Summary of: Chronic skeletal unloading of the rat femur mechanisms and functional consequences of vascular remodeling..pdf

Key findings:

1. Chronic skeletal unloading reduces femoral bone and marrow blood flow (BF) to the femur.

2. During reloading, BF in the proximal metaphysis, diaphyseal marrow, and distal metaphysis of Con rats increases, but only in the diaphyseal marrow of 7-d HU rats.

3. Vascular resistance (VR) in the femur is higher in 14-d HU rats during reloading.

4. The lower BF in 14-d HU rats is associated with vascular remodeling in the femur.

5. The PNA from 14-d HU rats has a smaller maximal intraluminal diameter and thinner medial wall thickness compared to Con rats.

6. The PNA from 14-d HU rats has a smaller medial cross-sectional area.

7. The PNA from 14-d HU rats has a lower calculated shear stress and circumferential wall stress compared to Con rats.

8. The PNA from 14-d HU rats has a higher calculated circumferential wall stress compared to Con rats.

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