

## Scar management

### What to expect during normal scar maturation

Most scars will be flat and quiet initially. Between 4-8 weeks after the procedure the scar enters the 'inflammatory phase' of healing. During this time it may become firm, tight, red and lumpy. This is known as an 'immature' scar. Over the next few months it will slowly begin to become pale and soft. This is known as a 'mature' scar. Mature scars will continue to improve in appearance over the following 12-18 months, and sometimes longer in young children.

### Abnormal scars

The main types of scar abnormalities are stretched, hypertrophic and keloid scars.

**Stretched scars** widen over time. They appear pale, soft and flat and are usually seen in very mobile areas of the body such as the upper back, knees and elbows.

**Hypertrophic scars** are scars that do not progress to mature scars. These scars essentially remain in an immature state and appear raised, red and lumpy. They may be itchy or painful.

**Keloid scars** appear similar to hypertrophic scars but are different in that they grow wider than the original scar tissue. These scars are firm, red, raised and wide. They may also be itchy or painful.

### Factors contributing to hypertrophic and keloid scar formation

The major risk factors for developing these scar abnormalities are racial background (individuals with darker skin types are associated with higher risk), genetic predisposition (particularly if you or family members have a history of abnormal scarring), and body site (body regions at high risk of developing these scar abnormalities are the front of chest, shoulders, upper back and earlobes).

Minor risk factors for developing hypertrophic and keloid scars include delays in wound healing, wound infection, excessive movement after the procedure, the direction of the scar, surgical technique, and scars caused by traumatic injury.

### Things that you can do to prevent the development of an abnormal scar

Sometimes the development of scar abnormalities is unavoidable even if the surgeon and patient do everything possible to prevent it. Dr Boorer recommends proven scar management techniques to all patients, and particularly to those at high risk.

These techniques include:

- Correct surgical alignment of the scar and use of non-traumatic surgical techniques
- Keeping the healing wound moist
- Minimizing scar movement wherever possible
- Timely removal of stitches
- Prompt treatment of any infection or gaping of the wound
- Scar massage
- Pressure
- Use of silicone gel products
- Sun protection

## Treatment of abnormal scars

If a patient develops an abnormal or suboptimal scar, the first step of treatment is detailed assessment of the factors leading to the development of the scar abnormality and diagnosing the specific type of scar abnormality. Some scar abnormalities improve naturally with time, whereas others may not significantly improve over time. Some scar abnormalities may improve following treatment with a combination of scar management techniques such as:

- Silicone gel products
- Pressure
- Scar massage
- Steroid injection
- Surgical reconstruction or revision
- Radiotherapy (rare)

If you require treatment of an abnormal scar, Dr Boorer will advise you regarding the best treatment option for your particular scar.