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Functional Medicine

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Titre

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### L'HÉMOGLOBINE A1C ET LES TRIGLYCÉRIDES RÉDUISENT LA COGNITION

Neuropsychology. 2017 Sep;31(6):682-688. doi: 10.1037/neu0000335. Epub 2017 Jun 12.

#### Triglycerides are negatively correlated with cognitive function in nondemented aging adults.

Parthasarathy V<sup>1</sup>, Frazier DT<sup>2</sup>, Bettcher BM<sup>3</sup>, Jastrzab L<sup>2</sup>, Chao L<sup>4</sup>, Reed B<sup>5</sup>, Mungas D<sup>5</sup>, Weiner M<sup>6</sup>, DeCarli C<sup>5</sup>, Chui H<sup>7</sup>, Kramer JH<sup>2</sup>.

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#### Abstract

**OBJECTIVE:** Vascular risk factors like hyperlipidemia may adversely affect brain function. We hypothesized that increased serum triglycerides are associated with decreased executive function and memory in nondemented elderly subjects. We also researched possible vascular mediators and white matter microstructure as assessed with diffusion tensor imaging (DTI).

**DESIGN/METHOD:** Participants were 251 nondemented elderly adults (54% male) with a mean age of 78 (SD = 6.4; range: 62-94) years and a mean education of 15.6 (SD = 2.9; range: 8-23) years. Fasting blood samples were used to detect serum triglyceride and low-density lipoprotein (LDL) levels along with ApoE4 status. DTI was used to determine whole brain fractional anisotropy (FA). Composite executive and memory scores were derived from item response theory. Clinical Dementia Rating (CDR) scores provided informant-based measures of daily functioning.

**RESULTS:** Triglyceride levels were inversely correlated with executive function, but there was no relationship with memory. Controlling for age, gender, and education did not affect this correlation. This relationship persisted after controlling for vascular risk factors like LDL, total cholesterol, CDR and ApoE4 status. Lastly, adding whole-brain FA to the model did not affect the correlation between triglycerides and executive function.

**CONCLUSION:** Triglyceride levels are inversely correlated with executive function in nondemented elderly adults after controlling for age, education, gender, total cholesterol, LDL, ApoE4 status, CDR, and white-matter microstructure. The fact that the effect of triglycerides on cognition was not clearly mediated by vascular risks or cerebrovascular injury raises questions about widely held assumptions of how triglycerides might impact cognition function. (PsycINFO Database Record

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*"Les taux de triglycérides sont inversement corrélés aux fonctions d'exécution chez les adultes âgés non déments après la prise en compte de l'âge, du niveau d'éducation, du sexe, du cholestérol total, du cholestérol LDL, du statut ApoE4, de la cote de démence clinique (CDR) et de la microstructure de la substance blanche. Le fait que l'impact des triglycérides sur la cognition ne soit pas clairement induit par les risques vasculaires ou les lésions cérébro-vasculaires soulève des questions quant aux hypothèses largement répandues concernant la façon dont les triglycérides pourraient influencer sur la fonction cognitive."*