the treatment of diabetic foot ulcers. The main growth factors identified in wounds include:

- platelet-derived growth factor
- fibroblast growth factor
- epidermal growth factor
- transforming growth factors
- insulin-like growth factor
- vascular endothelial growth factor (VEGF)
- whey-derived growth factors.

Research into the potential uses of growth factors is being undertaken in centres all over the world. This includes their use in scarless wound healing and the use of VEGF to enhance new blood-vessel formation.

Tissue-engineered products

Clinical trials of several skin substitutes developed by seeding neonatal cells onto a matrix in a controlled environment are under way. The matrix changes by the expression of a number of growth factors and cells into a dermis/epidermis and/or epidermis. Once mature, these skin substitutes are frozen and stored. They are thawed immediately before application to diabetic wounds and leg ulcers or as a temporary cover for burns. Many of these products are not yet available in Australia. One example of an available product is *Oasis*; others will be introduced into the Australian market over the next few years. There is excellent research in Australia developing future growth factor and tissue-engineered products.

Bandages and bandaging

There are three main types of bandages:

- retention bandages
- support bandages
- compression bandages.

Retention bandages

Retention bandages are used to hold a dressing in place. They are of particular use where a patient has very fine, friable skin that would be easily damaged by adhesive tape or other adhesive products. Cotton crepe bandages have been used for this purpose for many years but more effective and appropriate bandages are now available.

A lightweight conforming cohesive bandage is a crepe bandage coated with a thin latex. As a result of this coating the bandage sticks to itself but not to skin, hair or clothing, so pins or clips are not required. A very small length is sufficient to hold the dressing in place, compared with using a complete roll of a standard crepe bandage. This type of bandage comes in widths that are appropriate for fingers, toes and limbs, with a larger size for the head.

Another useful product is a lightweight non-elasticised tubular bandage that may be cut to the required size and placed over the dressing to hold it in place.

Table D.38 Retention bandages

Product®	Manufacturer
Handy Gauze Co-hesive	Beiersdorf/Smith & Nephew
Easyfix Co-hesive	Smith & Nephew
Peha-haft	Hartmann
Tubifast	Aaxis Pacific
Tubular Conforming	Sutherland Medical
Wool Bandages	
Artifex	Smith & Nephew
Soffban	Smith & Nephew
Velband	Johnson & Johnson
Webrill	Tyco
Rolta	Hartmann

Support bandages

Support bandages are made from both natural and synthetic fibres. They achieve their stretch by the use of high-twist yarns and heavier construction. Their main use is the support of joints in strains and in the management of muscular injuries. Strong support bandages can be used alone or in combination to restrict movement, help reduce oedema, and provide support following soft tissue injury.

Table D.39 Support bandages

Product®	Manufacturer
Elastocrepe	Smith & Nephew
Handycrepe	Smith & Nephew/Beiersdorf
Telfa Crepe	Tyco
Idealcrepe	Hartmann
CoPlus	Smith & Nephew
Co ban	3M
Handygrip	Smith & Nephew/ Beiersdorf
Flexwrap	Tyco
Tubigrip straight	Aaxis Pacific
Handyplast Tubular	Smith & Nephew/Beiersdorf
Tensogrip	Smith & Nephew

Compression bandages

Compression bandages are one of the main treatments for venous disease, especially when venous ulcers are