

Growth Factors

Local and Systemic

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Growth factors that are produced locally at the wound site and systemically from distant sources may elicit inhibitory or stimulatory responses depending on interactions with other factors and the cellular environment into which they are liberated. Growth factors released from macrophages, neutrophils, lymphocytes, platelets, and fibroblasts bind to target cells via specific cell-surface receptors inducing cells to migrate, divide, or produce other factors required for wound healing.¹ Structural similarities between cell receptors may explain cross-reactivity between substances. Systemic growth factors, such as growth hormone and local epidermal growth factor, fibroblast growth factor, platelet-derived growth factor, and transforming growth factor α have all been shown to enhance wound healing. Further, growth factors have been shown to have a distinct role in catabolic and malnourished patients as well as in patients with cancer. Clinical trials with growth factors have demonstrated efficacy, and specific uses for those particular factors may become an accepted mode of therapy producing important differences in outcome.

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