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P169 THE POSITIVE ASSOCIATION OF LIGNAN AND FLAVONOID INTAKES WITH BONE MINERAL DENSITY (BMD) IN MEN FROM SOUTHERN CHINA

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OBJECTIVE(S): There have been promising data showing that phytoestrogens may prevent bone loss in postmenopausal women. However there has been little data on the skeletal effect of specific phytoestrogens among young men and premenopausal women. The purpose of this study was to examine the relationship between phytoestrogens intake (isoflavones, coumestrol, flavonoids and lignans) and BMD at femoral neck and spine in a cohort of Southern Chinese young men and women.

MATERIAL & METHODS: The participants of this cross-sectional study included 386 Southern Chinese men and 957 women aged 20-39 years. Linear regression analysis was used to examine the association between phytoestrogens intake (as continuous variable) adjusting for age, BMI, calcium intake, smoking and drinking history, number of pregnancy (for women), educational and exercise level, serum estradiol (for women and men) or testosterone (for men) level. Analysis of covariance was used to test for a linear trend across sex-specific tertiles of phytoestrogens intake.

RESULTS: The findings from linear regression and ANCOVA were in agreement with each other. In particular, dietary lignan intake ($\beta=0.093$; $p=0.009$) and flavonoid intake ($\beta=0.075$; $p=0.035$) were significantly associated with lumbar spine BMD in young men. Interestingly, isoflavone intake was negatively associated ($\beta=-0.024$; $p=0.011$) with BMD at the lumbar spine in young men. Lignan intake was further associated with BMD at femoral neck ($p=0.04$) in young men. However, only marginally significant associations were observed for lignan and flavonoid intake in women (P range: 0.062-0.093).

CONCLUSION(S): Our study showed positive associations between specific phytoestrogens intake and BMD in Southern Chinese young men.