

Name:

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Group:

10A-4

Basic Science Question:

What does the periodontium consist of and what is each of its function?

Report:

The periodontium is a system of tissues that encompass all of the supporting structures of the teeth. These structures include alveolar bone, gingiva, root cementum, and the periodontal ligament. Each structure has a specific function, which enables them to work together to provide protection and support for the teeth.

Alveolar bone is the part of the jaw that forms the bony sockets and functions to protect and support the roots of teeth. Lining the alveolar bone is the gingiva, which is the portion of the oral mucosa that forms a protective seal around the teeth in order to withstand mechanical forces. In addition, it serves as a line of defense against microorganisms. Cementum is the calcified tissue layer covering the root of the tooth, which serves as a point of attachment for the Sharpey's fibers of the periodontal ligament and anchors the tooth into the socket. In addition to suspending and supporting the tooth in the socket, the periodontal ligament also functions to provide nutritional support to the cementum and bone.

References:

Gehrig, Jill S., et al. Foundations of Periodontics for the Dental Hygienist. Wolters Kluwer, 2019.

Tomokiyo, Atsushi, et al. "Periodontal Ligament Stem Cells: Regenerative Potency in Periodontium." Mary Ann Liebert, Inc., Publishers, 25 July 2019.

Zhao, Jing, et al. "Mesenchymal Stem Cells in Teeth." Encyclopedia of Bone Biology, Academic Press, 30 June 2020.