

SUN-538: Osteogenic Markers in Postmenopausal Diabetics Respond to Higher Mechanical Loading during Exercise after Rather Than before the Meals

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Ba a d,diabetics. Why hypothesized that greater bone fragility in

heral insulin resistance and reduced nutrient access to the bone.

women, age 57.7y, BMI 27.2 kg/m², in two of five day-long experiments:

(40 min of uphill treadmill exercise, respectively one h before, or one h

downhill exercise at -6o slope with meals and exercise timed the same way)

meals at 10 and 17 h and containing 50% carbohydrate, 15% protein, and

respectively) and coincided with PP insulin AUCs. CICP rise in DAM trial was 44% greater than

alcalin (OCN) and CICP (c-terminal propeptide of type I collagen) and of

after 10h meal (AUCs, 685.9 vs 384.1 ng/ml*h, respectively) and produced a 40 percent greater

propeptide of type I TJ-0.005 Tc 0.005 Tw -15.716 -1.307 Td(P)0-6 (e)-7 (a)TJ-0.006 Tw 1.489.0 Td(k)-4.5 (gr)-8.3 (e)-0.8 (u)-2.7 (n)-2.7 (d)TJ-0 Tc 0 Tw 3

CICP/CIX ratio after 10h meal in the in the DAM than DBM trial. No group difference was seen

postprandial serum glucose rises, while PP insulin was highest in UBM and SED trials and low

downhill and UAM trials. HOMA-IR in the two downhill trials (355.6) was reduced to 47% of t

trials (759.1) and to downhill exercise reduced IR in resistance to high-carbohydrate meals

SED control. Postprandial downhill exercise has the highest osteogenic potential.

Presentation Date: Sunday, March 24

Presentation Time: 1 p.m. – 3 p.m.

Location: Expo Hall