Author's response to reviews

Title: Effects of Aging and Type 2 Diabetes on Resting and Post Occlusive Hyperemia of the Forearm; the Impact of Rosiglitazone

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1) figure 3 corrected as suggested
2) it is 8 and 8 for the subjects and the table is corrected as suggested
3) The editor is correct that continuing RSG brings flows to that of controls. This is substituted for the statement about reversing the effects of diabetes as suggested. The new sentence is Administration of RSG for 3 months was associated with an increase in the blood flow response to venous occlusion so that it was not significantly different than that of age matched controls.

4) It can be said that the flows, by linear regression, were equivalent to people 23 years younger in that analysis of residuals showed that the best model statistically is a linear regression. An exponential fit was a poorer fit than linear regression. However, the sentence is omitted as requested.
5) Whereas the gold standard is infusion of blocking agents, it is impossible to do these studies in most of the United States anymore due to changes in IRB regulations. It is well accepted in the field that post occlusion flows show endothelial function and numerous references are cited in the text. Three new references are added. The exact mechanism for the decline with aging and diabetes is not known. A sentence to this effect is added to the discussion. We are engaged in DB rat studies to examine just this mechanism. Drug infusion without therapeutic benefit for pure research will not be allowed by most IRBs anymore in this country. The following sentence has been added to the end of the paper

While it is well accepted that vascular occlusion is a mechanism to examine endothelial function, the exact mechanism of the damage, e.g. nitric oxide, prostaglandins etc can not be elucidated without additional studies.

6) A reference has been added on page 12 showing lack of nitric oxide production with reduced vasodilatation after occlusion.

Other comments- The term physically active is a relative one. For 50 year olds, physically active is just not sitting all day and drinking beer. This group is active in that they do more than sit all day. They walk, for example, across campus rather than driving. They do not engage in football, baseball etc. This is what we try to get all of our patients with diabetes to do. Therefore, I dont see this as a problem.

A comment about hypertension is added to the discussion.

Comments on nerve function removed and minor editing and shortening done. Introduction is now scant at 1.5 pages, results shortened by about.