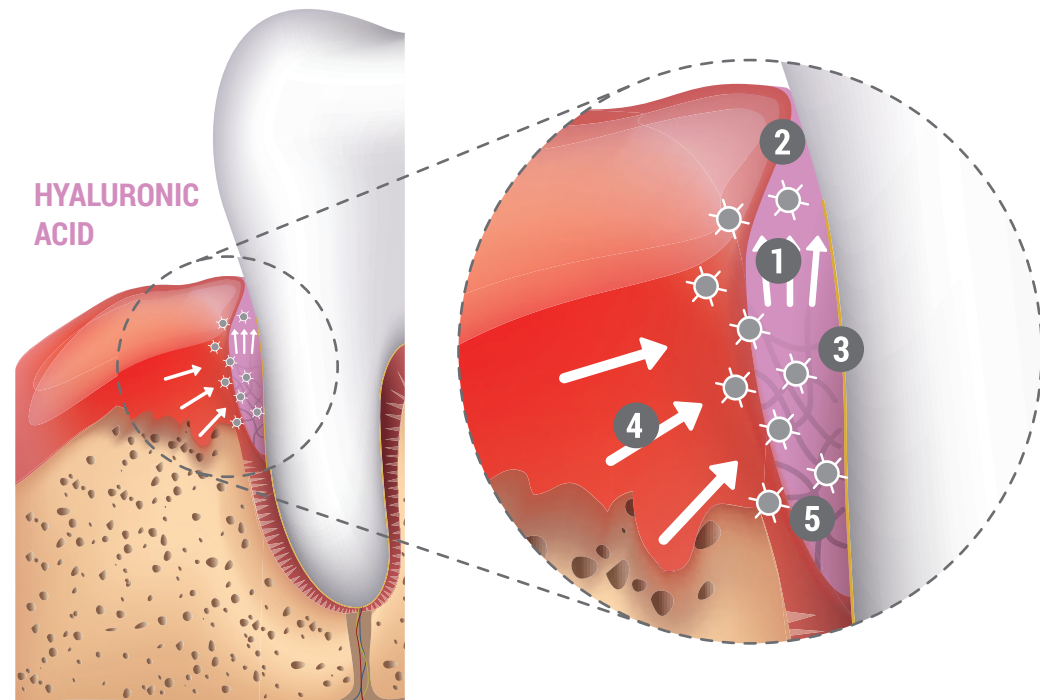


# HYALURONIC ACID- MODE OF ACTION



- 1 ATTRACTS BLOOD
- 2 STABILIZES COAGULUM AND SUPPORTS TISSUE REGENERATION
- 3 BACTERIOSTATIC EFFECT PROVIDES PROTECTION
- 4 GROWTH FACTORS ATTRACTED BY HYALURONIC ACID
- 5 COORDINATES INFLAMMATION AND ACCELERATES ANGIOGENESIS

## AVAILABLE PRODUCTS

ARTICLE NUMBER

hyADENT BG

BS091

HA Gel composed of a mixture of cross-linked (1,6%) and natural (0,2%) Hyaluronic Acid

2 x 1.2 ml  
cylindrical ampulla

### LITERATURE

1. Lee JY, Spicer AP. 'Hyaluronan: a multifunctional, megadalton, stealth molecule.' Curr Opin Cell Biol 2000;12:581–586.
2. McDonald J, Hascall VC. 'Hyaluronan mini review series.' J Biol Chem 2002; 277:4575–4579.
3. Jiang D et al. 'Hyaluronan as an immune regulator in human diseases.' Physiol Rev 2011;91:221–264.
4. Longaker T et al. 'Studies in Fetal Wound Healing: V. A prolonged presence of hyaluronic acid characterizes fetal wound healing' Ann. Surg. 1991; April:292–296.
5. Mast BA et al. 'Hyaluronic Acid Modulates Proliferation, Collagen and Protein Synthesis of Cultured Fetal Fibroblast' Matrix, 1993;13:441–446.
6. Salbach J et al. 'Regenerative potential of glycosaminoglycans for skin and bone.' J Mol Med 2012;90:625–635.
7. Muzaffer A. et al. 'The Effect of Hyaluronic Acid-supplemented Bone Graft in Bone Healing: Experimental Study in Rabbits ' J Biomater Appl 2006 20:209
8. Sasaki T, Watanabe C, Bone. Vol. 16. No.1 January 1995:9-15
9. Pirnazar P. et al. 'Bacteriostatic effects of hyaluronic acid.' Journal of Periodontology 1999;70:370-374
10. De Boule K, Glogau R, Kono T, et al. 'A Review of the Metabolism of 1,4-Butanediol Diglycidyl Ether– Crosslinked Hyaluronic Acid Dermal Fillers.' Dermatologic Surgery 2013;39(12):1758-1766
11. King SR, Hickerson WL, Proctor KG. Beneficial actions of exogenous hyaluronic acid on healing. Surgery 1991;109(1):76-84
12. Fawzy ES. et al. Local application of hyaluronan gel in conjunction with periodontal surgery: a randomized controlled trial. Clin Oral Invest 2012;16:1229-1236
13. Briguglio, F. et al. Treatment of infrabony periodontal defects using a resorbable biopolymer of hyaluronic acid: A randomized clinical trial. Quintessence Int 2013;44:231-240
14. Stiller M. et al. 'Performance of  $\beta$ -tricalcium phosphate granules and putty, bone grafting materials after bilateral sinus floor augmentation in humans' Biomaterials 2014;35(10):3154-3163.
15. Mendes RM et al. 'Sodium hyaluronate accelerates the healing process in tooth sockets of rat' Arch Oral Biol 2008; 53:1155–1162
16. Kessiena L. Aya et al. 'Hyaluronan in wound healing: Rediscovering a major player.' Wound Rep Reg 2014;22:579-593. Dental Journal. (2017) Vol.42:104-11.
17. West DC et al. 'Angiogenesis induced by degradation products of hyaluronic acid.' Science. 1985 Jun 14;228(4705):1324-6.

HYADENT BG is a registered brand and manufactured by  
BioScience GmbH, Walsmühler Str. 18, 19072 Dummer, Germany

CE certified medical device, class III Art. 8161.901EN, Version 2019

MORE CLINICAL CASES AVAILABLE AT  
[www.regedent.com](http://www.regedent.com)

**REGEDENT**  
smart regeneration



## THE NATURAL PROMOTER OF REGENERATION

Art. 8131.902EN, 2018-01-01



# HYALURONIC ACID-EFFECTS

THE NATURAL PROMOTER OF REGENERATION

HYADENT BG, a highly concentrated and cross-linked hyaluronic acid gel, is designed specifically for the application in the dental field. Hyaluronic acid (HA), as one of main components of the extracellular matrix is naturally present in the human body.<sup>1-3</sup> Studies have shown that prolonged presence of HA during the healing process promotes healing by regeneration rather than repair.<sup>4,5</sup> Besides accelerating the healing of soft tissue and bone,<sup>6,7,8</sup> the bacteriostatic properties of HA also protect the wound.<sup>9</sup>

HYADENT BG remains present throughout the various phases of the healing process due to its slow degradation pattern (several weeks).<sup>10</sup>

In addition, it aids the surgical periodontal treatment after application to the root surface and soft tissue. This leads to faster wound closure, substantial pocket reduction and enhanced attachment.<sup>11-13</sup> When mixed with bone substitute material of any origin HYADENT BG forms an easily manageable putty, which may in addition lead to accelerated bone formation.<sup>14,15</sup>

HYADENT BG is a hyaluronic acid-based treatment solution of non- animal origin optimized for regenerative dental and periodontal applications.

## • ACCELERATED TISSUE HEALING

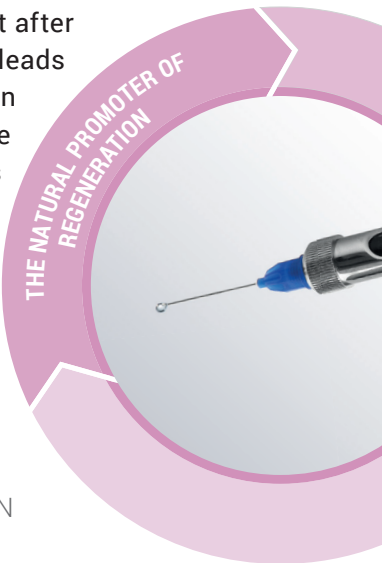
COORDINATES THE POST-OPERATIVE INFLAMMATION PROCESS AND ACCELERATES ANGIOGENESIS<sup>11,16,17</sup>

## • IMPROVED OUTCOME

STABILIZES COAGULUM AND SUPPORTS TISSUE REGENERATION<sup>11-13,16</sup>

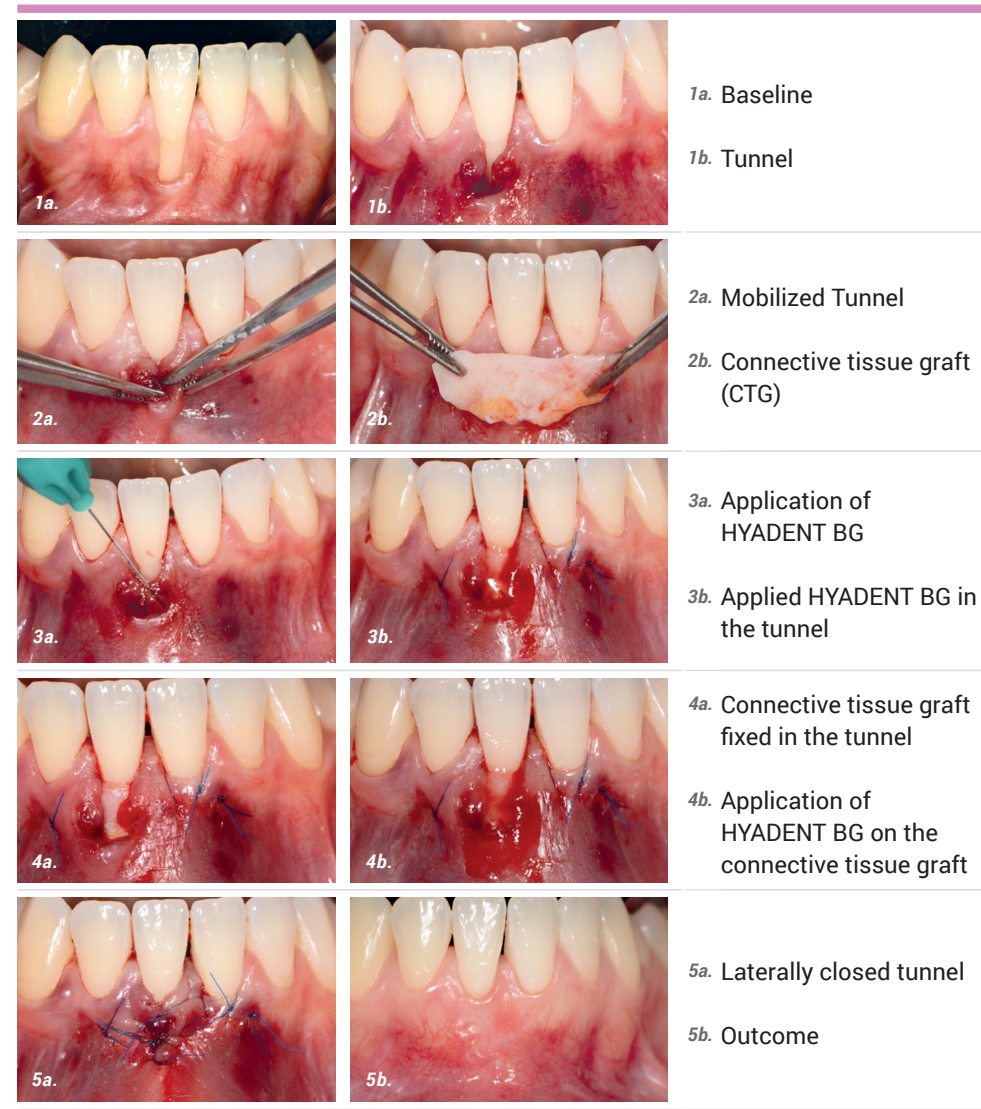
## • IMPROVED PREDICTABILITY

BACTERIOSTATIC ACTION AND REDUCED PATHOGEN PENETRATION<sup>9</sup>



# DEEP MILLER CLASS II RECESSION

CASE PROVIDED BY PROF ANTON SCULEAN, BERNE, SWITZERLAND



# TREATMENT OF A GINGIVAL RECESSION

CASE PROVIDED BY PROF ANDREA PILLONI, ROME, ITALY

