

DAFTAR PUSTAKA

- Alberts, A., Moldoveanu, E.-T., Niculescu, A.-G., & Grumezescu, A. M. (2025). *Hydrogels for wound dressings: Applications in burn treatment and chronic wound care*. *Journal of Composites Science*, 9(3), 133. <https://doi.org/10.3390/jcs9030133>
- Al Fatih, H., Iklima, N., & Gusyani, I. (2023). *Perbandingan modern dressing hidrogel dan hydrophobic terhadap penyembuhan luka infeksi ulkus diabetik*. *Jurnal Keperawatan BSI*, 11(1), 87–94. Retrieved from <https://ejurnal.ars.ac.id/index.php/keperawatan/article/view/1293>
- Alma, A., Marconi, G. D., Rossi, E., Magnoni, C., & Paganelli, A. (2023). Obesity and wound healing: focus on mesenchymal stem cells. *Life*, 13(3), 717.
- Alma, L. M., & Silva, A. M. (Eds.). (2021). *Biopolymer-based nano films* (1st ed.). Elsevier. <https://doi.org/10.1016/B978-0-12-823381-8.00001-2>
- Agyare, C., Boakye, Y. D., Bekoe, E. O., Hensel, A., Dapaah, S. O., & Appiah, T. (2016). *African medicinal plants with wound healing properties*. *Journal of Ethnopharmacology*, 177, 85–100.
- Aini, N. S., Suhari, S., & Ro'isah, R. I. (2025). Hubungan Kepatuhan Diet Tinggi Protein Dan Kecemasan Dengan Penyembuhan Luka Diabetes Mellitus Di Rumah Sakit Umum Muhammadiyah Lumajang. *Jurnal Keperawatan*, 18(1), 1-10.
- Andreu, V., Mendoza, G., Arruebo, M., & Irusta, S. (2015). *Smart dressings based on nanostructured fibers containing natural origin antimicrobial, anti-inflammatory, and regenerative compounds*. *Materials*, 8(8), 5154–5193.
- Annisa, S. B., & Kristinawati, B. (2025). *Efektivitas aplikasi moist wound healing menggunakan hidrogel Prontosan terhadap kesembuhan luka ulkus diabetikum*. *Jurnal Ners*, 9(1), 459–465.
- Astuti, D., Hidayah, K. H., & Puspasari, F. D. (2025). *Aplikasi modern dressing: Hidrogel pada pasien dengan ulkus diabetik*. *Multidisciplinary Indonesian Center Journal (MICJO)*, 2(1), 220–226.
- Ather, S., Harding, K. G., & Tate, S. J. (2009). *Advanced textiles for wound care*. Woodhead Publishing, Duxford, UK. <https://doi.org/10.1533/9781845696306.1>
- Bale, S. (2001, November 1). The causes and prevention of maceration of the skin. *Nursing Times*. Retrieved April 21, 2025, from

<https://www.nursingtimes.net/tissue-viability-and-wound-care/the-causes-and-prevention-of-maceration-of-the-skin-01-11-2001/>

- Bianchi, J., & Cameron, J. (2008). *Assessment of skin integrity in the elderly 1*. British Journal of Community Nursing, 13(Sup1), S26–S32.
- Biga, L. M., *et al.* (2019). *Anatomy & physiology* (1st ed.). OpenStax.
- Blackburn, J., Kopecki, Z., & Ousey, K. J. (2024). *Skin integrity, antimicrobial stewardship and infection control: A critical review of current best practice*. Wound Practice & Research: Journal of the Australian Wound Management Association, 32(1), 34–43.
- Boateng, J. S., Matthews, K. H., Stevens, H. N., & Eccleston, G. M. (2008). Wound healing dressings and drug delivery systems: A review. *Journal of Pharmaceutical Sciences*, 97(8), 2892–2923.
- Bonifant, H., & Holloway, S. (2019). *A review of the effects of ageing on skin integrity and wound healing*. British Journal of Community Nursing, 24(Sup3), S28–S33.
- Bowers, S., & Franco, E. (2020). Chronic wounds: evaluation and management. *American family physician*, 101(3), 159-166.
- Bryant, R. A., & Nixx, D. (2015). *Anatomy and physiology of skin and soft tissue*. In *Acute and Chronic Wounds: Current Management Concepts* (5th ed.). Mosby.
- Carville, K. (2006). *Building bridges in wound management*. Kai Tiaki: Nursing New Zealand, 12(2), 2–3.
- Catanzano, O., & Boateng, J. (2020). *Local delivery of growth factors using wound dressings*. In *Therapeutic Dressings and Wound Healing Applications* (pp. 291–314).
- Cavanagh, P. R., & Bus, S. A. (2010). Off-loading the diabetic foot for ulcer prevention and healing. *Journal of the American Podiatric Medical Association*, 100(5), 360–368.
- Clark, R. K., Stampas, A., Kerr, K. W., Nelson, J. L., Sulo, S., Leon-Novelo, L., ... & Pandya, D. (2023). *Evaluating the impact of using a wound-specific oral nutritional supplement to support wound healing in a rehabilitation setting*. International Wound Journal, 20(1), 145–154.

- Crendhuty, F. D., & Megantara, S. (2019). Sediaan hydrogel mengandung epidermal growth factor dalam penyembuhan luka. *Farmaka*, 17(2), 410–416.
- Cutting, K. F. (2001). The causes and prevention of maceration of the skin. *Professional Nurse (London, England)*, 17(3), 177–178.
- Dasari, N., Jiang, A., Skochdopole, A., Chung, J., Reece, E. M., Vorstenbosch, J., & Winocour, S. (2021, August). Updates in diabetic wound healing, inflammation, and scarring. In *Seminars in plastic surgery* (Vol. 35, No. 03, pp. 153-158). Thieme Medical Publishers, Inc..
- Department of Health Australia. (2015). *Best care for older people everywhere: The toolkit* [cited 2024 Feb 4]. Retrieved from <http://www.health.vic.gov.au/older/toolkit/index.htm>
- Devi, N. N. L. P. S., Kep, M., An, S. K., Antari, G. A. A., Kep, M., Kep, S., ... & Kep, M. (2023). *Menggali Esensi Luka: Pengenalan, Penilaian, dan Penanganan yang Tepat*. Kaizen Media Publishing.
- Ghasemiyeh, P., & Mohammadi-Samani, S. (2019). *Hydrogels as drug delivery systems; pros and cons*. Trends in Pharmaceutical Sciences, 5(1), 7–24.
- Gounden, V., & Singh, M. (2024). *Hydrogels and wound healing: Current and future prospects*. Gels, 10(1), 43.
- Guo, S. A., & DiPietro, L. A. (2010). *Factors affecting wound healing*. Journal of Dental Research, 89(3), 219–229.
- Handayani, L. T. (2016). *Studi meta analisis perawatan luka kaki diabetes dengan modern dressing*. The Indonesian Journal of Health Science, 6(2).
- Hess, C. T. (2011). Checklist for factors affecting wound healing. *Advances in Skin & Wound Care*, 24(4), 192.
- Herrera, A. L. G., Sanabria, R. D. J. F., Cabadilla, L. D. L. Á. A., & Cartaya, M. M. (2017). Curative metatarsal bone surgery combined with intralesional administration of recombinant human epidermal growth factor in diabetic neuropathic ulceration of the forefoot: a prospective, open, uncontrolled, nonrandomized, observational study. *Current Therapeutic Research*, 85, 2-7.
- Herman, T. F., Popowicz, P., & Bordoni, B. (n.d.). *Wound classification*. In StatPearls [Internet]. StatPearls Publishing. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK554456/>

- Huang, C., Dong, L., Zhao, B., Lu, Y., Huang, S., Yuan, Z., ... & Qian, W. (2022). *Anti-inflammatory hydrogel dressings and skin wound healing*. *Clinical and Translational Medicine*, 12(11), e1094.
- Kumar, S. S. D., Rajendran, N. K., Houreld, N. N., & Abrahamse, H. (2018). *Recent advances on silver nanoparticle and biopolymer-based biomaterials for wound healing applications*. *International Journal of Biological Macromolecules*, 115, 165–175.
- Lei, H., Zhu, C., & Fan, D. (2020). *Optimization of human-like collagen composite polysaccharide hydrogel dressing preparation using response surface for burn repair*. *Carbohydrate Polymers*, 239, 116249.
- Legrand, J. M., & Martino, M. M. (2022). *Growth factor and cytokine delivery systems for wound healing*. *Cold Spring Harbor Perspectives in Biology*, 14(8), a041234.
- Li, M., Zhang, Z., Liang, Y., He, J., & Guo, B. (2020). *Multifunctional tissue-adhesive cryogel wound dressing for rapid nonpressing surface hemorrhage and wound repair*. *ACS Applied Materials & Interfaces*, 12(32), 35856–35872.
- Liu, B., & Chen, K. (2024). *Advances in hydrogel-based drug delivery systems*. *Gels*, 10(4), 262.
- Liu, Y., & Ye, G. (2014). Hydrogel enhances re-epithelialization in chronic wound healing: A clinical study. *Wound Medicine*, 5(2), 10–14.
- Lotfollahi, Z. (2024). *The anatomy, physiology and function of all skin layers and the impact of ageing on the skin*. *Wound Practice & Research: Journal of the Australian Wound Management Association*, 32(1), 6–10.
- Manna, B., Nahirniak, P., & Morrison, C. A. (2023). *Wound debridement*. In StatPearls [Internet]. StatPearls Publishing.
- Manna, B., Nahirniak, P., & Morrison, C. A. (2025). *Wound debridement*. StatPearls Publishing. Diakses 29 April 2025, dari <https://www.ncbi.nlm.nih.gov/books/NBK507882/>
- McCallon, S. K., Weir, D., & Lantis II, J. C. (2014). *Optimizing wound bed preparation with collagenase enzymatic debridement*. *Journal of the American College of Clinical Wound Specialists*, 6(1–2), 14–23.
- Mitchell, A., & Llumigusin, D. (2021). The assessment and management of hypergranulation. *British Journal of Nursing*, 30(5), S6–S10.

- Mogoșanu, G. D., & Grumezescu, A. M. (2014). *Natural and synthetic polymers for wounds and burns dressing*. *International Journal of Pharmaceutics*, 463(2), 127–136.
- Muse, M. E., Shumway, K. R., & Crane, J. S. (2023, September 4). Physiology, epithelialization. In *StatPearls*. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK532977/>
- North American Nursing Diagnosis Association. (2018). *Nursing diagnoses, definitions and classification*. Retrieved from <http://www.nanda.org/nanda-i-publications/>
- Nguyen, H. M., Le, T. T. N., Nguyen, A. T., Le, H. N. T., & Pham, T. T. (2023). *Biomedical materials for wound dressing: Recent advances and applications*. *RSC Advances*, 13(8), 5509–5528.
- Nugraha, A. (2020). *Debridement eksplorasi atas indikasi peritonitis*. In Asuhan Keperawatan pada Klien Post Operasi Debridement: Eksplorasi atas Indikasi Peritonitis.
- Nuutila, K., & Eriksson, E. (2021). *Moist wound healing with commonly available dressings*. *Advances in Wound Care*, 10(12), 685–698.
- Olteanu, G., Neacșu, S. M., Joița, F. A., Musuc, A. M., Lupu, E. C., Ioniță-Mîndrican, C. B., ... & Mititelu, M. (2024). *Advancements in regenerative hydrogels in skin wound treatment: A comprehensive review*. *International Journal of Molecular Sciences*, 25(7), 3849.
- Oktaviani, A. T., Kusumajaya, H., & Agustiani, S. (2022). Faktor-faktor yang mempengaruhi penyembuhan luka post operasi. *Jurnal Penelitian Perawatan Profesional*, 5, 1703-12.
- Ozgok Kangal, M. K., & Regan, J.-P. (2025). *Wound healing*. In StatPearls. StatPearls Publishing. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK535406/>
- Spampinato, S. F., Caruso, G. I., De Pasquale, R., Sortino, M. A., & Merlo, S. (2020). The treatment of impaired wound healing in diabetes: looking among old drugs. *Pharmaceutics*, 13(4), 60.
- Pahlevi, R., & Mutia, A. (2021). *Jumlah penderita diabetes Indonesia terbesar kelima di dunia*. Katadata Media Network.
- Patil, P., & Pawar, S. H. (2021). *Wound dressing applications of nano-biofilms*. In *Biopolymer-Based Nano Films* (pp. 247–268). Elsevier.

- Pakpahan, S. E., Sutomi, M. A., & Fadhillah, F. R. (2024). Pengaruh hydrogel human amnion membrane pada wound healing diabetic in vivo dengan mengukur luas area kolagen menggunakan software ImageJ. *Prosiding Asosiasi Institusi Pendidikan Tinggi Teknologi Laboratorium Medik Indonesia*, 3, 126–139.
- Popescu, V., Cauni, V., Petrutescu, M. S., Rustin, M. M., Bocai, R., Turculet, C. R., ... & Mastalier, B. (2023). Chronic wound management: from gauze to homologous cellular matrix. *Biomedicines*, 11(9), 2457.
- Primadina, N., Basori, A., & Perdanakusuma, D. S. (2019). Proses penyembuhan luka ditinjau dari aspek mekanisme seluler dan molekuler. *Qanun Medika—Medical Journal Faculty of Medicine Muhammadiyah Surabaya*, 3(1), 31–43.
- Ramadhania, R. (2022). *Asuhan keperawatan pemenuhan kebutuhan istirahat tidur pada pasien dengan pasca bedah debridement di RSUD Dr. M. Yunus Bengkulu*.
- Ramadhanti, W. (2020). *Aplikasi modern dressing: Hydrogel sebagai autolisis debrilitik pada pasien ulkus diabetik* [Doctoral dissertation, Universitas Muhammadiyah Magelang].
- Saghazadeh, S., Rinoldi, C., Schot, M., Kashaf, S. S., Sharifi, F., Jalilian, E., ... & Khademhosseini, A. (2018). *Drug delivery systems and materials for wound healing applications*. *Advanced Drug Delivery Reviews*, 127, 138–166.
- Santos, T. M. D., Sousa, D. S. F. D., Di Piero, K. C., Todeschini, A. R., Dias, W. B., Oliveira, C. A., ... & Freitas, Z. M. F. D. (2023). Development and clinical application of hydrogel formulations containing papain and urea for wound healing. *Brazilian Journal of Pharmaceutical Sciences*, 59, e201090.
- Saragih, R. Y. (2021). *Literature review: Pengaruh senam kaki terhadap penurunan risiko ulkus kaki diabetik pada pasien diabetes melitus tipe 2*.
- Sari, S. I., Andas, A. M., & Wada, F. H. (2022). *Efektivitas hidrogel terhadap penyembuhan luka pada pasien pressure ulcer*. *Jurnal Ilmiah Keperawatan IMELDA*, 8(1), 52–57.
- Sibbald, R. G., Williamson, D., Orsted, H. L., Campbell, K., Keast, D., Krasner, D., & Sibbald, D. (2000). Preparing the wound bed—2003: Focus on infection and inflammation. *Ostomy/Wound Management*, 49(11), 23–51.
- Sila, R. R. (2024). *Analisis harga diri pada pasien post amputasi ekstremitas bawah dengan intervensi promosi citra tubuh di RSUD Muhammadiyah Metro pada tahun 2024* (Karya Ilmiah Akhir, Politeknik Kesehatan Tanjungkarang,

- Program Studi Pendidikan Profesi Ners). Diakses dari <https://repository.poltekkes-tjk.ac.id/xxxx>
- Su, J., Li, J., Liang, J., Zhang, K., & Li, J. (2021). *Hydrogel preparation methods and biomaterials for wound dressing*. *Life*, 11(10), 1016.
- Shu, W., Wang, Y., Zhang, X., Li, C., Le, H., & Chang, F. (2021). Functional hydrogel dressings for treatment of burn wounds. *Frontiers in Bioengineering and Biotechnology*, 9, 788461.
- Teixeira, M. O., Marinho, E., Silva, C., Antunes, J. C., & Felgueiras, H. P. (2023). Pullulan hydrogels as drug release platforms in biomedicine. *Journal of Drug Delivery Science and Technology*, 89, 105066.
- The Wound Pros. (2022, March 25). Wound maceration: Identification, management and prevention. Retrieved April 21, 2025, from <https://www.thewoundpros.com/post/wound-maceration-identification-management-and-prevention>
- UCSF Department of Surgery. (2025). *Debridement*. University of California, San Francisco. Diakses 29 April 2025, dari <https://surgery.ucsf.edu/procedure/debridement>
- Wang, C., Wang, M., Xu, T., Zhang, X., Lin, C., Gao, W., ... & Mao, C. (2019). *Engineering bioactive self-healing antibacterial exosomes hydrogel for promoting chronic diabetic wound healing and complete skin regeneration*. *Theranostics*, 9(1), 65.
- Weller, C., & Team, V. (2019). *Interactive dressings and their role in moist wound management*. In *Advanced Textiles for Wound Care* (pp. 105–134). Woodhead Publishing.
- Wounds, U. K. Best Practice Statement. (2018). *Maintaining skin integrity*. London: Wounds UK. Retrieved from <http://www.wounds-uk.com>
- Zhang, A., Liu, Y., Qin, D., Sun, M., Wang, T., & Chen, X. (2020). *Research status of self-healing hydrogel for wound management: A review*. *International Journal of Biological Macromolecules*, 164, 2108–2123.
- Zhang, W., Liu, L., Cheng, H., Zhu, J., Li, X., Ye, S., & Li, X. (2024). *Hydrogel-based dressings designed to facilitate wound healing*. *Materials Advances*, 5(4), 1364–1394.
- Zhao, X., Wu, H., Guo, B., Dong, R., Qiu, Y., & Ma, P. X. (2017). *Antibacterial anti-oxidant electroactive injectable hydrogel as self-healing wound dressing*

with hemostasis and adhesiveness for cutaneous wound healing.
Biomaterials, 122, 34–47.