

Table S1. Mean values \pm SD of the variables under study.

Variable	Control n=37	Ski jumping n=28	Volleyball n=48
Ferritin (ng/ml))	67.2 \pm 39.9	59.4 \pm 40.9	57.7 \pm 29.7
Fe stores (g)	7.72 \pm 2.3	7.6 \pm 2.2	7.4 \pm 2.2
Total 25(OH)D (ng/ml)	21.0 \pm 5.0	28.9 \pm 8.1	28.3 \pm 6.6
Free 25(OH)D (ng/ml)	5.50 \pm 1.8	6.7 \pm 1.9	8.1 \pm 2.4
Calcium intake (mg/day)	1039 \pm 767	858 \pm 420	1410 \pm 816
Z-score	0.11 \pm 1.14	-0.03 \pm 0.97	1.43 \pm 0.90
BMAD (g/cm ³)	0.31 \pm 0.03	0.31 \pm 0.04	0.33 \pm 0.03
TBS	1.433 \pm 0.08	1.479 \pm 0.06	1.396 \pm 0.08
Fractures (number)	21	13	20

Fe stores – body iron stores; Total 25(OH)D – total fraction of 25(OH)D, Free 25(OH)D – free fraction of 25(OH)D; BMAD – lumbar spine bone mineral apparent density; TBS – trabecular bone score.

Table S2. Results of one-way analysis of variance and non-parametric tests for groups studied

Control vs. Ski jumping vs. Volleyball		
Variable	<i>p</i>	ES
Ferritin	NS	
Fe stores	NS	
Total 25(OH)D	***	$\epsilon^2 = 0.285$; CI<0.161;0.434> (C vs. S_J)***; (C vs. V)***
Free 25(OH)D	***	$\epsilon^2 = 0.257$; CI<0.133;0.413> (C vs. S_J)*; (C vs. V)***; (S_J vs. V)*
Calcium intake	***	$\epsilon^2 = 0.087$; CI<0.019;0.222> (C vs. V)*; (S_J vs. V)*
Z-score	***	$\eta^2 = 0.323$; CI<0.219;0.405> (C vs. V)***; (S_J vs. V)***
BMAD	*	$\eta^2 = 0.063$; CI<0.009;0.123> (C vs. V)*
TBS	***	$\eta^2 = 0.161$; CI<0.063;0.249> (C vs. S_J)*; (S_J vs. V)***
Fractures	NS	

Fe stores – body iron stores; Total VitD – total fraction of 25(OH)D, Free 25(OH)D – free fraction of 25(OH)D; BMAD – lumbar spine bone mineral apparent density; TBS – trabecular bone score.

C stands for Control, S_J for Ski jumping, V for Volleyball, CI – confidence interval. Significant differences: * $p < 0.05$; *** $p < 0.001$; NS - not significant.

#Effect sizes (ES) epsilon squared (ϵ^2) were taken as small for $0.01 \leq \epsilon^2 < 0.08$, medium $0.08 \leq \epsilon^2 < 0.26$, large $\epsilon^2 \geq 0.26$ and for eta squared (η^2) as small $0.01 \leq \eta^2 < 0.06$, medium $0.06 \leq \eta^2 < 0.14$ and large $\eta^2 \geq 0.14$ [35,36].