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| **Name:** |
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| **Group:** |
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| **Pathology Question:** |
| What is scaling and root planing and when is it indicated? |
| **Report:** |
| Scaling and root planning, determined by the ADA, is the instrumentation of the crown and root surfaces of the teeth to remove plaque and calculus from teeth surfaces. It is indicated for patients with periodontal disease and is therapeutic, not prophylactic, in nature. Scaling and root planning results in the mechanical removal of bacteria and leads to the ecological disruption of the oral biofilm. Proper technique, with a combination of hand instrumentation, as well as ultrasonic scaling, can lead to a reduction in plaque, calculus, and endotoxin infected cementum. When instrumenting on cementum, it is important to achieve a biologically acceptable level of debridement, so that the body can take back control of normal immune healing and function. Scaling and root planning also is useful in the reduction of inflammation and can be considered the central element in periodontal disease control. The major indication for this non-surgical periodontal therapy is chronic periodontitis. Specifically, scaling and root planning are indicated when patients display clinical loss of periodontal attachment, radiographic evidence of crestal bone loss or changes in crestal lamina dura, or radiographic evidence of root surface calculus. Proper instrumentation can result in a reduction or maintenance of pocket depth, and maintenance, or increase, in attachment level. Other than maintaining periodontal disease, scaling and root planning can be used as a pre-treatment for other periodontal surgical procedures such as crown lengthening, bone grafting, or implants. The two major limitations of non-surgical periodontal therapy by scaling and root planning are the limitations of the clinician to instrument sufficiently while reaching all accessible areas of need, and the limitation of the body’s immune respond during the healing process and control of biological pathogens. |
| **References:** |
| Lang NP. Indications and rationale for non-surgical periodontal therapy. Int Dent J. 1983 Jun;33(2):127-36. PMID: 6347903.  Dental Scaling and Root Planing for Periodontal Health: A Review of the Clinical Effectiveness, Cost-effectiveness, and Guidelines [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2016 Oct 17. PMID: 27929624.  Smiley, Christopher J., et al. "Systematic review and meta-analysis on the nonsurgical treatment of chronic periodontitis by means of scaling and root planing with or without adjuncts." *The Journal of the American Dental Association* 146.7 (2015): 508-524.  Zappa, U., et al. "Root substance removal by scaling and root planing." *Journal of Periodontology* 62.12 (1991): 750-754 |