be effective. In addition, for some patients with underlying ill health e.g. they have a poor immune system due to a medical condition, multi-resistant bacteria are an additional and potentially serious problem for them.

### How can we prevent them emerging?

We try to prevent multi-resistant organisms emerging by a well-controlled use of antibiotics.

### How do we stop them spreading?

The simplest way is to wash our hands well, both before and after handling a baby or child colonised or infected with the multi-resistant organism. In hospital we try to separate babies or children who are colonised from other children (a process called “cohorting”). When a child is a carrier or is infected with an MRO and is hospitalised, we adopt special “infection control” precautions until the child is discharged from hospital.

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Despite our best efforts, we sometimes find that babies and children become colonised with the multi-resistant organism within a short time of being admitted to a hospital. Since these bacteria are not usually highly virulent, in general this colonisation is a nuisance rather than being dangerous.

**More information**

For more information, please consult the Infection Control team or the consultant in charge of your child.