

NORMAL HEALING IN OTHER SPECIFIC TISSUES Bone

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pathway of coagulation Figure 3.2
Schematic representation of the
coagulation cascade and the /f_i

brinolytic system. The coagulation cascade (blue arrows) can be activated during haemostasis via the intrinsic pathway (contact system; red arrows) or the extrinsic pathway (black arrows), which ultimately converge on the common pathway of coagulation. Both pathways lead to the activation of factor X and subsequently of thrombin, which is required for the conversion of /f_i brinogen into /f_i brin and for activation of factor XIII. The /f_i brin clot is cross-linked and stabilised by factor XIII. Fibrinolysis

(green arrows) is activated at the same time as the coagulation system but operates more slowly and is important for the regulation of haemostasis. During /f_i brinolysis, plasminogen is converted into plasmin, which degrades the /f_i brin network. Coagulation by 'F' followed by a roman numeral; an additional 'a' denotes the activated form. HK, high-molecular-weight kininogen; tP activator; uPA, urokinase plasminogen activator. (Adapted with permission from Loof TG, Deicke C, Medina E. The role of

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Remodelling proceeds with osteoclasts and and eventually recreating the appropriate anatomical
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regenerating nerve fi bres are attracted to their receptors by neur otropism, which is mediated by

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(a) Normal nerve (b) Wallerian degeneration (c) Phagocytosis and reconstruction (d) Axonal regeneration and remyelination
Myelin debris Schwann cell Macrophage
Figure 3.4 Schematic diagram illustrating the process of degeneration and regeneration after peripheral nerve injury. When normal nerves (a) suffer a physical injury, the portion of the lesion site and its distal stump undergo destruction and break down to produce myelin debris. This degenerative process is called Wallerian degeneration (b) Schwann cells (SCs) recruit macrophages to scavenge degenerated myelin fragments (c) . Meanwhile, SCs proliferate and migrate alone to the basal lamina to form bands of Büngner, which guide the axon to reinnervate towards the corresponding target (d) . (Adapted from Li R, Li DH, Zhang HY et al . Growth factor-based therapeutic strategies and their underlying signaling mechanisms for peripheral nerve regeneration. *Acta Pharmacol Sin* 2020; 41 : 1289–300. 2020. <http://creativecommons.org/licenses/by/4.0/>)

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