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| **Name:** |
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| **Group:** |
| 7-A1 |
| **Basic Science Question:** |
| What is ferrule? |
| **Report:** |
| Ferrule* Broken into the Latin words ferrum meaning iron, and viriola meaning bracelet, translates to a metal band that is encircling something to give it strength
* In dentistry, we use a ferrule when there is not enough healthy tooth structure to properly support a restoration

When creating a treatment plan for a tooth, and evalutating whether or not it is restorable, we must evaluate the amount of healthy tooth structure remaining* If tooth loss is too great, there may be a chance the tooth is unrestorable
* We can choose to use a ferrule if the height and width requirements are met

-Minimum amount of tooth height present to consider a ferrule is 1 mm-The most beneficial ferrule height is 1.5-2 mm-Overlying trend is that the restoration has a greater chance of success and greater resistance to fracture when a greater tooth height is present - In width, the walls must be 1 mm or thicker for the Ferrule to still prove effectiveThe area where the connective tissue and epithelial tissue attach to tooth, also called the biologic width, is an important factor that influences the amount of ferrule length that can be used* Crown margin must be 2 mm from alveolar crest
* Should have 4.5 mm of supra-alveolar tooth structure to ensure there is no invasion of biological width

If there is not enough ferrule length, can consider othordontic extrusion of crown lengthening* Increases supragingival tooth structure, which increases amount of length for ferrule

When used effectively, the ferrule will help hold the tooth together, support the tooth, and help the tooth resist fracture- As will be talked about later in this presentation, a ferrule is especially useful when supporting endodontically treated teethClick here to enter text. |
| **References:** |
| Mamoun J. S. (2014). On the ferrule effect and the biomechanical stability of teeth restored with cores, posts, and crowns. *European journal of dentistry*, *8*(2), 281–286. https://doi.org/10.4103/1305-7456.130639Troiano G, Parente G, Laino L, Dioguardi M, Cervino G, *et al.* (2016) Use of orthodontic extrusion as aid for restoring extensively destroyed teeth: a case series. J Transl Sci 2: doi: 10.15761/JTS.1000148Stankiewicz, N.R. and Wilson, P.R. (2002), The ferrule effect: a literature review. International Endodontic Journal, 35: 575-581. doi:[10.1046/j.1365-2591.2002.00557.x](https://doi.org/10.1046/j.1365-2591.2002.00557.x) |