

Medical Gloves and The Correct Method of Use

a report by

Professor Klemens Rappersberger

In recent years, the problem of latex allergies has resulted in the establishment of working groups and commissions for the correct use of medical gloves in many hospitals. Consultations with these groups, whose membership represents a wide range of disciplines, clearly showed that the problems involved in the use of medical gloves are not limited to latex allergy alone. On the contrary, there are a number of medical issues (powder granulomas, risk of infection following perforation of the glove during use and skin damage) that need to be discussed and resolved under increasing economic pressure.

Many manufacturers offer a wide range of products of varying quality. Although this offers the advantage of being able to select from large pool, it is essential that the purchaser is aware of the glove selection criteria, enabling the appropriate glove to be selected for the each procedure. Gloves that meet only the minimum standards do not provide adequate protection for medical staff across the many different professions. The use of powdered gloves should be avoided, as toxic, dermatological and allergic reactions have been clinically proven.

Whilst price and value for money is extremely important, these factors should not be the only reasons for selecting a glove. It is critical that the selection criteria considers the technical and clinical advantages of the glove.

Glove users themselves are often unaware of the high number of perforations that can occur during operations. The perforation rate is closely associated with the type of operation and damage to the gloves is most likely to occur during abdominal, orthopaedic and trauma surgery. For example, the lesser used left hand and particularly the index finger are most commonly affected. The preventive measure usually recommended, namely wearing two pairs of gloves simultaneously, is not generally accepted due to the associated loss of tactile sensitivity. The better option is to change the gloves at regular intervals, particularly during complicated, long surgery. This will reduce the risk of infection.

In general, only powder-free latex gloves with the

lowest possible protein content, i.e. with a lower allergic potential, should be used.

The hands should be disinfected and the skin should be absolutely dry before the gloves are worn. The gloves should be changed after every single patient and not simply disinfected, as is sometimes suggested.

Regular hand care is also recommended, since disinfection can cause the skin to become dry. Skin that has suffered such damage is an ideal ground for the development of toxic and subsequently allergic contact eczema. In particular, this concerns atopic subjects.

Intensive hand care with pH stabilising hand cream and moderately fatty substances (on a vegetable basis: avocado, almond, olive, etc.) should be carried out regularly. However, fatty care products should never be applied immediately before wearing latex gloves, since they can accelerate the swelling of the gloves. In addition, the care products also contain protective substances such as silicone. Such care measures are primarily of a preventive nature, but they can also be very helpful if the skin is already irritated. Once a dermatitis/eczema has developed, only topical preparations containing cortisone will help.

At the time of press, the best medical gloves are manufactured in high-tech production facilities. Even so, they can be even more beneficial when used intelligently. Therefore, important tips that can significantly increase safety should be given to glove wearers, regardless of their job description. It is by no means a coincidence that the staff of dermatology departments report the lowest incidence of 'glove intolerance'.

Is the medical industry still being penny-wise and pound-foolish? In economic terms, accidents at work and work-related disease (including follow-up costs) are much more expensive than the purchase of excellent high-quality gloves. Hopefully, the old stocks of cheap gloves will soon be used and influential, non-medical purchasers will start to rethink their policies. ■



Number of Perforations in the Tested Gloves (Total 1,093 Pieces).

n= 204 perforated gloves

- 1 perforation;
- 2 perforations;
- 3 perforations; and
- 4 perforations.

Reasons for Needle Prick Injuries to Medical and Nursing Staff

- disposal;
- third-party;
- blood collection;
- injection;
- suturing; and
- others.

Perforation Site (total)

- cuff;
- back;
- palm;
- thumb;
- all fingers
- right; and
- left.

Contact Information

Professor Klemens Rappersberger
Rudolfsstiftung
Juchgasse 25
A-1030 Vienna
e-Mail: klemens.rappersberger@kar.magwien.gv.at