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essential for protecting the teeth from potential damage or infection. The pulp, in particular, is highly sensitive to any injury or infection, signaling the need for treatment if damage occurs.

Cementum and the periodontal ligament are essential for maintaining the tooth's stability within the jawbone. Cementum provides an attachment surface for the periodontal ligament, which holds the tooth in place and absorbs the forces generated during biting and chewing. These structures also play a role in tooth eruption and maintaining the alignment of the teeth.

Dentin and cementum are capable of some degree of repair and regeneration. For example, secondary dentin is produced in response to tooth wear or damage, helping to preserve tooth structure. Cementum can also regenerate and repair itself to a certain extent if the root is exposed due to gum recession.

### Dental tissues in health and disease

Dental tissues can be affected by a range of diseases and conditions, the most common of which are dental caries (cavities), periodontal disease, and pulpitis (inflammation of the pulp). These conditions often result from poor oral hygiene, poor diet, and other lifestyle factors. Dental caries occur when bacteria in the mouth produce acids that demineralize the enamel and dentin, leading to tooth decay. The progression of caries can lead to pulp infection if left untreated. Early detection and treatment are essential to prevent further damage to the dental tissues.

Periodontal disease affects the periodontal ligament and cementum, leading to inflammation and potential loss of tooth support. Poor oral hygiene and plaque buildup are the primary causes of periodontal disease. If untreated, it can result in tooth mobility and even tooth loss [10].

Pulpitis is inflammation of the pulp tissue, typically caused by bacterial infection, deep cavities, or trauma. The condition can cause severe pain and sensitivity. In advanced cases, root canal therapy may be necessary to save the tooth.

### Conclusion

Dental tissues are integral to the structure and function of the

teeth, each fulfilling distinct roles that contribute to oral health. Enamel, dentin, pulp, cementum, and the periodontal ligament work in harmony to protect, support, and maintain the health of the teeth. Understanding the functions and importance of these tissues provides valuable insight into both preventive dental care and clinical interventions. Maintaining healthy dental tissues through regular oral hygiene practices, a balanced diet, and timely dental visits is essential to preventing common oral health issues and ensuring the longevity of healthy teeth.

### References

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