Putting on gloves

The Health and Safety at Work Act (1974) places a responsibility on employers to provide a safe working environment for employees. The provision of personal protective equipment is included in Health and Safety Executive (1992) regulations. Employers have a responsibility to provide appropriate protective equipment such as gloves, while staff have a responsibility to use the protective equipment to prevent injury or harm. Most disposable gloves used in health care are made of latex. However, some individuals develop latex sensitivity, so alternative products should be made available when required and any reactions should be recorded and reported (MDA, 1996).

When is the procedure undertaken?
Gloves should be worn as a protective barrier to prevent contamination of the hands or transmission of micro-organisms from hands during a procedure. Disposable gloves should be worn when hand contact with blood or potentially contaminated substances is possible. This includes handling dirty equipment and during procedures where hands may become contaminated. In these instances non-sterile procedure gloves are normally used. Gloves should also be worn during invasive or sterile procedures including surgical procedures and aseptic pharmaceutical preparation. In these instances sterile surgeon or sterile examination gloves are normally used. It is important to use gloves only when necessary and to remove them when they are no longer required.

Relevant physiology
Irritant contact dermatitis is a common skin irritation associated with glove use. The hands become dry and itchy but recover when glove use is suspended. A range of substances can cause similar symptoms, including soap. Repeated exposure to substances can produce sensitisation. Some individuals have a genetic predisposition to produce immunoglobulin E (IgE) in response to an allergen. These individuals are ‘atopic’ and may suffer from hay fever, eczema and asthma. In some instances hypersensitivity to latex may develop. There are two main types of
hypersensitivity: delayed (type IV) and immediate (type I) (MDA, 1996).

In type IV the allergic response is delayed, occurring several hours after contact. In the acute phase hands become red and painful, itchy and small vesicles can appear. Eventually the skin may become dry, thick, cracked and sore. Type IV reactions are usually caused by residues of agents used in the glove manufacturing process and are localised to the area of contact.

In type I the onset is immediate and symptoms may include a raised rash, runny eyes and nose, difficulty in breathing, swelling of eyes, lips and face, and in some cases anaphylactic shock. A type I reaction is normally associated with the protein residues in latex products and causes a generalised systemic reaction.

Preparation
Gloves are available in a range of materials such as natural rubber latex, nitrile, polyvinyl chloride (PVC), neoprene and polythene. Selection depends on intended use. Factors such as resistance to chemicals, need for sterility, sensitivity of staff or patient to latex and duration of the procedure should be taken into account. Some procedures may require ‘double gloving’, particularly when punctures are likely to occur. It is important to know your glove size and ensure it is available and to keep fingernails short and smooth.

The procedure
Techniques for donning sterile and non-sterile gloves differ. In theatre sterile gloves are put on after handwashing and gowning. This procedure is not described here.

The procedure for donning non-sterile gloves does not require strict sterility, although hands should first be washed or cleansed and dried well.

1. Take a glove from the dispenser or package.
2. Hold the wrist end of the glove open and ease the fingers of the other hand inside (Fig 1).
3. Gently pull the wrist end of the glove while easing the hand into the glove (Fig 2).
4. Apply the next glove to the other hand using the same procedure (Fig 3).
5. Once the procedure is completed gloves should be removed carefully to avoid contaminating the hands or environment. Take the wrist end of one glove and gently pull the glove down the hand, turning it inside out (Fig 4).
6. Continue to grasp the first glove and with the ungloved hand pull the other glove from the wrist so that it too is inside out (Fig 5) and covers the first glove (Fig 6) (Infection Control Nurses Association, 2002).
7. Place both gloves in a clinical waste bin.
8. Wash your hands.

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