Our Time Today…

- Therapeutic discovery process and current treatments
- How to be a savvy research consumer
- Importance of data and scientific evidence
- Q&A
Our Work is About People and Science

The Alzheimer’s Association is a global organization working to advance care, support and research across the world.
The Therapeutic Discovery Process
Currently, there are no therapies that can cure Alzheimer’s.

Some drugs are available to temporarily improve symptoms.
FDA Approved Therapies

Cholinesterase Inhibitors
• donepezil (Aricept)
• rivastigmine (Exelon)
• galantamine (Razadyne)

Approved For
• All Stages
• Mild - Moderate

Glutamate Moderators
• memantine (Namenda)

Approved For
• Moderate - Severe

Combination
• donepezil + memantine (Namzaric)

Approved For
• Moderate - Severe
How Drugs Work…

**Cholinesterase inhibitors:**
- Acetylcholine is a chemical in the brain
- These drugs block the breakdown of acetylcholine
- Can restore neuronal communication by concentrating the available chemical

**Glutamate moderators:**
- Glutamate is an excitatory chemical in the brain
- Glutamate can overstimulate cells leading to neuronal cell death
- These drugs block the glutamate receptors from being overstimulated
All Agents in Alzheimer’s Disease Trials

Cognitive Enhancement, Behavioral, or Neuropsychiatric Symptom Approaches

Disease Modifying Biologic Approaches

Disease Modifying Small Molecule Approaches

Cummings J. et al. A&D:TRCI, 2019
Current Landscape of Clinical Trials for Alzheimer’s & Dementia

As of July. 2019

Phase I: 116
Phase II: 177
Phase III: 56

62 cognitive assessment, cognitive training, and computerized devices

Always a Need for Participants
How To Read Research News Critically
Exciting Time in Research
Awareness Continues to Grow
Hot Topics in Research News

Does education really protect against dementia?

By Tim Newman  |  Published Thursday 7 February 2019

Should you get a home genetic test?

Direct-to-consumer tests may help predict risks to your future health. But are they worth the cost and trouble?

Published: February, 2019

Is It Safe to Give People with Alzheimer’s Medical Marijuana?

Minnesota becomes the latest state to allow medical marijuana for people with Alzheimer’s.

Roche bails on late-stage studies of crenezumab in Alzheimer’s

Jan. 30, 2019 7:02 AM ET  |  About: Roche Holding Ltd ADR (RHHBY)  |  By: Douglas W. House, SA News Editor

Blood test could detect Alzheimer’s up to 16 years before symptoms begin, study says

By Nina Avronova, CNN

Updated: 2:45 PM ET, Tue January 22, 2019

Study links gum disease-causing bacteria to Alzheimer’s

CBS NEWS

alzheimer's association
ALZHEIMER’S ASSOCIATION INTERNATIONAL CONFERENCE®

JULY 14–18 ANNUAL CONFERENCE
JULY 12–13 PRECONFERENCES
JULY 14–17 EXHIBITS

Los Angeles, USA
alz.org/AAIC
Women who work for a salary see slower memory decline in old age, reducing risk of dementia, a new study suggests.
We Must be Savvy Consumers

• Concern about cognitive changes and dementia
• Increase in readily accessible information
• Not all sources contain quality medical information
What to Look For in The News

• Details: objective of the study
• Randomized clinical trials in humans (not mice)
• Large study population
• Diverse study population
  – Sex, Geographic, Race, Ethnicity, Socio-economic
• Reproducible results
  – Validated by multiple studies or research teams
In The News…SPRINT-MIND Study

The New York Times
Study Offers Hint of Hope for Staving Off Dementia in Some People

People who received intensive treatment for hypertension were less likely to develop minor cognitive problems than those receiving standard treatment.
The SPRINT-MIND Study
First Study to Demonstrate Reduction of New Cases of Cognitive Impairment

- 9,000+ people, Over age 50, All-cause dementia risk
- Standard vs. Intensive Blood Pressure Intervention
- Intensive treatment 120 systolic vs. 140 systolic
  - 19% reduced risk for MCI
  - 17% reduced risk for dementia * Not Statistically Significant
  - 15% reduced combined risk for MCI and dementia
- Dramatic reduction of small vessel disease on MRI
NOT ACCURATE

Too soon to say Alzheimer's was not confirmed in participants.
Studies In The News are Not Always Generalizable to Diverse Populations

- Epidemiological vs. Observational vs. Randomized Controlled Trials
- News media are more likely to cover catchy observational studies
- History will show that scientists have done a poor job of accurately representing diverse populations in randomized controlled trials
- Concentrated proactive effort needs to made to recruit and retain individuals from diverse racial and ethnic backgrounds
- More research is needed to confirm true biological differences
Lifestyle Research at AAIC 2019

- Combining multiple healthy lifestyle factors may be more impactful for reducing dementia risk
  - Healthy diet
  - Moderate to vigorous physical activity
  - Light to moderate alcohol intake
  - Smoking
  - Cognitive stimulation
- 4 or 5 → 59% lower risk of Alzheimer’s dementia
- 2 or 3 → 39% lower risk
- May even offset risk associated with genetics
Workshop: Reading The Details…

Both studies conducted in mainly individuals with European ancestry
Data not confirmative or generalizable to all people
More research is needed
Infectious Agents Debate

• As the world's leading forum for discussion of emerging topics in Alzheimer’s and dementia research, AAIC 2019 hosted a panel discussion of five expert speakers with differing views on the role of bacterial or viral infection in Alzheimer’s disease.
The Importance of Data To Support Medical Benefit
Challenging Unfounded Claims About Treatments

• FDA sends warning letters to manufacturers of **CBD products, vitamins, and dietary supplements** who are making claims their products prevent, treat, or cure serious diseases, such as cancer, Alzheimer's disease, psychiatric disorders and diabetes

• FDA has developed a working group to evaluate safety and to determine how to lawfully market CBD products
Nabilone Improves Agitation in People with Moderate to Severe Alzheimer’s

- Small study (39 people)
- Nabilone is a synthetic cannabinoid - NOT marijuana
- More sedation in Nabilone group (45%) than in placebo group (16%), which is an important safety issue
- Needs replication in a larger study
‘Natural’ Medicine can Interfere with Proven Therapy

St John’s wort can interfere with effects of many prescription medicines:
- cancer drugs
- immunosuppressants
- heart drugs
- HIV drugs
- blood thinners
- birth control pills

St John’s wort has drug interactions:
- Decreases drug efficacy
- Increases drug metabolism
- Decreases drug absorption
- Lowers drug concentration in blood

St. John’s wort
One of the most studied complementary medicines

Original Investigation
JAMA Network
October 2018

Complementary Medicine, Refusal of Conventional Cancer Therapy, and Survival Among Patients With Curable Cancers
Skyler B. Johnson, MD; Henry S. Park, MD, MPH; Cary P. Gross, MD; et al
How to Spot Unproven Interventions

• Many supplements, diet suggestions and medical interventions exist within the law

  Appeal to health concerns
  Promote individual testimony as established fact
  Use disease-related jargon, e.g. for memory or brain health
  Lack credible efficacy or safety data

Ideas are Good, Data are Better
Where Can You Learn More?

• alz.org
• alz.org/research
• Alzheimer’s Association Helpline 24/7: 1-800-272-3900
• Members of the public can send an email to: sciencestaff@alz.org
In Summary ...

• Exciting time in research
• Demand rigorous science
• Be a savvy research consumer
Q&A