

1. Aging and the Periodontium



Aging and the Periodontium

(c) 2005, Terrence Griffin, D.M.D.

2. Masticatory Efficiency




Masticatory Efficiency

- Slight atrophy of the musculature
- Reduction of efficiency due to loss of teeth or poor replacement
- Poor chewing ability = associated digestive disorders = dietary changes
- May develop avitaminosis
- Particular importance of fiber, vitamins, and low fat in diet

(c) 2005, Terrence Griffin, D.M.D.

3. Cumulative Effects of Aging



Cumulative Effects of Aging

- **Important to differentiate pathology from the aging process**
- **Increased plaque accumulation due to architecture, medications, and a reduction in immune response**
- **Inflammation develops more quickly and wound healing more slowly**
- **Rapid forms of periodontal disease seen in young people and older individuals suffer from more slowly progressive forms**

(c) 2005, Terrence Griffin, D.M.D.

4. General Features of Aging Found in All Tissues



General Features of Aging Found in All Tissues

- **Tissue desiccation**
- **Diminished reparative ability**
- **Reduced elasticity**
- **Altered cell permeability**

(c) 2005, Terrence Griffin, D.M.D.

5. Age Related Changes in the Periodontium



Age Related Changes in the Periodontium

- **Gingiva and mucosa**
- **Periodontal ligament**
- **Alveolar bone and cementum**
- **Tooth-periodontium relationships**

(c) 2005, Terrence Griffin, D.M.D.

6. Gingival Aging



Gingival Aging

- **Diminished keratinization**
- **Possibly reduced stippling**
- **Increased width of attached gingiva**
- **Decreased connective tissue cellularity**
- **Reduced oxygen consumption**
- **Thinning of the epithelium**

(c) 2005, Terrence Griffin, D.M.D.

7. Alveolar Bone



Alveolar Bone

- **Osteoporosis**
- **Decreased vascularity**
- **Reduction in metabolic rate and healing capacity**
- **Density may increase or decrease with age**

(c) 2005, Terrence Griffin, D.M.D.

8. Cementum



Cementum

- **Greater irregularity**
- **Continuous deposition with age**
- **Width of cementum at 76 years is three times that at 11 years of age**

(c) 2005, Terrence Griffin, D.M.D.

9. Tooth-Periodontium Relationships



Tooth-Periodontium Relationships

- **Loss of tooth substance due to attrition**
- **Reduction in cusp height and inclination due to wear**
- **Bone loss results in increase in crown/root ratio**
- **Tooth wear tends to modify increase in crown/root ratio**

(c) 2005, Terrence Griffin, D.M.D.

10. Tooth-Periodontium Relationships (Continued)



Tooth-Periodontium Relationships (Continued)

- **Wear on proximal surfaces results in physiological mesial drifting**
- **Most pronounced wear in teeth that taper towards the CEJ (incisors)**
- **Reduced maxillary/mandibular molar overjet and an edge to edge bite anteriorly**

(c) 2005, Terrence Griffin, D.M.D.

11.

Nellie W.



Nellie W.

- **83 year-old white female**
- **Loss of masticatory efficiency due to tooth loss and poor replacement**
- **Attachment loss due to recession**
- **Excellent oral hygiene and high dental IQ**
- **Reduced chewing ability**

(c) 2005, Terrence Griffin, D.M.D.