Collagen

Used primarily as a carrier for other osteoinductive, osteoconductive, or osteogenetic materials and as a composite with other graft extenders

1. PROS: contributes to vascular ingrowth, mineral deposition, and growth factor binding

2. CONS:

a) minimal structural support

b) potential immunogenicity

Collagen is the main structural protein in the extracellular space in the various connective tissues in animals. As the main component of connective tissue, it is the most abundant protein in mammals,making up from 25% to 35% of the whole-body protein content.

Collagen, in the form of elongated fibrils, is mostly found in fibrous tissues such as tendons, ligaments and skin. It is also abundant in corneas, cartilage, bones, blood vessels, the gut, intervertebral discs and the dentin in teeth.

In muscle tissue, it serves as a major component of the endomysium. Collagen constitutes one to two percent of muscle tissue, and accounts for 6% of the weight of strong, tendinous muscles.

The fibroblast is the most common cell that creates collagen.

see High density collagen gel.

see Collagen matrix dural substitute.

see also Collagen sponge.

Types

see Type I collagen.

Type XVIII collagen.

Semi-synthetic collagen