

# Emerging roles for high-density lipoproteins in neurodegenerative disorders

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Lipoproteins are the complexes of different lipids and proteins, which are devoted to the transport and clearance of lipids or lipid-related molecules in the circulation. Lipoproteins have been found to play a crucial role in brain function and may influence myelination process. Among lipoproteins, high-density lipoproteins (HDLs) and their major protein component, apoA-I, are directly involved in cholesterol efflux in the brain. It has been suggested that inadequate or dysfunctional brain HDLs may contribute to cerebrovascular dysfunctions, neurodegeneration, or neurovascular instability. HDL deficiency could also promote cognitive decline through impacting on atherosclerotic risk. The focus of this review is to discuss knowledge on HDL dysregulation in neurological disorders. A better understanding on how changes in cellular HDL and apolipoprotein homeostasis affect central nervous system function may provide promising novel avenues for the treatment of specific HDL-related neurological disorders. © 2019 International Union of Biochemistry and Molecular

## Biology

Alzheimer's disease

apolipoprotein

cholesterol

dementia

HDL

Parkinson's disease

apolipoprotein

high density lipoprotein

APOA1 protein, human

apolipoprotein A1

cholesterol

high density lipoprotein

Alzheimer disease

central nervous system function

cognitive defect

degenerative disease

geriatric disorder

human

Huntington chorea

lipoprotein metabolism

nonhuman

Parkinson disease

priority journal

protein homeostasis

Review

atherosclerosis

blood vessel

brain

dementia

memory disorder

metabolism

pathology

transport at the cellular level

Alzheimer Disease

Apolipoprotein A-I

Atherosclerosis

Biological Transport

Blood Vessels

Brain

Cholesterol

Dementia

Humans

Huntington Disease

Lipoproteins, HDL

Memory Disorders

Parkinson Disease