Author's response to reviews

Title: Muscle fiber-type distribution predicts weight gain and unfavorable left ventricular geometry: a 19 year follow-up study

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Version: 2 Date: 20 October 2005

Author's response to reviews: see over
Dear Sirs

We submit our revised manuscript “Muscle fiber-type distribution predicts weight gain and unfavorable left ventricular geometry: a 19 year follow-up study” (6360967507442909), by Jouko Karjalainen, Heikki Tikkanen, Miika Hernelahti, and Urho M Kujala.
We have carefully revised our manuscript along the comments of the three expert referees. Our response from point to point follows at the end of this covering letter.

Yours sincerely

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Reviewer 1:

Minor revisions:
- Figures are redrawn with decimal points and inner frames to conceal the fact that abscissa and ordinate do not start in origo (SPSS package graphs do not allow the cutting of X and Y axes).

Discretionary revisions:
- We have added in the end of Results section a new paragraph giving the main results in regression analyses performed in the whole study group including men using cardiovascular drugs. We have also added in the first paragraph of Results, that an additional reason to exclude the men using cardiovascular drugs from the main analysis was the fact that in this group were men with significant cardiac diseases (other than hypertension) with an impact on LV structure.
- LV mass was indexed also for length, but there was no difference between low and high type-I% groups then either.

Reviewer 2:

Major compulsory revisions:
- The low and high type-I% groups are now of equal size (20 and 20). Further, we have given the main results in regression analyses of the whole study group including the men using CV drugs in the end of Results section. (Look comment for reviewer 1)
- We have totally deleted everything concerning the diastolic function. Reviewers comments here are very true.
- In the limitations paragraph has been added: “Our study subjects were white men, thus our findings may not be applicable to other ethnic groups or women.”
Minor revisions:
- Table 5 has been deleted and its main findings are added in the paragraph “Type-I%, cardiac risk factors and echocardiographic indices.”
- r and p values has been added to figures
- “Low type-I% predicts fatness” has been replaced by “low type-I% predicts obesity”

Reviewer 3:
- Men have now been divided by median in low and high type-I% groups (20 and 20)
- Comparisons in tables 1 and 2 has been reduced
- The hypothesis sentence in the end of Background has been changed to “we hypothesized that the proportion of slow-twitch skeletal muscle fibers could predict LV structure and function”.
- Regression analyses are now performed also for the whole study group
- The normality of the distributions was tested with Kolmogorov-Smirnov test, all variables were normally distributed except relative wall thickness, which was so after logtransformation.
- 95% confidence intervals are given for regression coefficients (tables 3-5)