

**THE WOUND – AFFERENT IMMUNE ARC, LYMPHATICS AND LYMPH NODES, EFFERENT ARC**

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Wound healing should not be considered as a process limited to the damaged tissues. It is always accompanied by an intensive response of the regional lymphatic (immune) system.

**Aim:** Recent interest in the field of wound healing has been focused on the reaction of the lymphatic system to the wound cellular and humoral events and specifically on the simultaneous lymph node response to bacterial and self antigens, establishing tolerance to own cellular antigens and dispatching node antigen-specific regulatory cells to “home” in the wound.

**Discussion:** Cellular debris and colonizing microorganisms are transported via lymphatics to the draining lymph node. There a xenogenic reaction to bacteria and autoimmune reaction to self antigens takes place. Our experimental studies have shown direct drainage of microbes and experimental markers from the skin wound to the regional lymph node. Markers injected into the gap of closed tibia fracture were also transported to lymph nodes. In humans, venous ulcers and diabetic foot fistulae are accompanied by changes in regional lymph nodes. Lymphoscintigraphic images reveal dilatation of lymphatics and enlargement of lymph nodes after closed fractures of calf bones. In the efferent arc of response, cohorts of Treg lymphocytes are dispatched from the node to the wound. Their regulatory function is being clarified.