

Supplemental Table 1. Comparison of bone mineral characteristics at the distal femoral metaphysis from the contralateral limbs of animals undergoing ovariectomy (OVX) + hindlimb unloading (HLU) + reambulation (REAMB) + exercise (EX).

	Total			Trabecular			Cortical		
	BMC	Bone Area	BMD	BMC	Bone Area	BMD	BMC	Bone Area	BMD
	(mg/mm)	(mm ²)	(mg/cm ³)	(mg/mm)	(mm ²)	(mg/cm ³)	(mg/mm)	(mm ²)	(mg/cm ³)
Left Femur	9.9 ± 0.5	23.2 ± 0.8	427 ± 17	0.3 ± 0.1	6.9 ± 0.2	44 ± 10	5.4 ± 0.3	6.2 ± 0.3	870 ± 10
Right Femur	10.4 ± 0.8	22.7 ± 1.1	457 ± 25	0.6 ± 0.2	6.8 ± 0.3	88 ± 27	5.5 ± 0.4	6.3 ± 0.4	882 ± 10

Values are Means ± SEM from OVX+HLU+REAMB+EX animals, n = 9 bones per side. No significant differences were present between left and right limb for any measure. BMC = Bone mineral content, BMD = bone mineral density.

Supplementary Table 2. Body Mass At Baseline and Sacrifice.

Group	Body Mass (g)	
	Baseline	Sacrifice
Intact Control	(a) 270 ± 15	296 ± 15
OVX	(b) 280 ± 24	343 ± 45 [#]

OVX+E ₂	(c)	267 ± 20	255 ± 18
OVX+HLU	(d)	280 ± 17	298 ± 26
OVX+E ₂ +HLU	(e)	263 ± 12	257 ± 24
OVX+HLU+REAMB	(f)	277 ± 17	325 ± 14 [#]
OVX+E ₂ +HLU+REAMB	(g)	263 ± 9	294 ± 47
OVX+HLU+REAMB+EX	(h)	287 ± 23	312 ± 32
OVX+E ₂ +HLU+REAMB+EX	(i)	281 ± 21	286 ± 23

Values are Means ± SEM of 6-12/group. No differences were present

between groups at baseline or sacrifice. # indicates within group change

from baseline to sacrifice was significantly different at $p \leq 0.05$.