

## ABSTRACT

*The first experimental investigation of orthodontic tooth movement was published by Sandstedt in 1904-1905 followed by Oppenheim in 1911 and other investigators. It seems appropriate to review the physiologic process in orthodontic tooth movement. Orthodontic tooth movement depends on resorption and deposition of the socket bone. Pressure and tension of varying magnitudes on the periodontal ligament initiate tooth movement through histologic bone resorption and bone deposition. Initial compression of periodontal ligament is compensated by internal alveolar bone resorption on pressure side while the stretch of periodontal ligament on the tension side is balanced by bone deposition. This process called as bone remodeling. Bone remodeling is regulated by cells of the osteoblast lineage and involves a complex network of cell-cell and cell-matrix interactions involving systemic hormones, locally produced cytokines, growth factors, many of which are sequestered within the bone matrix, as well as the mechanical environment of the cell.*

*Keywords: Orthodontic tooth movement, remodeling, pressure and tension; resorption and deposition.*

