

---

## Was Sie aus diesem *essential* mitnehmen können

- Wissen über den chronologischen Ablauf im Akutspital
- Kenntnisse bezüglich verschiedener chirurgischer Deckungsmöglichkeiten bei tiefermalen Defekten
- Grundlagenwissen zu Verbrennungen, zur physiologischen und pathophysiologischen Wundheilung sowie zur Narbenbildung
- Erkenntnisse zu therapeutisch beeinflussbaren Faktoren bei pathologischer Narbenbildung.

---

## Literatur

- Alberts, W., Johnsons, A., Lewis, J., Raff, M., & Roberts, K. (2017). *Molecular biology of the cell*. New York: Garland.
- Andalib, M., Dzenis, Y., Donahue, H., & Lim, J. (2016). Biomimetic substrate control of cellular mechanotransduction. *Biomaterials Research*, 20, 11. <https://doi.org/10.1186/s40824-016-0059-1>.
- Balestrini, J., & Biliar, K. (2009). Magnitude and duration of stretch modulate fibroblast remodeling. *Journal of Biomechanical Engineering*, 131, 051005-1. <https://doi.org/10.1115/1.3049527>.
- Balestrini, J., & Billiar, K. (2006). Equibiaxial cyclic stretch stimulates fibroblasts to rapidly remodel fibrin. *Journal of Biomechanics*, 39(16), 2983–2990.
- Bayat, A. (2003). Skin scarring. *BMJ*, 326(7380), 88–92.
- Bouffard, N., Kenneth, R., Cutroneo, G., Badger, J., White, S., Buttoph, T., Ehrlich, H., Stevens-Tuttle, D., & Langevin, H. (2008). Tissue stretch decreases soluble TGF- $\beta$ 1 and type-1 procollagen in mouse subcutaneous connective tissue: Evidence from ex vivo and in vivo models. *Journal of Cellular Physiology*, 214(2), 389–395.
- Campbell, N. (2017). *Biology*. New York: Pearson.
- Carano, A., & Siciliani, G. (1996). Effects of continuous and in-termittent forces on human fibroblasts in vitro. *European Journal of Orthodontics*, 18(1), 19–26.
- Eckes, B., & Nitsch, R. (2010). Cell-matrix interactions in dermal repair and scarring. *Fibrogenesis Tissue Repair*, 3, 4. <https://doi.org/10.1186/1755-1536-3-4>.
- Huang, C., Holfeld, J., Schaden, W., Orgill, D., & Ogawa, R. (2013). Mechanotherapy: Revisiting physical therapy and recruiting mechanobiology for a new era in medicine. *Trends in Molecular Medicine*, 19(9), 555–564.
- Jaudoin, D., Mathieu, Y., Weber, S., Ponthus, C., Bruel, H., Petit, V., Chun, E., Gauthier, J., Galaup, F., & Kints, A. (2010). Physiothérapie de la cicatrice après une brûlure grave (unveröffentlichtes Weiterbildungsskript).
- Kapp, H., & Smola, H. (2006). Regulation der Wundheilung durch Wachstumsfaktoren und Zytokine. *Hartmann WundForum*, 1, 8–14.
- Khan, K., & Scott, A. (2009). Mechanotherapy: How physical therapists' prescription of exercise promotes tissue repair. *BJSM*, 43(4), 247–252.

- Koller, T. (2016). Physiologische Grundlagen manueller Mobilisation von Narben und Bindegewebe und Dosierung bei großflächig brandverletzten Patienten. *Manuelle Therapie*, 20, 239–243.
- Koller, T. (2017a). Physiotherapeutische Werkzeuge zur funktionellen Mobilisation von Narben und Bindegewebe sowie Dosierung bei großflächigen Narbenplatten. *Manuelle Therapie*, 21, 237–243.
- Koller, T. (2017b). *Physiotherapeutische Diagnostik, hypothesengeleitet und klinisch relevant entscheiden*. Stuttgart: Thieme.
- Langevin, H., Bouffard, N., Fox, J., Palmer, B., Wu, J., Iatridis, J., Barnes, W., Badger, G., & Howe, K. (2011). Fibroblast cytoskeletal remodeling contributes to connective tissue tension. *Journal of Cellular Physiology*, 226(5), 1166–1175.
- Lehnhardt, M., Hartmann, B., & Reichert, B. (Hrsg.). (2016). *Verbrennungschirurgie*. Berlin: Springer.
- Lemperle, G. (2017). *Vermeidung breiter Narben durch Inzisionen in der Hauptfaltlinie*. Berlin: Scar Academy DACH.
- Li-Tsang, C., Feng, B., Huang, L., Liu, X., Shu, B., Chan, Y., & Cheung, K. (2015). A histological study on the effect of pressure therapy on the activities of myofibroblasts and keratinocytes in hypertrophic scar tissues after burn. *Burns*, 41(5), 1008–1016.
- Moortgat, P. (2017). *Physikalische Narbenbehandlung*. Berlin: Scar Academy DACH.
- Nexobrid. (2018). [www.nexobrid.com](http://www.nexobrid.com).
- Pastar, I., & Stojadinovic, O. (2010). Attenuation of the transforming growth factor  $\beta$ -signaling pathway in chronic venous ulcers. *Molecular Medicine*, 16(3–4), 1.
- Penn, J., Grobbelaar, A., & Rolfe, K. (2012). TGF- $\beta$  family in wound healing. *International Journal of Burns and Trauma*, 2(1), 18–28.
- Schneider, M., & Plock, J. (2016). Verbrennungen. *Swiss Medical Forum*, 16(43), 910–915.
- Tomasek, J., Gabbiani, G., Hinz, C., Chaponnier, C., & Brown, R. (2002). Myofibroblasts and mechano: Regulation of connective tissue remodeling. *Nature Reviews Molecular Cell Biology*, 3(5), 349–363.
- Van den Berg, F. (2011). *Das Bindegewebe des Bewegungsapparates verstehen und beeinflussen*. Stuttgart: Thieme.
- Viidik, A. (1980). *Biology of collagen. Physiology of connective tissue*. London: Academic.
- Wang, J., Dodd, C., Shankowsky, H., Scott, P., & Tredget, E. (2008). Deep dermal fibroblasts contribute to hypertrophic scarring. *Laboratory Investigation*, 88(12), 1278–1290.
- Warren, L., et al. (1971). Technique and apparatus for measuring and monitoring the mechanical impedance of body tissues and organ systems. United States Patent Alan R. Kahn Cherry Hill, Health Technology Corporation inventors Appl. No. Filed Patented Assignee.
- Wipff, P., Rifkin, D., Meister, J., & Hinz, B. (2007). Myofibroblast contraction activates latent TGF- $\beta$ 1 from the extracellular matrix. *Journal of Cell Biology*, 179(6), 1311–1323.