

# Dementia Risk Reduction

Ten Things You Can Do Starting Today

## HIT THE BOOKS!

Formal education can help reduce risk of cognitive decline and dementia. Take a class at a local college, community center or online. Commit yourself to life long learning.

Source – Alzheimer's Association

# Dementia Risk Reduction

Ten Things You Can Do Starting Today

## STUMP YOURSELF!

Challenge your mind. Build a piece of furniture, play games of strategy. Do crosswords, puzzles and memory exercises.

Source – Alzheimer's Association

# Dementia Risk Reduction

Ten Things You Can Do Starting Today

## CATCH SOME ZZZ'S!

**Not getting enough sleep may result in problems with memory and thinking.**

Source – Alzheimer's Association

# Dementia Risk Reduction

Ten Things You Can Do Starting Today

## BUDDY UP!

**Staying socially engaged can support brain health. Find ways to be part of your local community or share activities with friends and family.**

Source – Alzheimer's Association

# Dementia Risk Reduction

Ten Things You Can Do Starting Today

## HEADS UP!

**Brain injury can raise risk for cognitive decline and dementia. Wear a seatbelt and use a helmet when riding a bike or playing sports as appropriate.**

Source – Alzheimer's Association

# Dementia Risk Reduction

**Dr. Lotta Granholm-Bentley**

**Executive Director**

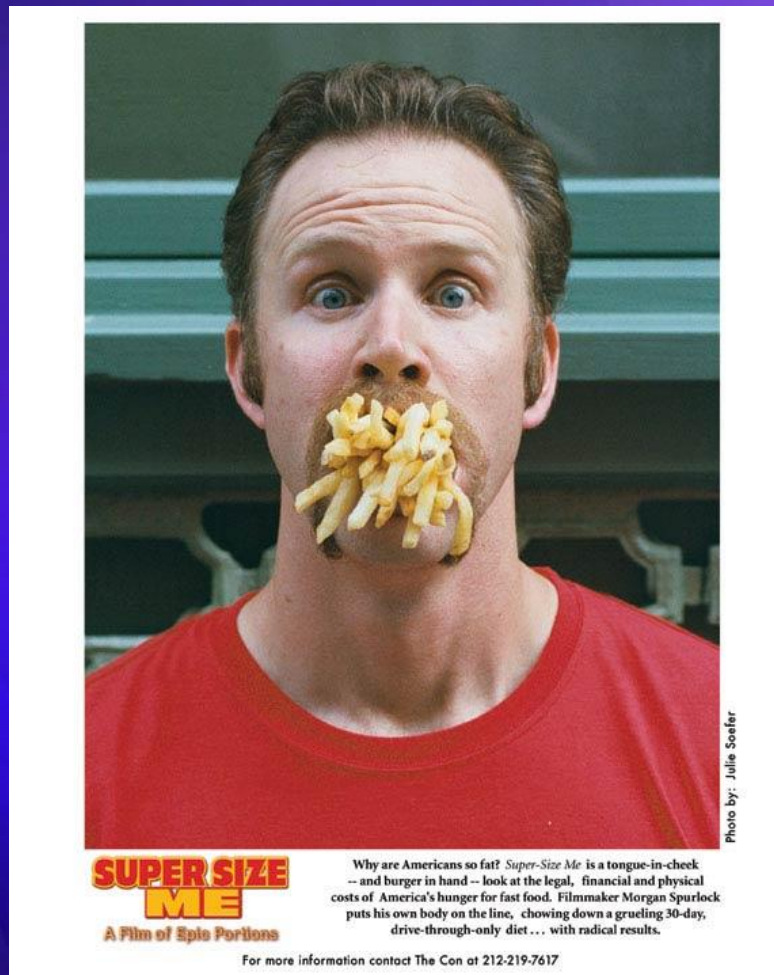
**Knoebel Institute for Healthy Aging**

**University of Denver**

**[aging@DU.edu](mailto:aging@DU.edu)**



# Diet and Healthy Brain



## McDonalds hits Africa



<https://twitter.com/ogghetogiraffe>

# Portion Size in the US

- “ US supersize portions and sedentary lifestyle
- “ # obese people doubled since 1970s (from 15 to 30%)
- “ Fast food meals are 2-5 times larger than in 70s



330 calories  
1.6 ounces



Quadruple Bypass  
burger  
9,982 calories



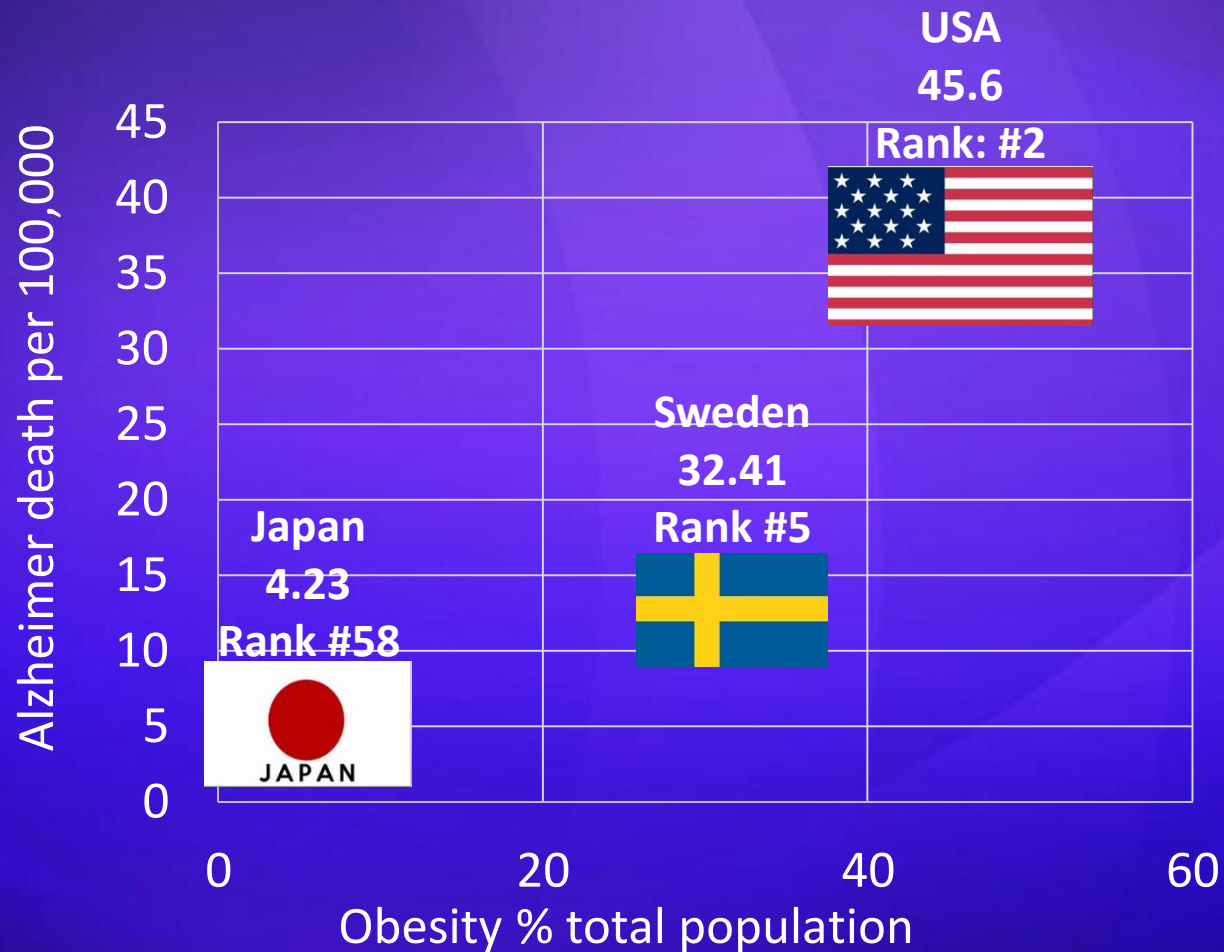
Cup coffee  
45 calories



Grande café mocha  
330 calories

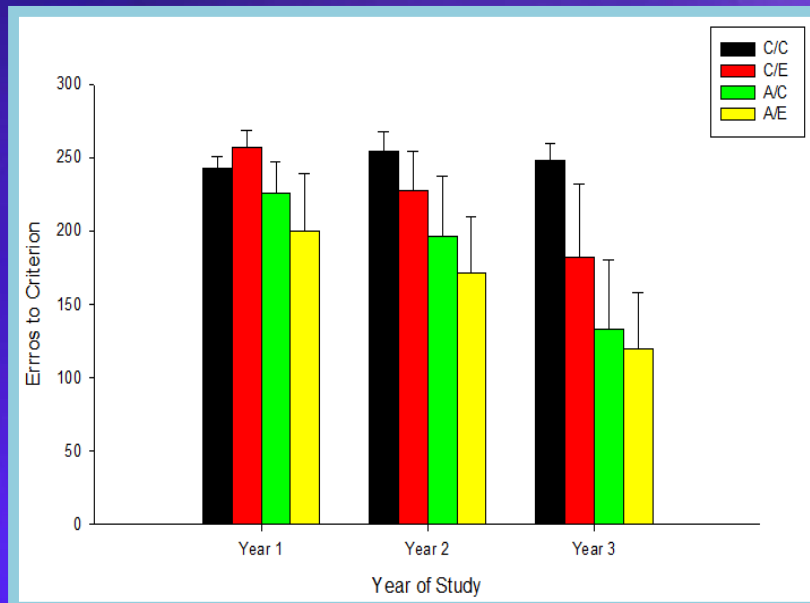


# Obesity and Alzheimer's death



# Holistic Approach

## Prevented memory loss

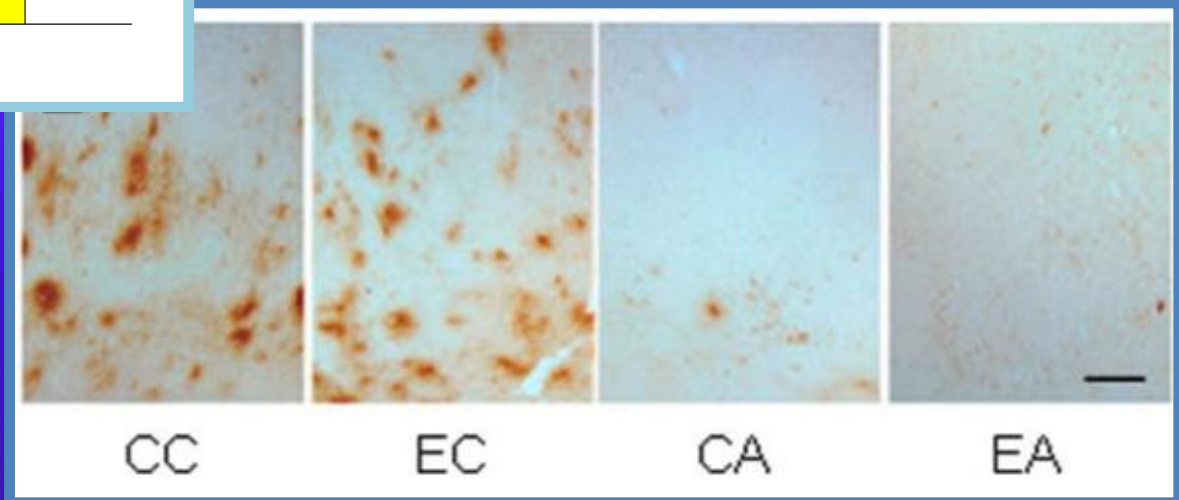


- Antioxidant diet
- Exercise
- Stimulation

Couch potato



## Reduced Alzheimer pathology



*Cotman et al 2010*

# Clinical Studies

- “ Walking 2-3 hrs/week increased memory (Harvard 2004)
- “ Walking reduced dementia risk 30% (Larson et al., 2010)
- “ Anti-oxidant diet and exercise lead to prevention and rescue of cognitive aging
  - . Salmon (Omega 3)
  - . **Blueberries!!!**
  - . Spinach



# Healthy Body – Healthy Brain

## Risk Factors

- ” Stroke
- ” High blood pressure
- ” High cholesterol
- ” Obesity
- ” Diabetes
- ” Smoking
- ” Depression/Stress
- ” Head trauma

## Protective Factors

- ” High education
- ” Physical activity
- ” Active lifestyle
- ” Antioxidants
- ” Fish oils
- ” Coffee
- ” Anti-hypertensives
- ” Statins (?)

*Mia Kivipelto, Professor, Karolinska Institutet*

# Intermission

**Please Return in Ten Minutes – Thank You!**

## Program

**Dementia Stages and Behaviors  
Caregiving and Self-Care  
Advance Planning for Family Caregivers  
Research Update  
Question & Answer Session**



# Dementia Stages and Behavior

**Presenter – Stacie Naslund**  
**Executive Director**  
**Spring Ridge Park Assisted Living**

**[stacie.naslund@continuumhealth.com](mailto:stacie.naslund@continuumhealth.com)**

# Dementia Stages and Behaviors

## Early Stage –

**Recent memory loss**

**Difficulty managing money**

**Difficulty with driving**

**Difficulty handling social situations**

Source – Alzheimer's Association

# Dementia Stages and Behaviors

## Middle Stage -

Difficulty with language

Problems keeping track of personal items

May need help with grooming

# Dementia Stages and Behaviors

**Late Stage -**

**Long and short term memory affected**

**Care needed around the clock**

Source – Alzheimer's Association

# Dementia Stages and Behaviors

## Common Behavioral Issues -

**Repetitive questioning  
Confabulation**

**Tips:  
Answering the question!  
Join their reality**



# Dementia Stages and Behaviors

## Common Behavioral Issues -

**Agitation**

**Yelling**

**Uninhibited actions and language**

**Suspicion and accusation**

**Tip:**

**Reassure and redirect**

# Dementia Stages and Behaviors

## Common Behavioral Issues -

**Tearfulness**

**Shadowing**

**Night time sleeplessness**

**Tip:**

**Reassure and redirect**

# Dementia Stages and Behaviors

## Common Behavioral Issues -

**Sundowning**

**Rummaging**

**Pacing**

**Wandering**

**Tips:**

**Redirect with calming activities**

**Make a safe path**

# Dementia Stages and Behaviors

**Confusion = Discomfort = Behavior**

**Tips:**

**Limit confusion**

**Eliminate clutter**

**Keep yourself calm**

**Establish a routine**

**Less is more...one hour for us = five hours for them**

**Try for balance to avoid over or under stimulation**

Source – The Savvy Caregiver – University of Minnesota

# Caregiving and Self-Care Overview

**Presenter – JJ Jordan  
Community Chair  
Dementia Friendly Denver**

**[Dementiafriendly.org](http://Dementiafriendly.org)**



# Caregiving and Self-Care Overview

## Caregiver Statistics

- Over 15 million caregivers in US
- Over 200,000 caregivers in Colorado for 69,000 living with dementia
- 2/3 of caregivers are women
- Caregivers provide 18.2 billion hours in unpaid care annually valued at \$230 billion

Source – Alzheimer's Association

# Caregiving and Self-Care Overview

## Caregiver Stress

- Caregiving – the unexpected career
- 74% of caregivers report being somewhat to very concerned about their own health
- Twice as likely to have physical or psychological problems
- More than twice as likely to use medications for mood/nerves
- Only half as likely to use healthcare for themselves
- At much higher risk of social isolation
- High instance of spousal caregiver predeceasing loved one
- **Increased risk for dementia (6X risk)! Take care of yourself!!**

# Caregiving and Self-Care Overview

## Symptoms of Caregiver Stress

- Denial about dementia
- Anger at the person with dementia
- Social withdrawal from friends and activities
- Anxiety about the future
- Depression that breaks your spirit
- Exhaustion that affects your ability to cope
- Sleeplessness
- Irritability
- Lack of concentration
- Physical or mental health problems

# Caregiving and Self-Care Overview

## Caregiver Self-Care is Critical

- Give yourself permission for self-care
- Use relaxation techniques

Meditation or mindfulness

Visualize peace and calm

Breathing exercises

Journaling

Massage

Bubble baths

# Caregiving and Self-Care Overview

## Caregiver Self-Care Tips

- Get moving - exercise or take walks
- Find time for yourself
- Take care of yourself
- Reduce other chaos in your life
- Delegate menial chores
- Make a plan
- Become an educated caregiver
- Become a dementia activist



# Caregiving and Self-Care Overview

## Emotional Quadrant



# Caregiving and Self-Care Overview

## Respite

- “ Offers short breaks for family caregivers
- “ Relieves stress and restores energy
- “ Helps keep families together
- “ Benefits caregivers and recipients
- “ Everyone needs a break to refresh/recharge
- “ [coloradorespitecoalition.org](http://coloradorespitecoalition.org) – Respite Locator

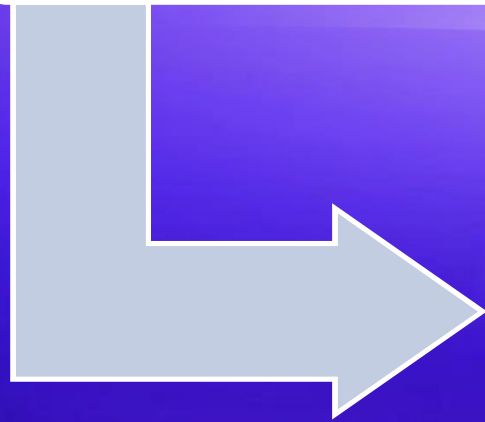
# Advance Planning for Families

Presenter – Jennifer Gormley, MA, JD, LLM  
Elder Law Attorney

[jennifer@elderlawsource.com](mailto:jennifer@elderlawsource.com)

# Advance Planning for Families

KNOW  
YOUR  
RIGHTS

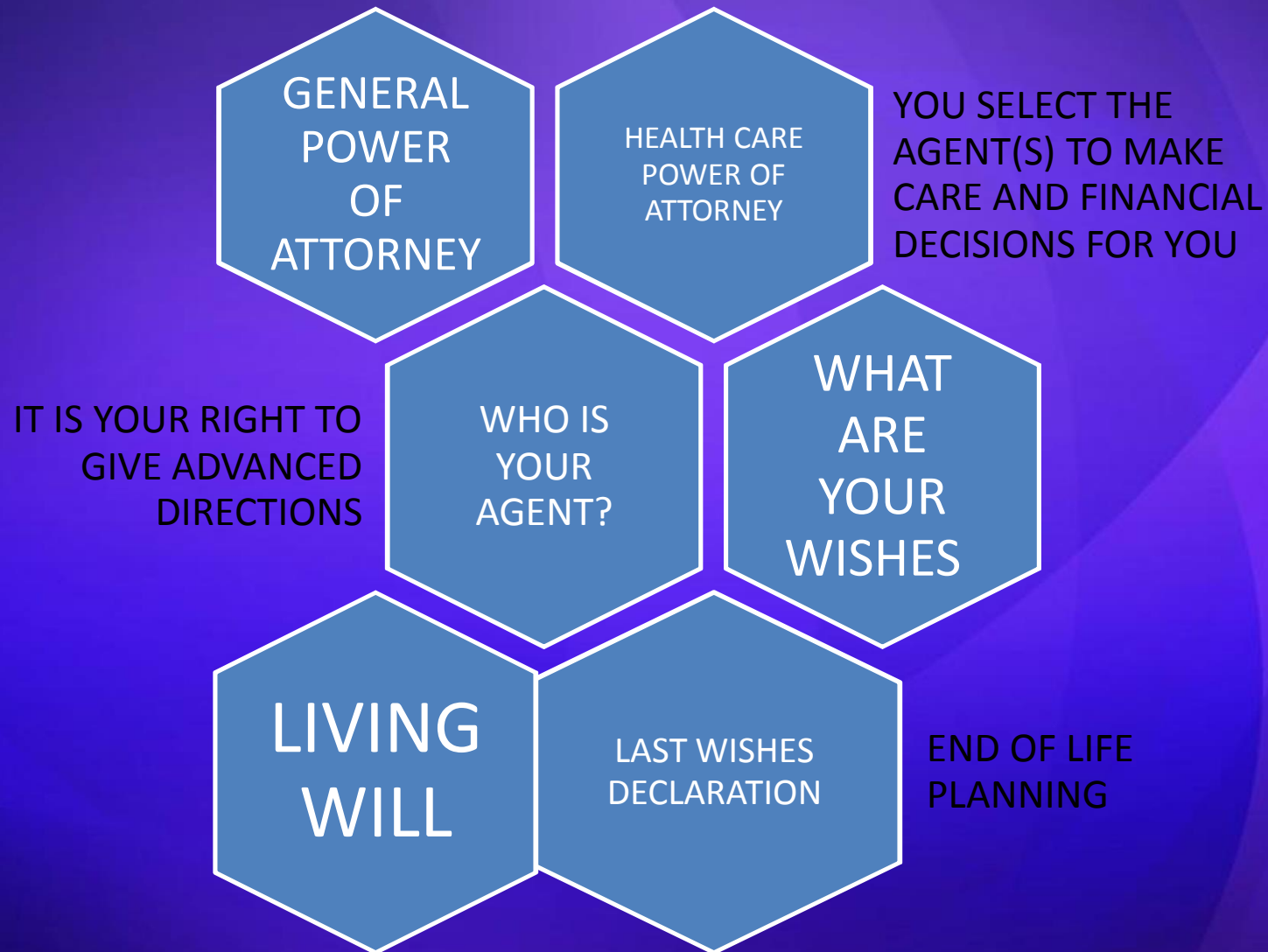


PLANNING

# Advance Planning for Families

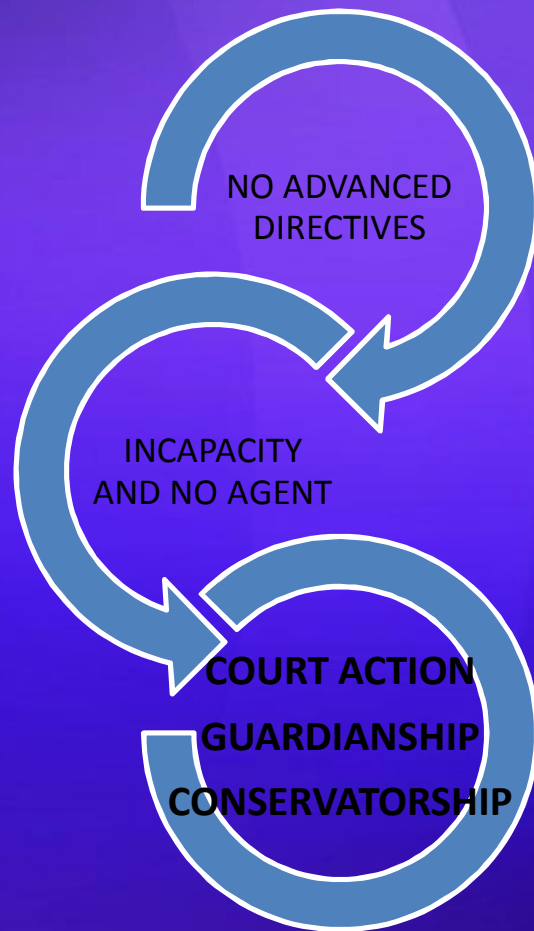


# Advanced Directives

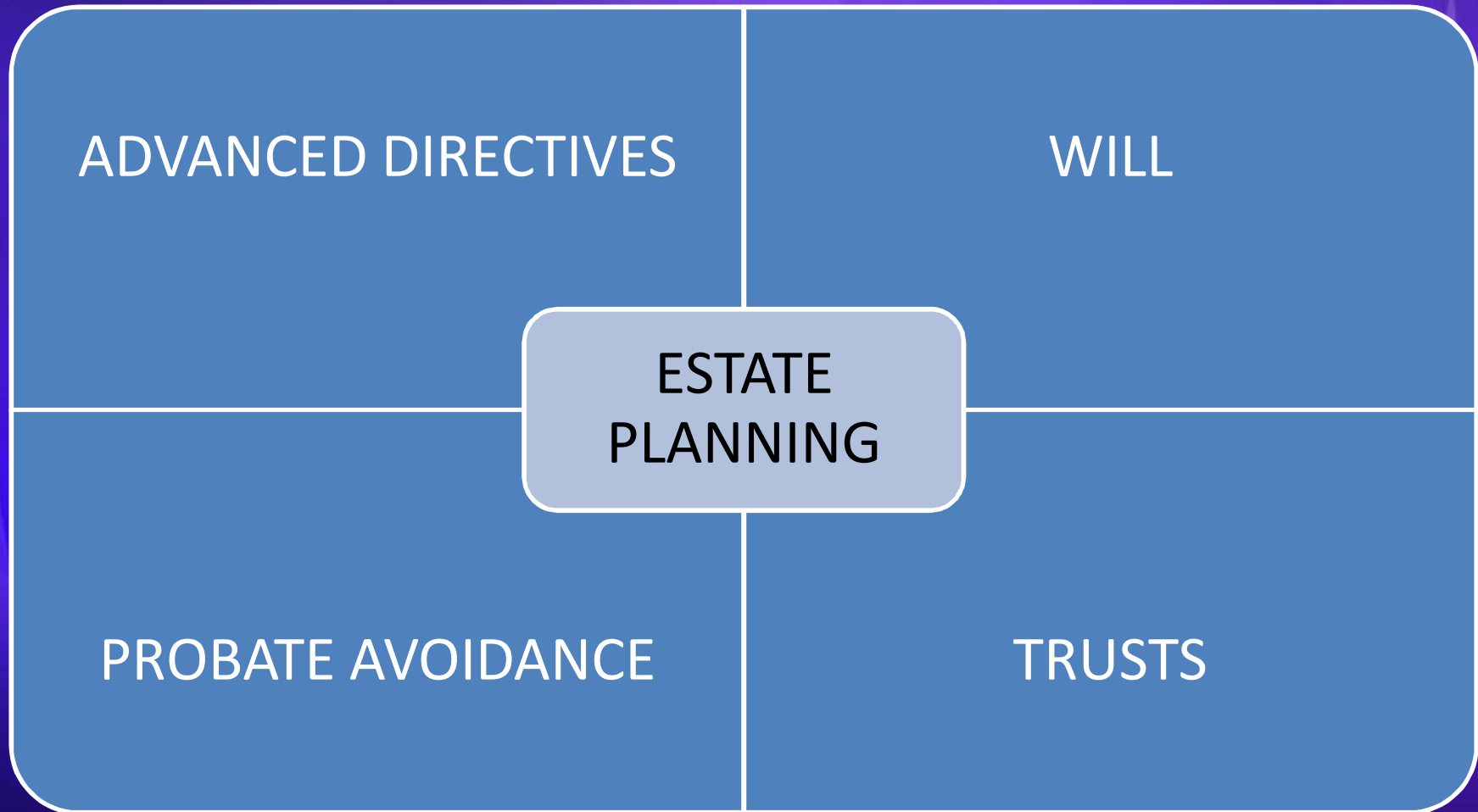




# Risk if No Advanced Directives



# Estate Planning



# Disability Benefits – Social Security

## SOCIAL SECURITY DISABILITY INSURANCE (SSDI)

DISABLED WITH  
CURRENT SSA  
WORKING  
CREDITS

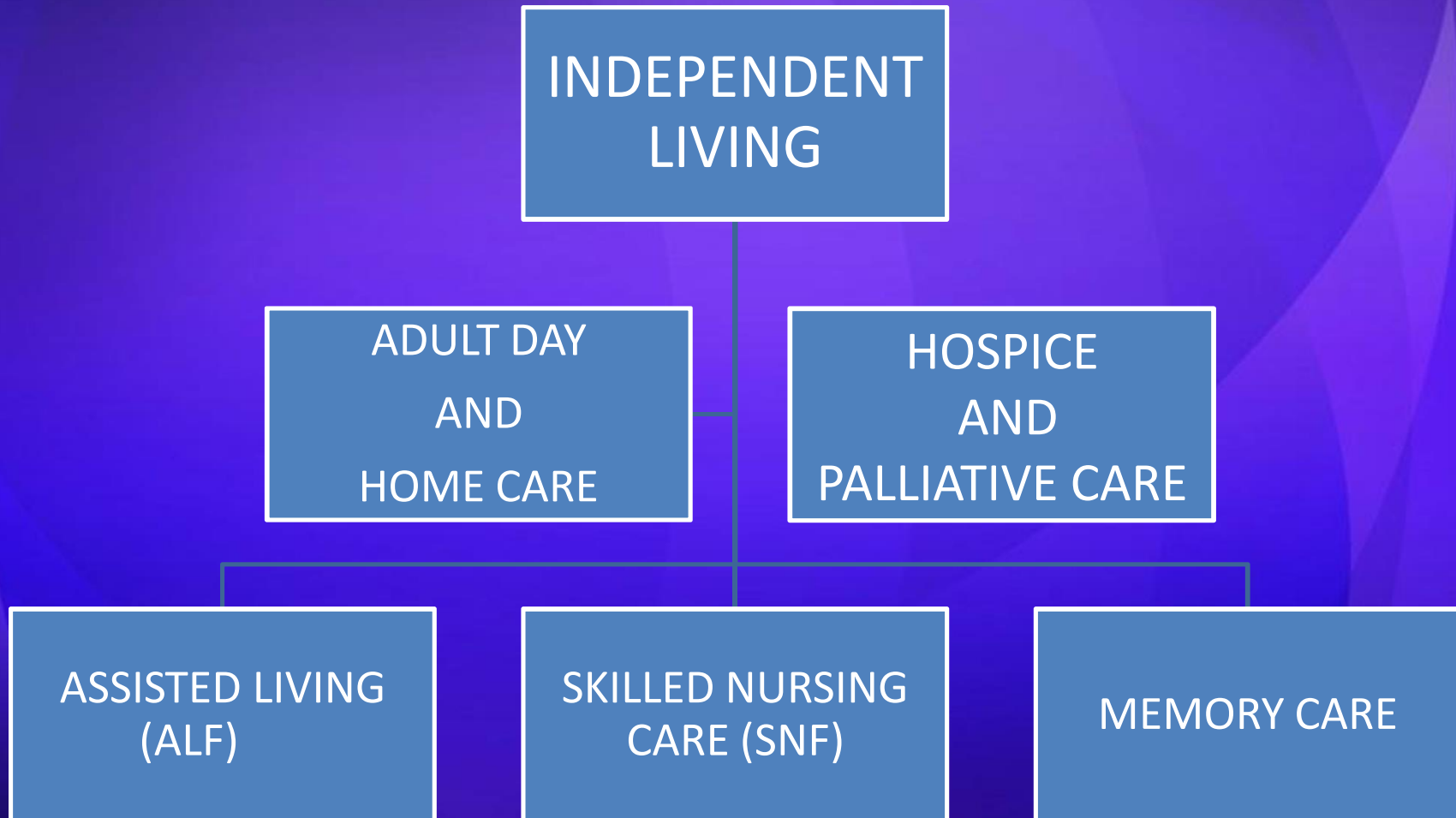
MONTHLY CHECK  
(SSA RECORD)  
AND MEDICARE

## SUPPLEMENT SECURITY INCOME (SSI)

DISABLED WITH  
LIMITED  
RESOURCES  
(>\$2,000)

\$735 PER  
MONTH AND  
MEDICAID

# Living Arrangements and Placement



# Paying for Care and Placement

## PRIVATE PAY

- INCOME
- RESOURCES

## INSURANCE

- MEDICARE
- MEDIGAP
- LTC INS

## GOVERNMENT BENEFITS

- MEDICAID
- VETERAN BENEFITS

# Private Pay for LTC





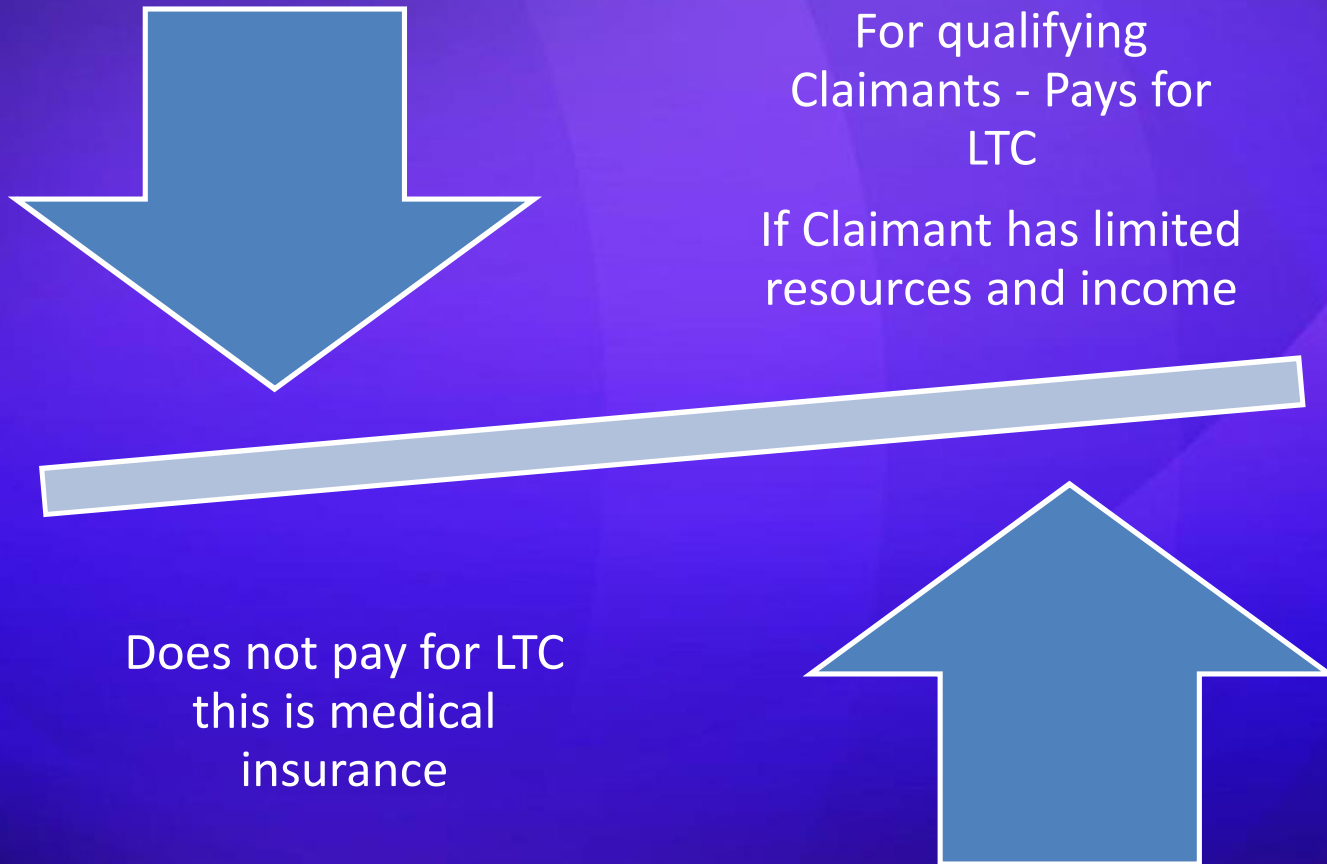
# Insurance for Care

Long Term Care Insurance

Hybrid Life Insurance with Rider for LTC

Self Insured --- private pay

# Medicare vs Medicaid



# Other Planning Ideas

CARE  
CONTRACTS

REVERSE  
MORTGAGES

LIFE ESTATES

SUPPLEMENTAL  
NEEDS TRUSTS

PROTECTING  
IDENTITY AND  
ASSETS

# Dementia Research Update

Presenter – Dr. Lotta Granholm-Bentley

Executive Director

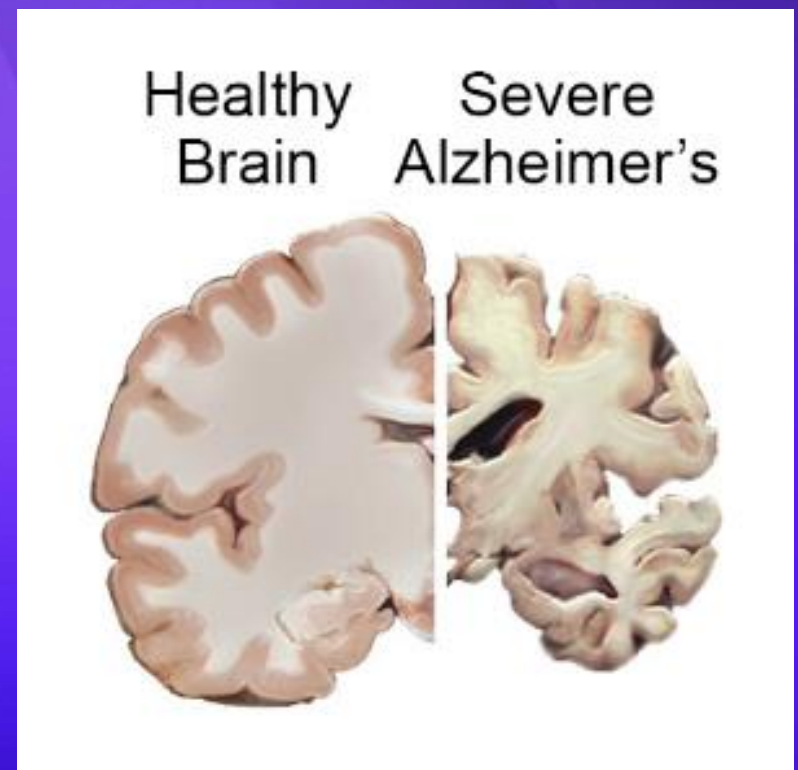
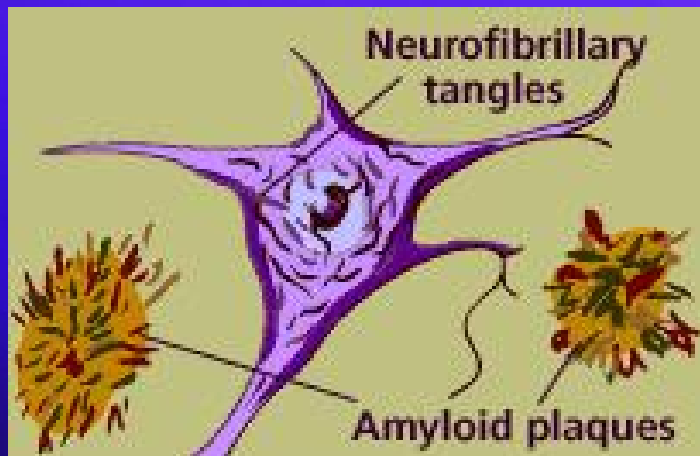
Knoebel Institute for Healthy Aging

University of Denver

[aging@DU.edu](mailto:aging@DU.edu)

# How Alzheimer's Works

- “ Amyloid plaques
- “ Tau tangles
- “ Cell death
- “ Inflammation



# Currently FDA Approved Drugs

Drug name	Brand name	Approved For	FDA Approved
1. donepezil	Aricept	All stages	1996
2. galantamine	Razadyne	Mild to moderate	2001
3. memantine	Namenda	Moderate to severe	2003
4. rivastigmine	Exelon	All stages	2000
5. donepezil and memantine	Namzaric	Moderate to severe	2014

*From: Alz.org*



# Future Treatments

- “ Current drugs help mask the symptoms of Alzheimer's, but do not treat the underlying disease or delay its progression
- “ The difference between **clinical trial** and **clinical study**
- “ The Alzheimer's Association TrialMatch®

# Targets for Future Drugs

## “ **Beta-amyloid**

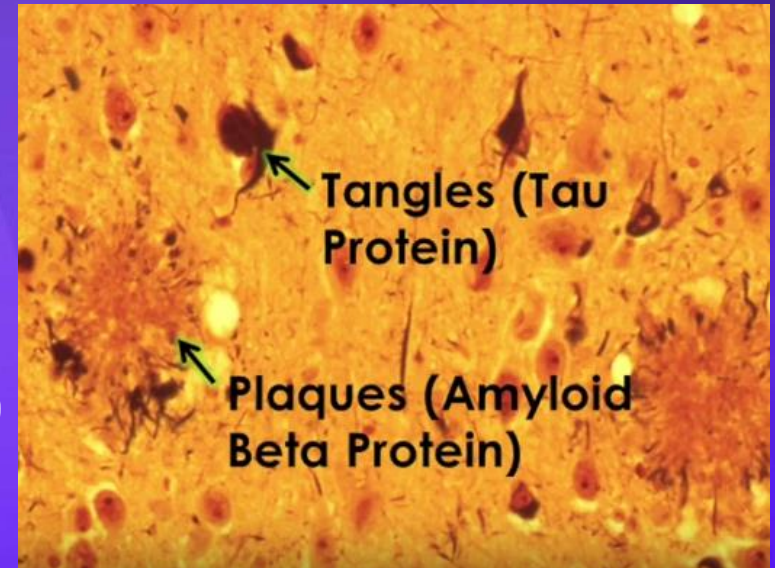
- . Prevent production
- . Amyloid vaccines (remove)
- . Solanezumab (binds amyloid)

## “ **Tau protein**

- . Forms tangles/kills nerve cells
- . AADvac1 vaccine stimulates the body to attack an abnormal form of tau

## “ **Inflammation**

- . Crucial contributor to disease (CSP-1103)



# Our Research at KIHA:

- “ New biomarkers for early diagnostics of AD
- “ Resolving or preventing inflammation in AD
- “ Repurposing drugs for AD

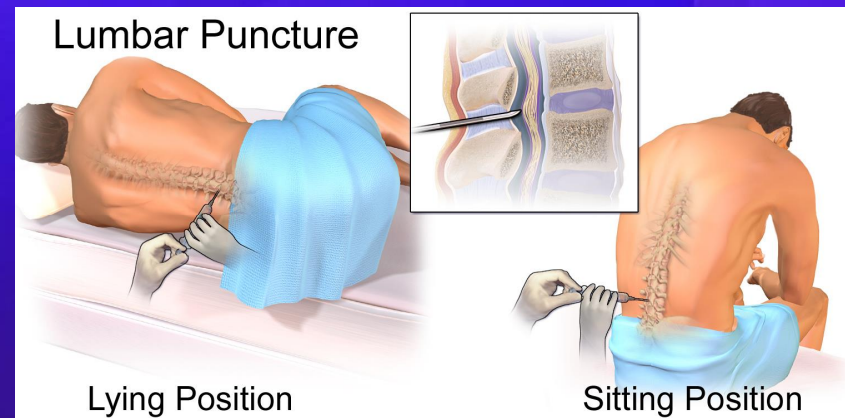
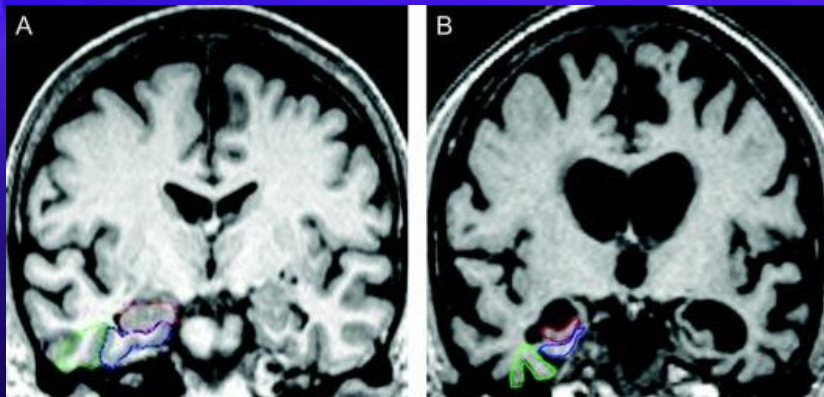
# Biomarkers for Disease

- “ MRI or PET imaging
- “ Biomarkers in blood or CSF
- “ Postmortem studies of brain
- “ **FIND A NON-INVASIVE BIOMARKER**

**Ante-mortem  
Blood/CSF**

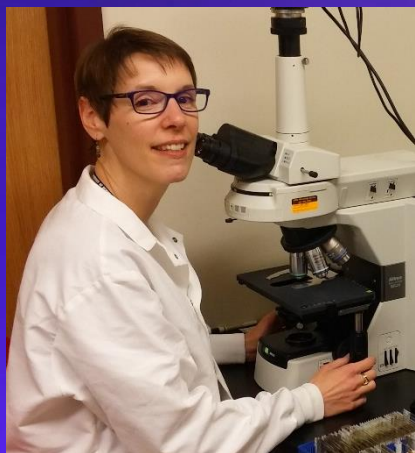


**Post-mortem  
Blood/CSF/Brain**





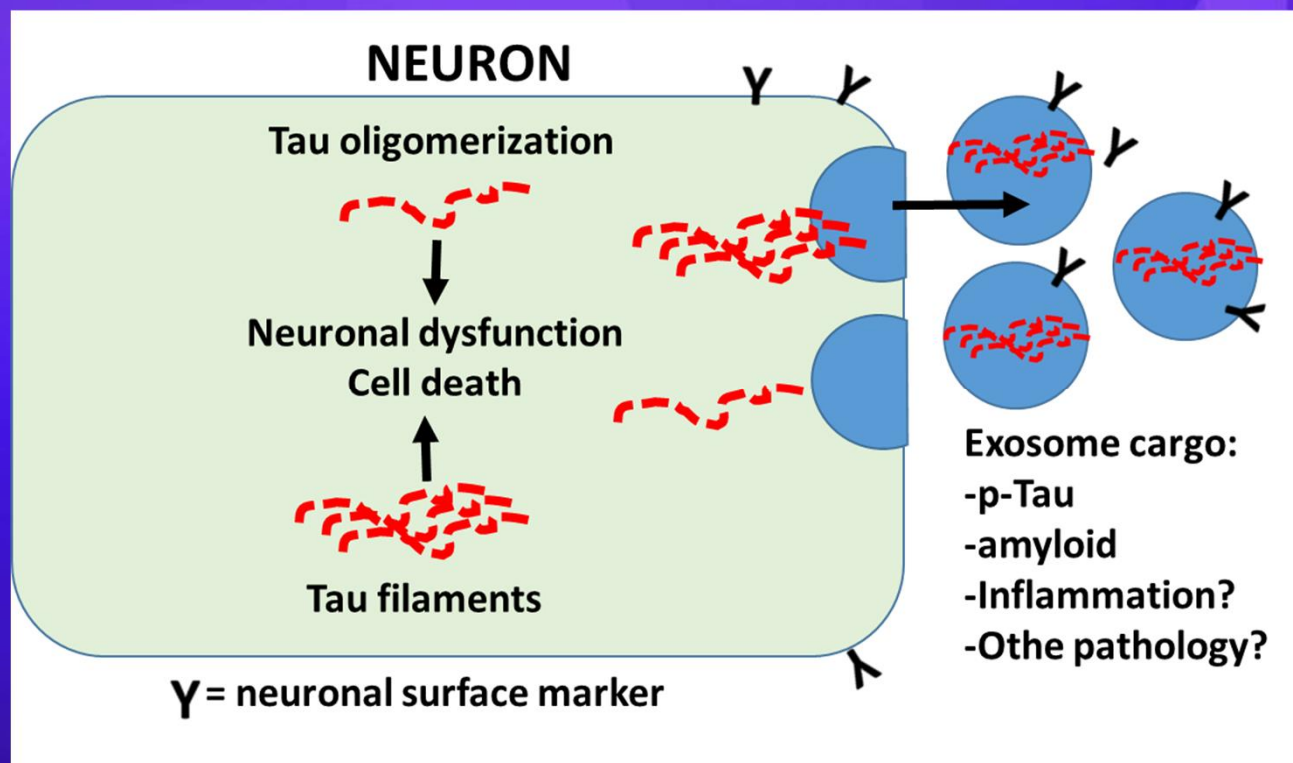
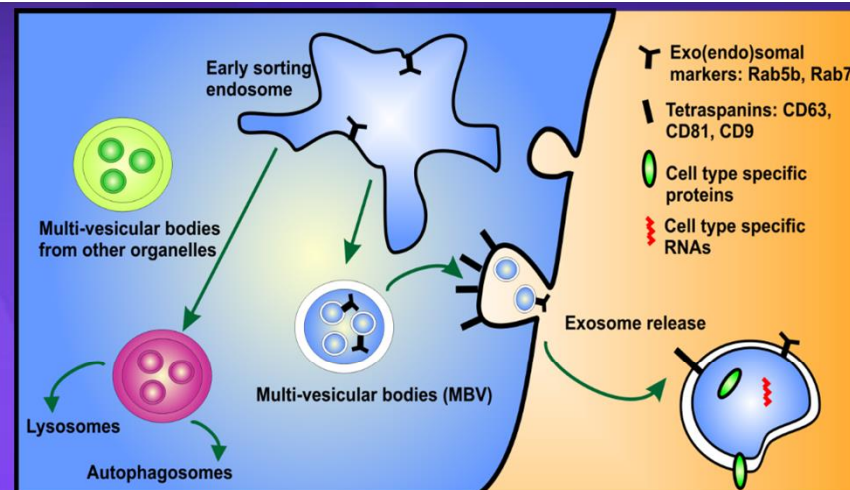
# Neuron-derived Exosome Cargo in Blood



Aurelie Ledreux

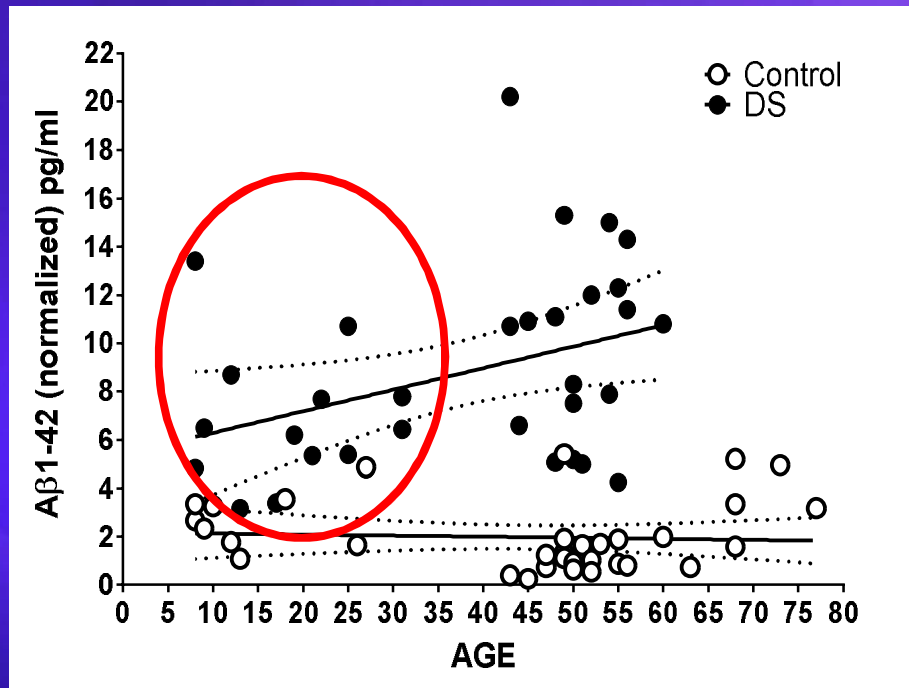


Eric Hamlett

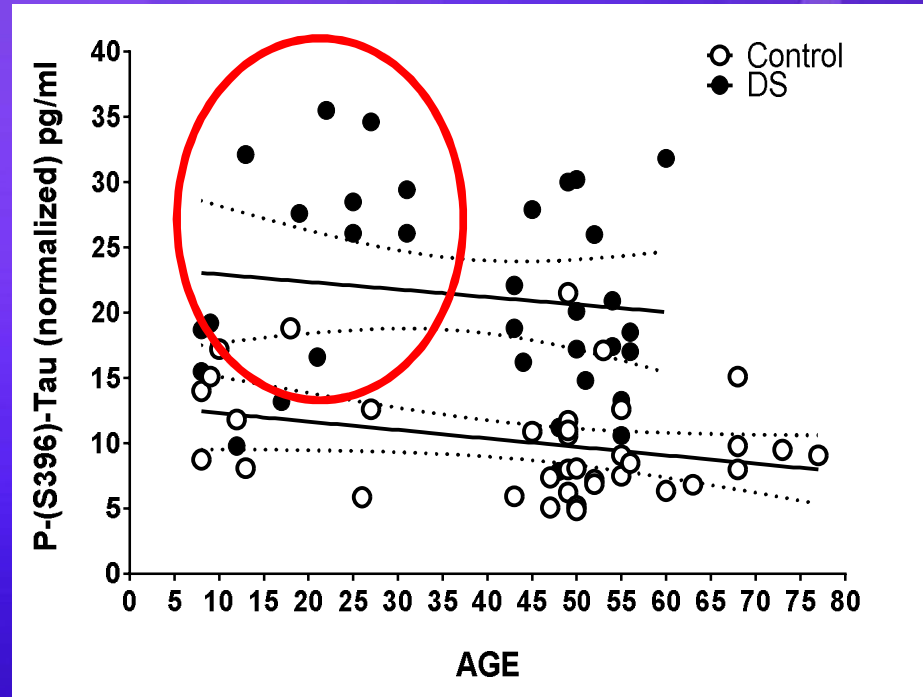


# Alzheimer Biomarkers in DS

## A $\beta$ 1-42 levels by Age



## P-(S396)-Tau levels by Age



● Down syndrome

● Controls

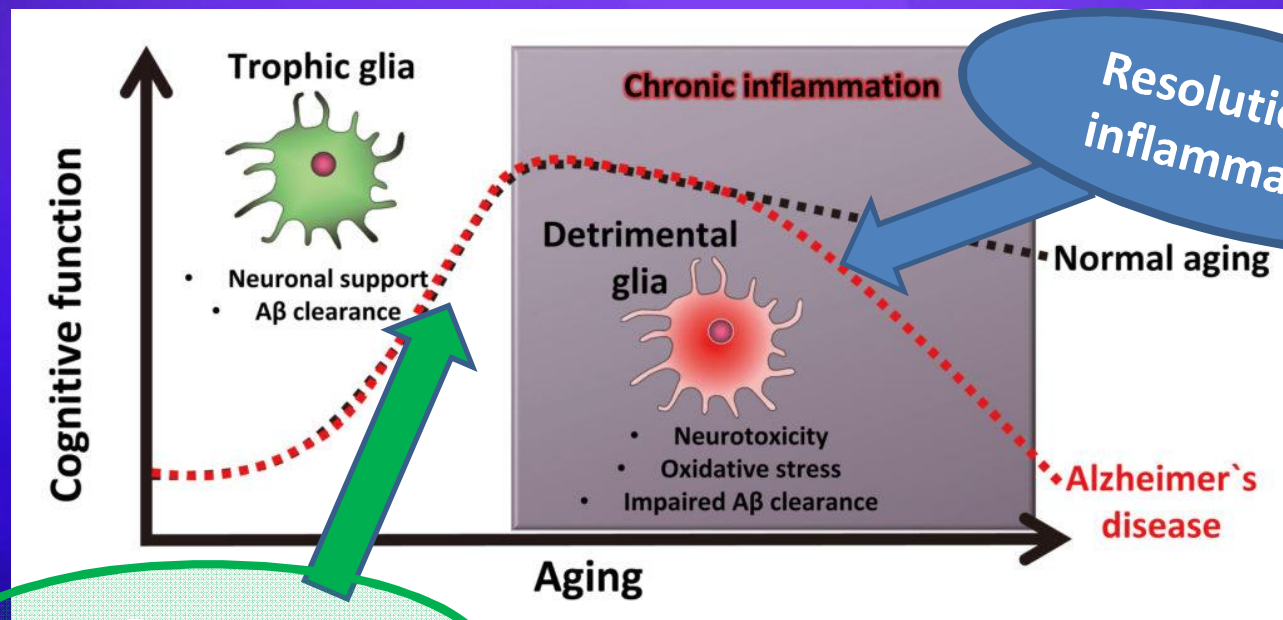


# Clinical Plan:

- ✓ Validate exosomes as “liquid biopsy”?
- ✓ Predict onset decades prior to onset of symptoms
- ✓ Two patient groups: Down syndrome and concussions in athletes

# Inflammation and Alzheimer's

- “ Inflammation aggravates and may cause Alzheimer's
- “ The brain is less capable of handling inflammation



Resolution of inflammation

Prevent inflammation

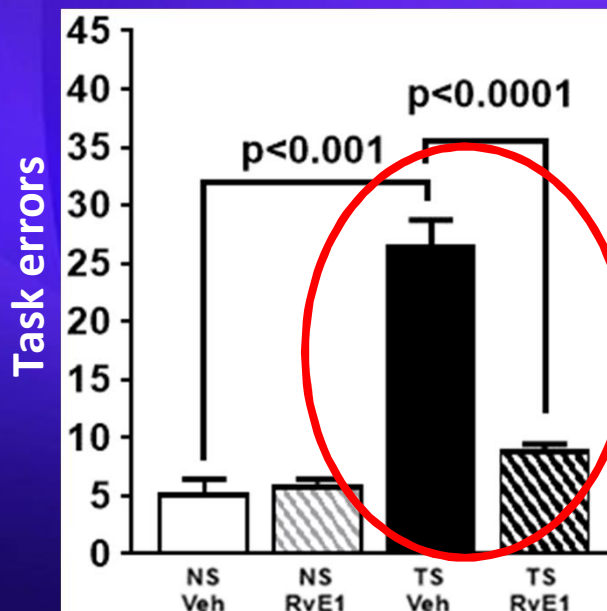
# Two Novel Drugs



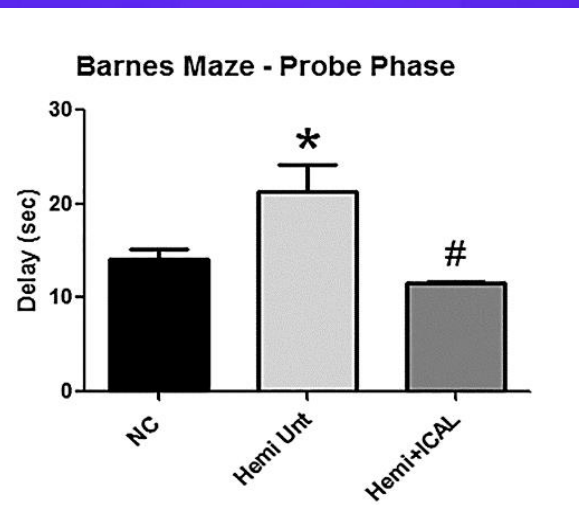
Daniel Linseman

- “ Resolution E1 prevents memory loss
- “ ImmunoCal – supplement with anti-oxidant and anti-inflammatory activities

## Memory Function RvE1



## Immunocal® enhances memory



# Clinical Plan:

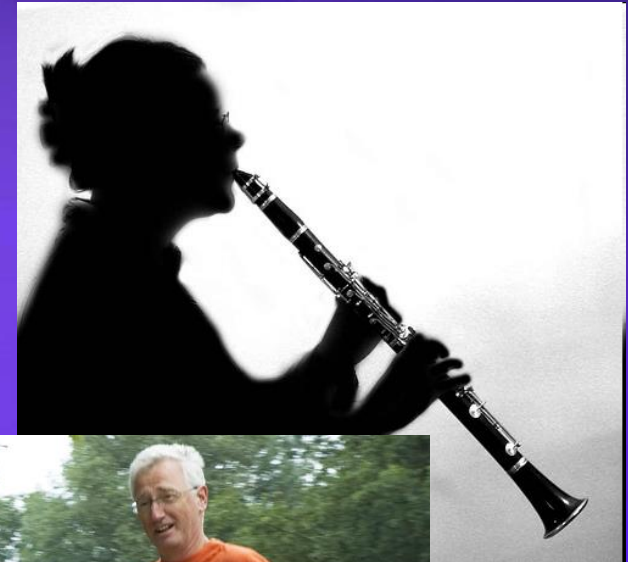
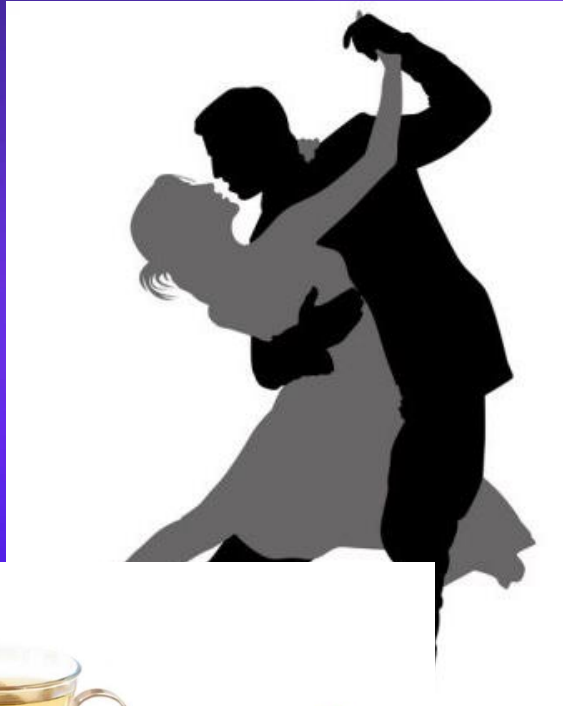
- “ Expand preclinical work
- “ Initiate Phase 1 clinical trial of Immunocal® and RvE1 as preventative treatments in early AD and MCI
- “ 2-5 years to clinic



Nathan Duval



# Neuroplasticity Tools



# Thank You for Coming!

## Thank You to Our Sponsors

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**Dementia Friendly Denver**

**Seniors' Resource Center**

**Alzheimer's Association – 800.272.3900**