

Electrophysiological quantification of diabetic neuro- and retinopathy

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Diabetes Mellitus (DM) is arguably one of the greatest medical challenge facing the world today. The complex metabolic changes which take place during DM damage multiple organs and tissues. Prominent among these affected tissues are peripheral nerves and the retina, and damages to these areas manifest as the clinical diseases known as diabetic neuropathy and diabetic retinopathy, respectively.

Effective treatment of diabetic neuropathy and retinopathy has proven elusive; however, recent research has established a link between diabetes induced capillary dysfunction in the vaso nervorum in peripheral nerves and the vasculature of the retina, leading to decreased oxygen delivery. This discovery presents the possibility of a new avenue of treatment.

This thesis examined the potential novel use of hyperoxic treatment of diabetic neuropathy and retinopathy. The hypothesis in question was; can increased dissolved blood oxygen alleviate the symptoms of neuropathy in peripheral nerves and/or retinopathy in the retina?



Friday October 11th at 14.00 Seminar room at Zoophysiology (1131-127)