

The periodontal ligament is a connective tissue located between the \_\_\_\_ and \_\_\_\_ bone.

cementum, alveolar

The periodontal ligament is unique because it is the only ligament that connects two \_\_\_\_ tissues in the human body.

hard

The periodontal ligament (PL) is a complex vascular and highly cellular connective tissue that connects the tooth root to the \_\_\_\_ and the \_\_\_\_ bone.

inner wall of the alveolar, alveolar

The gingival connective tissue is continuous with the connective tissue of the gingiva and is bounded by \_\_\_\_ fiber bundles extending between the alveolar crest and the \_\_\_\_ cementum.

collagen, root

The PL cells are responsible for synthesizing and secreting a wide range of \_\_\_\_ and \_\_\_\_ essential for tissue remodeling.

regulatory molecules, maintaining homeostasis

One of the key features of PL is its ability to adapt to rapidly changing \_\_\_\_ and maintain a consistent \_\_\_\_ throughout life.

applied force, width of the PL space

The PL space is diminished around teeth that are \_\_\_\_ and \_\_\_\_ teeth, but increased in teeth subjected to \_\_\_\_.

not in function, unerupted, hyperfunction

The average width of the PL space is about \_\_\_\_ mm, and it varies according to age, functional characteristics, and \_\_\_\_ of eruption.

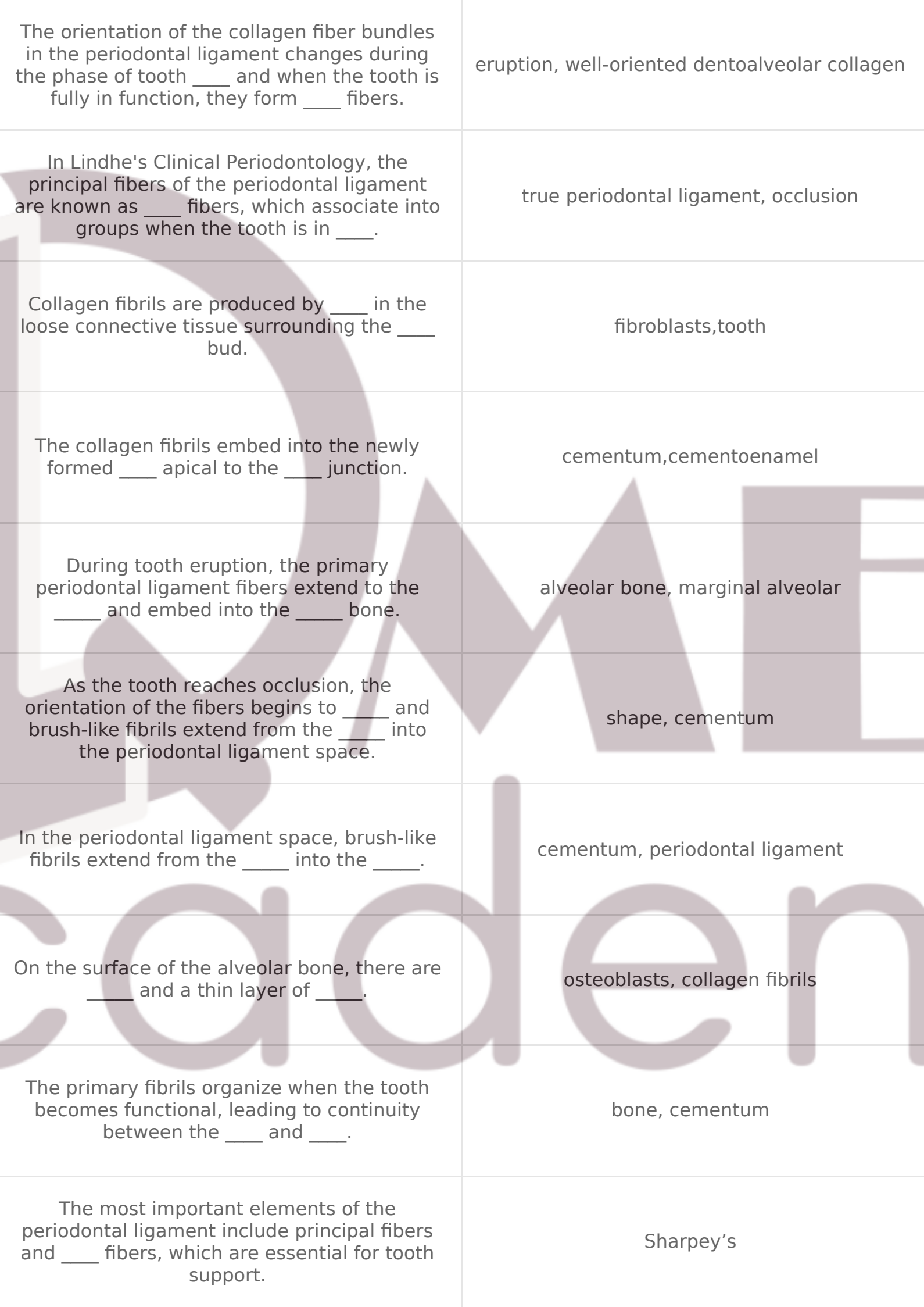
0.2, stage

The periodontal ligament helps to \_\_\_\_ the tooth to the bone and provides \_\_\_\_ for the tooth.

attach, support

One function of the periodontal ligament is to absorb \_\_\_\_ and resist the impact of \_\_\_\_ forces.

shock, occlusal



The orientation of the collagen fiber bundles in the periodontal ligament changes during the phase of tooth ____ and when the tooth is fully in function, they form ____ fibers.	eruption, well-oriented dentoalveolar collagen
In Lindhe's Clinical Periodontology, the principal fibers of the periodontal ligament are known as ____ fibers, which associate into groups when the tooth is in ____.	true periodontal ligament, occlusion
Collagen fibrils are produced by ____ in the loose connective tissue surrounding the ____ bud.	fibroblasts,tooth
The collagen fibrils embed into the newly formed ____ apical to the ____ junction.	cementum,cementoenamel
During tooth eruption, the primary periodontal ligament fibers extend to the ____ and embed into the ____ bone.	alveolar bone, marginal alveolar
As the tooth reaches occlusion, the orientation of the fibers begins to ____ and brush-like fibrils extend from the ____ into the periodontal ligament space.	shape, cementum
In the periodontal ligament space, brush-like fibrils extend from the ____ into the ____.	cementum, periodontal ligament
On the surface of the alveolar bone, there are ____ and a thin layer of ____.	osteoblasts, collagen fibrils
The primary fibrils organize when the tooth becomes functional, leading to continuity between the ____ and ____.	bone, cementum
The most important elements of the periodontal ligament include principal fibers and ____ fibers, which are essential for tooth support.	Sharpey's

The terminal portions of principal fibers that are embedded into the \_\_\_\_ and \_\_\_\_ are called Sharpey's fibers.

cementum, alveolar bone proper

Sharpey's fibers become \_\_\_\_ in areas where they are embedded in bone and \_\_\_\_.

calcified, cementum

Sharpey's fibers help regulate \_\_\_\_ mineralization and contribute to the attachment of tissues under increased \_\_\_\_ stress.

hard tissue, biomechanical

The intermediate plexus formed by fibers from the bone and cementum disappears when the tooth becomes \_\_\_\_ and is associated with \_\_\_\_ proteins.

functional, non-collagenous

The principal fibers of the periodontal ligament are arranged in 6 groups: Alveolar crest, \_\_\_\_, Oblique, \_\_\_\_, Interradicular, and Transseptal fibers.

Horizontal fibers, Apical fibers

In the periodontal ligament, the six groups of principal fibers include Alveolar crest, Horizontal, \_\_\_\_, Apical, \_\_\_\_, and Transseptal fibers.

Oblique fibers, Interradicular fibers

The principal fibers of the PL include \_\_\_\_ fibers, \_\_\_\_ fibers, and \_\_\_\_ fibers.

Alveolar crest, Horizontal, Oblique

Alveolar crest fibers extend from the cementum to the \_\_\_\_ and help prevent \_\_\_\_ of the tooth.

alveolar crest, extrusion

The principal fibers of the periodontal ligament are arranged in 6 groups including \_\_\_\_ and \_\_\_\_.

Alveolar crest fibers, Horizontal fibers

Horizontal fibers extend at right angles to the long axis of the tooth from the \_\_\_\_ to the \_\_\_\_.

cementum, alveolar bone

The principal fibers of the PL are arranged in \_\_\_\_ groups, with the largest group being the \_\_\_\_ fibers.

6, oblique

Oblique fibers in the periodontal ligament extend from the cementum in a \_\_\_\_ direction to the \_\_\_\_.

coronal, bone

The principal fibers of the PL are arranged in \_\_\_\_ groups, with the apical fibers radiating from the cementum to the \_\_\_\_ at the apical region.

6, bone

Apical fibers do not occur on \_\_\_\_ formed roots and radiate in a rather \_\_\_\_ manner from the cementum.

incompletely, irregular

The principal fibers of the PL are arranged in \_\_\_\_ groups, including the \_\_\_\_ fibers that extend interproximally over the alveolar bone crest.

6, Transseptal

Transseptal fibers are embedded in the cementum of adjacent teeth and may be considered as belonging to the \_\_\_\_ because they do not have \_\_\_\_ attachment.

gingiva, osseous

The periodontal ligament contains various components including \_\_\_\_ and \_\_\_\_ cells.

fibroblasts, cementoblasts

In the extracellular matrix (ECM) of the periodontal ligament, you can find \_\_\_\_ fibers and \_\_\_\_ substances.

Type I collagen, glycosaminoglycans

Fibroblasts are primarily found in the \_\_\_\_ and are responsible for synthesizing \_\_\_\_ and proteoglycans.

PL, collagen

The process of collagen turnover is regulated by fibroblasts through \_\_\_\_ degradation and does not involve \_\_\_\_ action.

intracellular, collagenase