

**You cannot participate if you:**

- 1) are taking a blood thinner such as Coumadin
- 2) are not willing to take a 48 hour break from all supplements that cause blood thinning (e.g. Ginko Biloba).
- 3) are not willing to fast for 8 hours (water is okay)
- 4) have had a major lower back surgery that resulted in spinal fusion of the lower vertebrae.
- 5) cannot complete a two hour bed rest after the CSF collection.
- 6) are unwilling to provide additional information on your cognitive abilities and general demographics

**Other Information**

Medical Attendings

Mark Rice, M.D.

Elizabeth Mahanna, M.D.

Primary Research Investigators:

Dawn Bowers, Ph.D.

Todd Golde, M.D.

Michael Okun, M.D.

Catherine Price, Ph.D.

Research Coordinators

Jennifer Adamson, B.S.

Liliana Salazar, B.S.

Jessica Williams, B.S.

*This study is partially funded by the National Institutes of Health*



IRB  
APPROVED  
ON 11/13/13

**What is  
cerebrospinal  
fluid (CSF)**

**and**

**how is CSF  
collected?**



*Clinical & Health Psychology /  
Neurology/ Anesthesiology*

*University of Florida*

Please direct questions to:

(352) 273 - 5929

## What is CSF?

Cerebrospinal Fluid (CSF) is the **clear bodily fluid** found around the brain and spinal cord.

CSF provides a cushion to these structures.

CSF is reproduced in our body at least three times a day. **It is constantly replenishing itself.**

CSF **carries very important information** about proteins and genetic markers. Researchers need this information to help stop dementia or Parkinson's disease.

CSF provides better information than blood or serum.

CSF samples are acquired through a process called a lumbar puncture ([next page](#)).

## What is a lumbar puncture?

A lumbar puncture (spinal tap) is used routinely to acquire a sample of CSF.

After numbing a small area in the back, a very small gauge needle is inserted between the vertebrae to access the CSF for collection.

A well-trained medical professional with numerous hours of experience completes the procedure.

Nationally, less than 5 % of individuals experience post-lumbar headaches. Within our study, we take extra precautions to avoid any adverse events, including headache.

The CSF sample is immediately stored in a NIH funded center for future processing:  
<http://ctrnd.med.ufl.edu>

## Reimbursement for time

The CSF sample is usually completed in the early morning hours (6:30am) and after eight hours of fasting.

If you are not living locally, we can provide you with an overnight stay to assist with the early morning collection.

We will provide a breakfast after the collection, reimbursement for travel, and a small honorarium for your time.

## What are we analyzing?

Protein markers associated with the development of memory/thinking problems such as:  
amyloid-beta, tau,  
alpha-synuclein.