



Journal of Diabetes Research

Special Issue on
Diabetes and Dementia/Alzheimer's Disease

CALL FOR PAPERS

While the links between diabetes and cardiovascular disease are well established, more recent epidemiological and preclinical studies have also demonstrated a strong association with diabetes and dementia particularly Alzheimer's disease (AD). AD is characterized by progressive cognitive impairment and is the most common form of dementia. Both diabetes (of which type 2 diabetes makes up ~90% of cases) and AD are increasing in prevalence due largely to the fact that both diseases correlate with lifespan and the world's population is aging. From a pathological point of view, there is significant overlap between these two noncommunicable diseases. For instance, both conditions are associated with aberrant protein accumulation (and associated endoplasmic reticulum (ER) stress), an increased proinflammatory profile, vascular defects, mitochondrial dysfunction/oxidative stress, and defective tissue specific insulin signaling.

Interestingly, alterations to modifiable lifestyle factors that are traditionally used to prevent or treat type 2 diabetes such as eating a healthy balanced diet, exercise training, or increasing incidental physical activity may also be beneficial for AD. Likewise, medical interventions used to treat patients with diabetes such as insulin and glucagon-like peptide 1 (GLP-1) mimetics may also be efficacious in patients with AD. Such similarities between these conditions suggest that research that investigates the mechanistic link between altered metabolic status and impaired cognitive function may have future clinical applications. We therefore welcome both review and original research articles from all fields (clinical, epidemiological, preclinical, and basic science) for this special issue of the Journal of Diabetes Research. This issue aims to compile a diverse special edition highlighting current research into the nexus between diabetes and dementia/AD.

Potential topics include, but are not limited to:

- ▶ New insights into the molecular mechanisms linking diabetes and neurological disease such as AD and depression
- ▶ Neuroimaging of diabetes, prediabetes, and metabolic markers
- ▶ A focus on insulin resistance, insulin signaling, mitochondrial function, inflammation, or ER stress and the similarities and differences in AD and diabetes
- ▶ Type 1 or type 2 diabetes and cognitive decline
- ▶ The effect of cognitive training in individuals with prediabetes
- ▶ Therapeutic strategies (both pharmaceutical and lifestyle) to prevent or delay cognitive decline in patients with type 2 diabetes
- ▶ Animal models to study whole-body metabolic defects combined with AD pathology
- ▶ The role of hyperglycemia-induced vascular damage in cognitive decline
- ▶ Contributive role of adiposity and hyperglycemia associated with type 2 diabetes in driving cognitive decline
- ▶ Common genetic susceptibility for diabetes and neurodegenerative diseases

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jdr/ddad/>.

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First Round of Reviews

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