Research

Research in the Kristine Yaffe Lab focuses on the epidemiology of cognitive aging, particularly on evaluating risk factors and biomarkers for cognitive impairment that may lead to strategies to prevent cognitive decline and optimize cognitive aging. Emphasis is placed on identifying risk factors that are potentially modifiable such as health and lifestyle related mechanisms. The lab also aims to determine and examine biomarkers associated with risk of cognitive impairment and dementia in order to help better identify those at risk as well as to increase our understanding of the mechanisms that may contribute or lead to cognitive decline and impairment.

An overview of selected research from the lab can be found below:

Cardiovascular and Metabolic Risk Factors

The association between cardiovascular and other metabolic risk factors and risk of cognitive impairment is one of the major areas of concentration in the Kristine Yaffe Lab. Risk factors for cognitive decline that have been identified by the group include associations with diabetes and glycemic control, obesity, vascular disease, kidney function, and the metabolic syndrome.

Selected publications:

- Barnes D, Alexopolous G, Lopez O, Williamsen J, Yaffe K. Depressive symptoms, vascular disease, and mild cognitive impairment: findings from the Cardiovascular
Sleep Disturbances

The Kristine Yaffe Lab has played a key role in identifying sleep disturbances as an emerging risk factor for cognitive impairment. Major areas of focus include sleep disordered breathing, sleep quality, and circadian rhythms.

Selected publications:

Lifestyle

Researchers in the Kristine Yaffe Lab have contributed some of the earliest studies supporting a protective relationship between physical activity and cognitive health. The lab continues to explore this association in addition to investigating the benefits of cognitive activity and cognitive reserve for dementia prevention.

Selected Publications:

Neuropsychiatric Disorders

Research in the Kristine Yaffe Lab also focuses on the relationship between neuropsychiatric disorders and cognitive outcomes in older adults, including associations with depression, post-traumatic stress disorder (PTSD), and traumatic brain injury (TBI). A particular area of research focuses on neuropsychological risk factors among Veteran populations. The Kristine Yaffe Lab was one of the first groups to provide epidemiological evidence of an association between PTSD and dementia and is now also at the forefront of research on the effects of TBI on cognitive aging.

Selected publications:

Biomarkers

Another focus of the Kristine Yaffe Lab is to investigate potential biomarkers associated with cognitive impairment and dementia. Biomarkers that have been studied include inflammatory markers, beta amyloid, markers of cardiovascular health, measures of oxidative stress, structural brain MRI measures, and genetic markers associated with risk of cognitive decline and dementia.

Selected Publications: