



Figure 8: Dynamic loading increases condyle chondrocyte proliferation and osteoclast cell number. To evaluate the effect of dynamic loading on chondroblast proliferation, BrdU was injected 3 days before euthanasia of the animals. (A) Histological sections from mid-frontal area of condyle were immunostained to identify BrdU-labeled cells. (B) The number of BrdU-labeled cells was significantly higher on both proliferative and sub-proliferative layers (pre-hypertrophic and hypertrophic) in animals that received the dynamic load. BrdU-labeled cells were measured in a fixed rectangular frame in the middle third of mid-frontal condylar sections in 6 consecutive sections. Values are mean \pm SEM of 6 animals. (C) To evaluate the effect of dynamic loading on osteoclast activity during endochondral bone formation, frontal sections of condylar cartilage were immunostained for TRAcP-5b and visualized as red cells. (D) The number of osteoclasts was measured in 5 consecutive sections of the middle third of condylar cartilage in a fix frame. Each value presents the mean \pm SEM of 6 animals. * Significantly different from Control and Static Load groups.