



For those affected  
and their family  
members

# GUIDE

FOR MULTI-DRUG-RESISTANT ORGANISMS (MDRO)



## I have received confirmation that I am colonised with a Multi-Drug-Resistant Organism (MDRO). What does this mean?

MDRO = Multi-Drug-Resistant Organism is a common bacteria (germ) that has developed resistance to multiple types of antibiotics.

### Examples of MDRO include:

#### MRSA/ORSA = Methicillin/Oxacillin-resistant *Staphylococcus aureus*

MRSA and ORSA are bacteria that are resistant to several antibiotics. Simple colonisation of the skin or a wound with this bacteria is not the problem; the bacteria settles on different places on the body, increasing the risk of bacteria entering the body and causing infections.

#### ESBL = Extended Spectrum $\beta$ -Lactamases

Various studies on the transmission probability of ESBL have shown that it spreads to other people much less easily than MRSA. In accordance with where they originally occur, the human intestine, ESBL contamination is most likely to occur when handling faecal matter. Nevertheless, the pathogens can also reside in/on other areas or body parts, especially in the case of bedridden patients.

#### VRE = Vancomycin-resistant Enterococci

Since they can be treated with only a few antibiotics kept in reserve, infections caused by VRE can be severe. Proliferation of these bacteria should be prevented through screening examinations, consistent hygiene management and isolation measures.



### RISK ASSESSMENT

20% of the population are constant MDRO carriers and 60% are temporary MDRO carriers – without a diagnosis of illness. They are said to be «colonised».

However, there is the danger of these bacteria entering the body through a wound in the skin or mucous membranes, causing an infection. It is also possible for these bacteria to be transferred to other people and thereby disseminated further.

### MDRO PROBLEM CASES

Multi-Drug-Resistant Organisms (MDRO) are a problem in the severely ill, immunocompromised individuals and the elderly because infections are more easily transmitted in these populations. Patients with injuries, surgical or chronic wounds, and/or those undergoing invasive procedures such as surgery, catheterisation, etc. also require special protective measures.



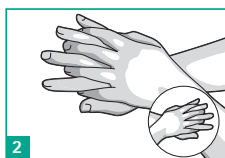
## HAND DISINFECTION

MDRO are primarily spread via the hands. Those who carry MDRO (but who are not infected) can be transmitters and can colonise others, such as patients and personnel and even infect them under adverse circumstances.

Hand hygiene is unanimously considered the ultimate measure in the prevention of infection.



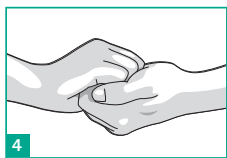
1 Rub hands palm to palm



2 Right palm over left dorsum with interlaced fingers and vice versa



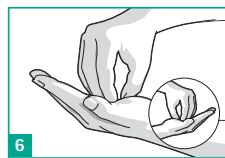
3 Palm to palm with fingers interlaced



4 Backs of fingers to opposing palms with fingers interlocked



5 Rotating rubbing of left thumb clasped in right palm and vice versa



6 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa



## DECOLONISATION

Most MDRO-positive individuals are merely colonised and not infected. In these cases, a cleansing measure (decolonisation) is useful and effective.

**Effective decolonisation requires experience, discipline and the right products.**

For decolonisation of the skin, bacteria-reducing soaps and solutions are recommended for washing the whole body, including the hair. The nose, mouth and throat must also be treated in any decolonisation (e.g. with Prontoderm®).



## THE PRONTODERM SYSTEM

For MDRO-decolonisation of the skin and mucous membranes

- Tested effective against Multi-Drug-Resistant Organisms such as MRSA, VRE, ESBL
- Proven antimicrobial barrier effect for up to 24 hours
- Does not have to be washed off, thus saving time and money
- Outstanding skin tolerance, dermatologically tested
- Available as solution, wipes, nasal gel, hair foam, shower gel and mouth rinse solution





## GENERAL INSTRUCTIONS

- Place denture in Prontoderm® Solution
- Clean teeth with disposable toothbrush
- Wipe off glasses and hearing aid with Prontoderm® Wipes
- Textiles in contact with skin (e.g. bedding, undergarments, towels) should be changed daily. If possible, wash these at 60 °C.
- After the disinfection procedure, discard any care and hygiene products used during the disinfection (e.g. toothpaste, roll-on deodorant, cream)

## Surface disinfection

As an accompanying measure, disinfecting all contact surfaces (bathroom, light switches, doorknobs and bedside tables) with a suitable surface disinfectant (e.g. Meliseptol® HBV Tissues) is recommended.

## Wound treatment

For wound treatment, a similarly decolonising wound irrigation solution (e.g. Prontosan®) should be used.





## USE INSTRUCTIONS

### Washing hair

Once daily, massage Prontoderm® Foam into the hair. Use enough for the length of the hair. **Exposure time: 3 – 5 minutes**

### Nasal care

Cleanse the nose three times daily with cotton swabs (removing any stubborn crusts), then use a new cotton swab for each nare to introduce Prontoderm® Nasal Gel into the nose.

### Mouth rinsing

Rinse the mouth three times daily with 10 ml ProntOral® and gargle.

**Exposure time: 1 minute**

### Washing the body – mobile patients

Shower once daily with Prontoderm® Shower Gel. Use shower to moisten body and hair, and then use a wash-cloth to distribute a palm-sized amount of Prontoderm® Shower Gel onto the surface of the body (including the outer ear, navel and genital area). **Exposure time: 1 minute**

Afterwards, shower Prontoderm® Shower Gel off.

### Washing the body – immobile patients

Carefully wash each body part with separate Prontoderm® Wipes or apply Prontoderm® Foam to a damp washcloth. Use a separate wipe/washcloth for each body part.



## CONCLUSION OF TREATMENT

### **Cultures show whether the treatment was successful**

After completion of the treatment, swabs will be taken from several locations such as both nostrils, the throat and the perineal area.

### **If all cultures are free of MDRO, the measures may be terminated**

Your physician can decide to discharge you from the hospital and continue your care at home.

## PROTECTIVE MEASURES FOR FAMILY MEMBERS

In **hospitals**, strictly defined hygiene measures are observed:

- Isolation of colonised patients
- Staff equipped with gown, cap, face mask and gloves to prevent transmission to other patients
- Family members and visitors must contact the clinic staff for training of the necessary measures

In the **private realm**, normal hygiene measures are sufficient:

- Regular hand disinfection
- Regular linen changes, laundering at least at 60 °C (higher temperatures are better)
- Preparation of utensils in the dishwasher at 65 °C

There are no restrictions in private interactions with other people. Only people who are active professionally in medical institutions, who exhibit open wounds or skin diseases (e.g. neurodermatitis/eczema), who are immunocompromised or severely ill or facing imminent hospitalisation, should take additional precautions.

## YOU ARE NOT ALONE

You and your relatives will have many questions, and this guide already provides answers to some of them for you. For further information, please contact your doctor:

We wish you a speedy recovery – for a healthy future.  
B. Braun Medical AG

B. Braun Medical AG | Infection Control | Seesatz 17 | CH-6204 Sempach  
Phone +41 58 258 50 00 | Fax +41 58 258 60 00 | [info.bbmch@bbraun.com](mailto:info.bbmch@bbraun.com) | [www.bbraun.com](http://www.bbraun.com)