

Road Map to Research Participation



Have you ever considered participating in research?

Did you know the first person to be cured of Alzheimer's disease will be in a clinical trial? Participation in a research study is a great opportunity to help find treatments or a cure for Alzheimer's disease and related dementias.

Study participants contribute to research by either receiving new experimental treatments or by providing investigators with important evidence through long-term observation.

What is the difference between a clinical trial and an observational study?

Alzheimer's research is conducted in many ways. The two most common types are clinical trials and observational studies.

Clinical trials are research studies used to test the safety and effectiveness of a new drug or treatment. During clinical trials, participants are randomly placed into two or more groups and receive the new treatment or a placebo. Often described as a "sugar pill," a placebo is an inactive drug or treatment used to observe the effects of the experimental medication compared to no treatment. During the study, both you and the study team will be blinded - not know - which group you are in. Participant safety is monitored closely throughout the study.

Observational studies aim to collect information to help better understand how to treat and diagnose symptoms of Alzheimer's and other neurological diseases. This leads to designing more effective clinical trials. Each observational study is unique. Some studies are conducted online, some consist of a one-time visit and others involve several visits to the research center. A few observational studies currently underway include use of technology, such as cell phones and computers, to recognize brain changes. This information may help doctors identify someone at risk for brain disease or diagnose individuals earlier.

Other observational studies aim to answer important questions such as why a person who is worried about their memory and thinking may be at greater risk for developing brain disease, and what role sleep may play in disease progression. These studies seek to enroll both healthy volunteers and those living with brain disease.

Aging & Memory Loss Road Map Series

I. Dementia Diagnosis

II. Research Participation

III. Caregiving

IV. Prevention

V. Behavior Management



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CLINICAL TRIALS

VERSUS

OBSERVATIONAL STUDIES

COMPARING THE 2 TYPES OF RESEARCH



Clinical trials

Determine new ways to treat or prevent disease

Involve an intervention with a drug or treatment to discover if it is safe and effective

Participants are randomly assigned into groups and either receive an investigational treatment or are in the control group which will receive standard of care or placebo

Neither the study team nor the participants know in which group they will be

Clinical evaluations such as memory tests, MRI, PET scan, physical exams, lumbar punctures and blood draws may be performed

Safety and efficacy is closely monitored by research team



Observational studies

Determine new ways to detect and track disease

No treatments or interventions are involved

Clinical evaluations such as memory tests, MRI, PET scan, physical exams, lumbar punctures and blood draws may be performed

Evaluations may help identify new tests, procedures, biomarkers that improve how we diagnose or monitor people living with disease

Study may help inform development of a clinical trial

May involve one or more visits



MASSACHUSETTS
Alzheimer's Disease
Research Center

"I recognize that the idea of participation in research may not be something everyone is comfortable with. I suggest getting involved with observational studies as a "gentle entrance."
– Research Study Partner



OBSERVATIONAL STUDIES ARE A KEY PART OF RESEARCH. THEY PROVIDE INVESTIGATORS WITH EVIDENCE THAT CAN IDENTIFY NEW TESTS AND PROCEDURES TO IMPROVE HOW WE DIAGNOSE AND MONITOR PEOPLE LIVING WITH DISEASES. OBSERVATIONAL STUDIES ARE A GREAT OPTION FOR PEOPLE WHO WOULD PREFER NOT TO RECEIVE AN EXPERIMENTAL DRUG.

WWW.MADRC.ORG



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"In addition to a personalized evaluation of my brain health, every visit with CART staff feels like I am among friends. The community of research participants has become an important part of my life. I am ordinarily an introverted person, but I have loved every moment of being among the incredible people living with memory issues who are a part of CART's research."
- Research Participant



CLINICAL TRIALS ARE RESEARCH STUDIES DONE ON PEOPLE, TO EVALUATE A DRUG OR TREATMENT AND DETERMINE IF IT'S SAFE AND EFFECTIVE. THIS MAY INCLUDE MEMORY TESTING, BLOOD DRAWS, LUMBAR PUNCTURES, AN MRI, A PET SCAN AND PHYSICAL EXAM. CLINICAL RESEARCH PARTICIPANTS ARE CLOSELY MONITORED BY MEDICAL STAFF THROUGHOUT THE STUDY.

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MASSACHUSETTS
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"Being a part of a team to find the cure and prevention for Alzheimer's and improve the life of future generations is a wonderful feeling. Donating money is good, but participating in the fight is better and more satisfying."
– Research Participant

"You get more out of volunteering than you give. The staff is great, you feel like part of a family and your involvement could actually result in a cure. What better reasons for volunteering?"
- Research Participant

What is involved in a clinical trial?

Every study is different, but these are some of the most common parts of clinical trial participation:

Step 1: Pre-screening

The first step is a pre-screening phone call during which you may review your medical history and take a brief memory test. This will help determine for which study you may be qualified. Each study has different inclusion and exclusion (reasons why someone is not eligible to participate) criteria for enrollment. Some of the most common reasons for exclusion from a clinical trial are:

- Exclusionary medications such as seizure medications, stimulants for ADHD, or the regular use of certain sedatives.
- Diagnosis and/or treatment of cancer within the past 2-5 years
- Scores either too high or too low on memory tests
- Other neurodegenerative diseases or head trauma

During the pre-screening call, you may be asked to sign a Medical Record Release Form. This gives permission for review of your medical records to determine if you are eligible for any studies. The form collects basic contact information and names of any doctors you see regularly, including your neurologist (if you have one). We will then request your medical records and have the study physicians review them.

Once your medical record review is complete, we will call to let you know for which studies you are eligible. If you qualify for multiple studies, we will give you information to review about each study so you can choose. Each study has a consent form that reviews study-specific details including the risks involved and your rights as a participant. The consent form will be discussed in detail with you at your first visit. Our research staff and research ambassadors (previous and current research participants) will be available to answer your questions and address any concerns.

To participate in a trial, you will need a study partner. Your study partner should be someone who knows you well and with whom you spend time on a regular basis. Some examples of a good study partner are a spouse or partner, a family member or a close friend. The study partner will be required to answer questions about your memory, daily functioning and/or mood and behavior.

Step 2: Screening Visit

The initial screening visit for a study is a 3-5-hour appointment that includes several components:

- Reviewing the consent form with one of our study physicians
- Taking your vitals and possibly a blood sample, urine sample or an EKG
- Reviewing your medical history and current medications
- Cognitive testing and questionnaires about your daily activities, mood and behavior

Screening evaluations are important to ensure that a study is safe for you. You must pass each of these components to qualify for the trial. You may screen-fail (be found ineligible for the study) at any point during the screening visit. Common reasons for screen-failing include:

- Scoring too high or too low on the memory tests
- Abnormal blood, urine, EKG
- Answers to the questions that exclude you because of your dementia diagnosis

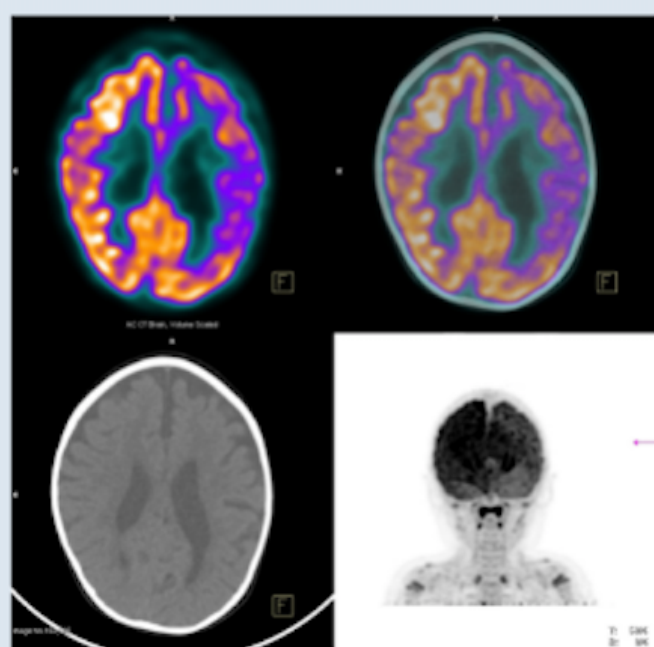
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If you screen-fail, we will seek additional studies for you. If you pass all the components, you will then schedule additional appointments for magnetic resonance imaging (MRI) and/or positron emission tomography (PET) scans. These are used to further determine eligibility based on pictures of your brain.

WHAT IS A PET SCAN?

A Positron Emission Tomography (PET) scan is an imaging test that allows us to look at an individual protein in the body by using a research drug called a "tracer" which works by binding with the protein. Each tracer is administered through an IV placed in the arm.

Our studies use different tracers to look at two specific proteins in the brain that are associated with Alzheimer's disease, but are also present in healthy brains, which is why we hope to learn more! Each tracer contains a very small dosage of radioactive dye, and this dye is what makes the protein "light up" in the image so that we can see where and how much of it there is. The tracers we use in our studies have been tested in thousands of people and are all found to be safe.



WHAT IS AN MRI?

We typically use magnetic resonance imaging (MRI) scans for our studies. This enables us to see your brain's structure and function. The image is then used as a "map of your brain" to understand where in the brain different proteins gather the most.



Step 3: MRI and PET Scans

As part of the screening process, you will usually undergo an MRI and PET scan.

MRI: MRI stands for magnetic resonance imaging. These scans are used to monitor safety during trials, and signs of strokes, tumors, areas of bleeding, and volume changes in your brain.

PET: PET stands for positron emission tomography. These scans use radioactive contrast to measure levels of amyloid and tau proteins in the brain. Many investigational drugs target one of these two proteins, so the PET scans help researchers to monitor treatment response.

You may be excluded from the trial based on the results of your MRI or PET scan. In some trials, you need to have a certain level of amyloid protein build-up to qualify. In addition, if certain abnormalities are found on your MRI scan, such as a tumor, you may be excluded.

Step 4: Lumbar Puncture (may be optional)

Some of our trials include a lumbar puncture, or spinal tap, to extract a small amount of cerebrospinal fluid (CSF) from the spinal column. This is done by using a local anesthetic on your lower back and inserting a small needle between two of your vertebrae. This fluid is then analyzed for the same amyloid and tau proteins visible through PET scans. Lumbar punctures are conducted by medical experts with extensive experience performing the procedure. For more information about lumbar punctures, ask our staff for study-specific handouts.

Step 5: Baseline/Randomization Visit

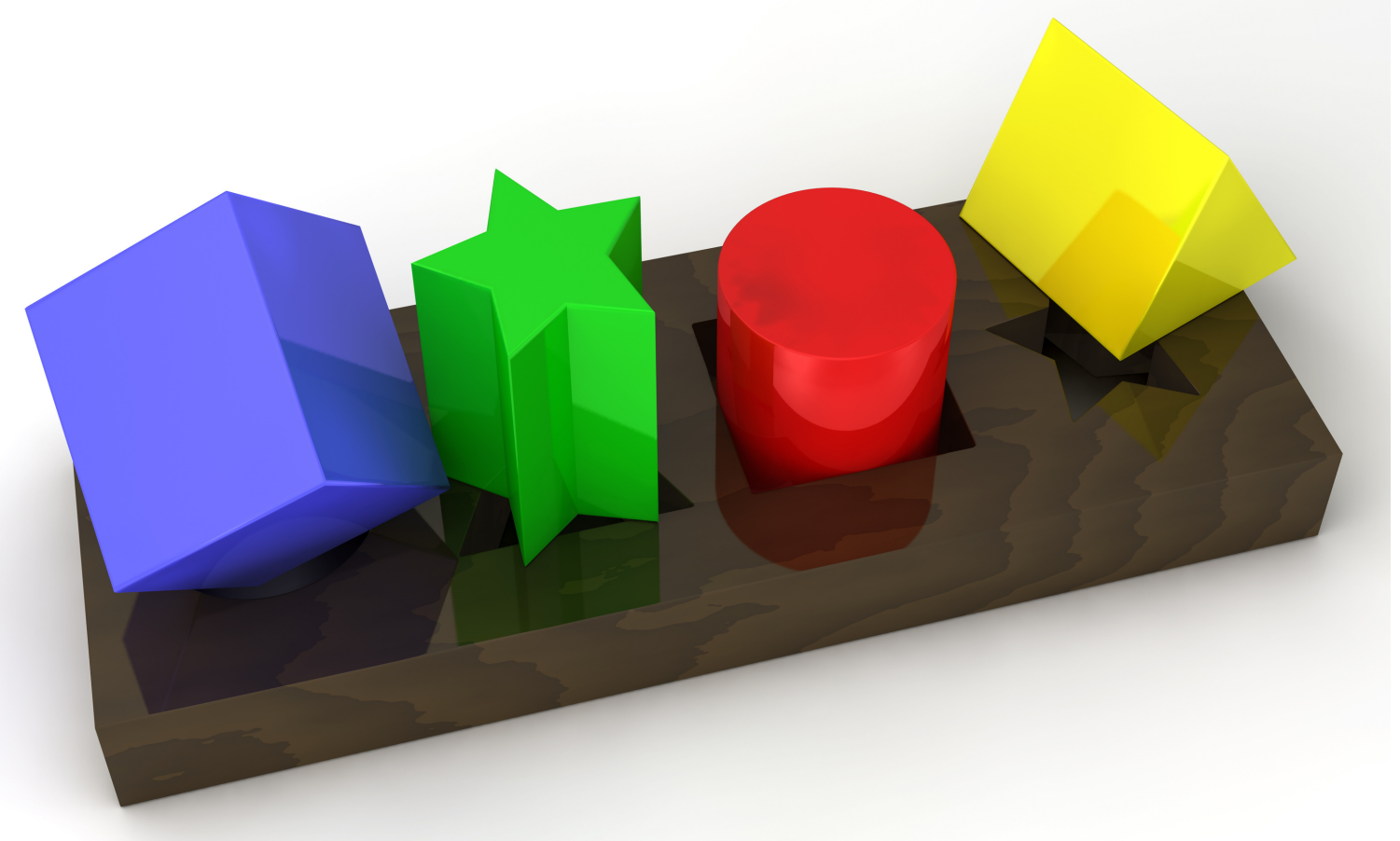
Once you have passed the previous steps, you will attend your randomization visit. This visit may last up to four hours, and can include memory testing, questionnaires for you and your study partner, and collection of vital signs and blood and/or urine. You will also receive the first dose of either the medication or a placebo. This will be given via pill, infusion, or injection. You may be asked to stay at the center for a short time after the first few doses, for safety monitoring.

Routine Study Visits

Following the first visit, you will come to the clinic for scheduled, routine study visits. These visits will include infusion or drug-distribution. Some sessions may include additional memory testing, brain scans or questionnaires for you and your study partner to complete.

Memory Testing

You'll receive cognitive testing at your first screening visit and your baseline visit, as well as periodically throughout the rest of the study. These tests determine changes in certain aspects of cognition, such as executive function and memory, over the course of the study. Most of the testing consists of tasks such as drawing shapes, remembering short lists of words, identifying objects, and remembering parts of a short story. Some other tasks may be completed using a tablet or computer. You will also fill out questionnaires either on your own or with one of our qualified raters. These questionnaires ask about changes in daily activities, memory, mood, behavior and general health and wellbeing. Your answers are used to assess any changes over time.



Study Drug Administration

If you are in a study that includes an experimental medication, we will always ask you about your current medical conditions, medications, and any changes that may have occurred since your last visit. Study drug administration is study-specific and the form in which the drug is administered will vary.

For some studies, the drug is given as a pill, and is taken orally each day over the course of the study. In other studies, the drug is given through intravenous (IV) infusion. The length and frequency of infusions depends on the study. The drug infusions are given using an IV pump under the supervision of study nurses, neurologists, and/or physician assistants. After the study drug is given, the IV is removed.

For other studies, the drug is given through an injection into the tissue (usually shoulder or abdomen). These injections are given by a study nurse. Frequency of these injections is dependent on the study.



Labs and Electrocardiogram (EKG or ECG)

At screening visits and throughout the duration of the study, intermittent safety labs and EKG's will be conducted. The primary reason is to confirm that you are relatively healthy and to monitor any clinically significant changes over time. In clinical trials, this serves to ensure that you are not experiencing any adverse effects due to the experimental medication. The secondary reason is to evaluate the effectiveness of the medication and to store samples, with your consent, for future research.

Electrocardiography (EKG or ECG) is a common type of diagnostic testing, used to monitor heart health and detect any problems, via electrodes placed on the chest.



Research Study - Frequently Asked Questions

Q: What are my options for transportation to the research center?

A: We encourage you to discuss this with the study-specific staff. Some studies cover the cost of transportation for research participants and/or validate parking in hospital garages. In addition, some studies reimburse participants with a stipend for each visit.

Brigham & Women's Hospital (BWH) and Massachusetts General Hospital (MGH) study sites are easily accessible via public transportation.

Q: Do I have to pay to take part in a study or will my insurance be charged to participate?

A: No, all study-related activities are free to you. Costs are paid for by the pharmaceutical company producing the drug, the NIH, foundations, philanthropic funds, or other research grants. If you opt to see one of our neurologists in clinic outside of the study, this will be charged to your insurance. However, all study visits, scans, medication and expenses are free to you.

Q: Are the drugs being tested approved by the Food and Drug Administration (FDA)?

A: Not yet. If successful, the drugs in our trials will be submitted for FDA approval following completion of a phase III trial (the last stage of testing of a drug). However, most of our trials are in phases II or III meaning that much of the safety testing has already been completed during phase I and the focus is now on efficacy.

Q: What happens when the study is over? Will I have a chance to take the drug at that point if I was on the placebo?

A: Some of our trials have what is called an "open-label extension" phase, in which all participants take the drug, regardless of previous status in the placebo or drug group, in this extended part of the study. Not all trials have this extension phase, and some may not guarantee this phase until after an interim analysis is performed.

Q: What information will I be getting about my health/cognitive function throughout the course of the study?

A: During the study, you will not receive individual scores and results of tests and scans, as this introduces the risk of bias to the study. However, if anything clinically significant (problematic or dangerous to your health) is found either during the testing or the scans, you will be notified and guided to receive the appropriate clinical care. In addition, you may ask to set up a meeting with one of our study physicians to discuss your test scores and how you are doing in the study.

Q: What are the chances of receiving the drug vs. the placebo?

A: This differs between studies. In some studies, the groups are split 50-50, and in some there are multiple treatment groups with different doses. In this case, your chance of receiving the drug, may be, for example 2 out of 3 or 3 out of 4.

Q: Will you talk to my doctor or neurologist before I enroll? Will my neurologist or doctor receive the results of my testing as the study progresses?

A: We will contact your neurologist and primary care physician to access your medical records prior to screening. After enrollment, we will update your care team about your status in the study, as well as if there are any concerning findings on testing, scans or labs.

Q: What are the side effects of the study drug?

A: This differs between studies. Study drugs may have minor side effects such as headaches, dizziness or nausea, or more significant side effects such as temporary and reversible swelling in the brain. All side effects will be outlined in the consent form, which must be reviewed thoroughly and signed before taking part in the study.

Q: When will I receive the results of the study?

A: When all participants have completed the study. In other words, when the final participant across all study sites completes the double-blind portion of the trial, the sponsor will spend a few months checking for errors and analyzing the data, and then the preliminary results will be released to the public. You will then be notified of whether you had received drug or placebo.

Resources for Patients and Caregivers

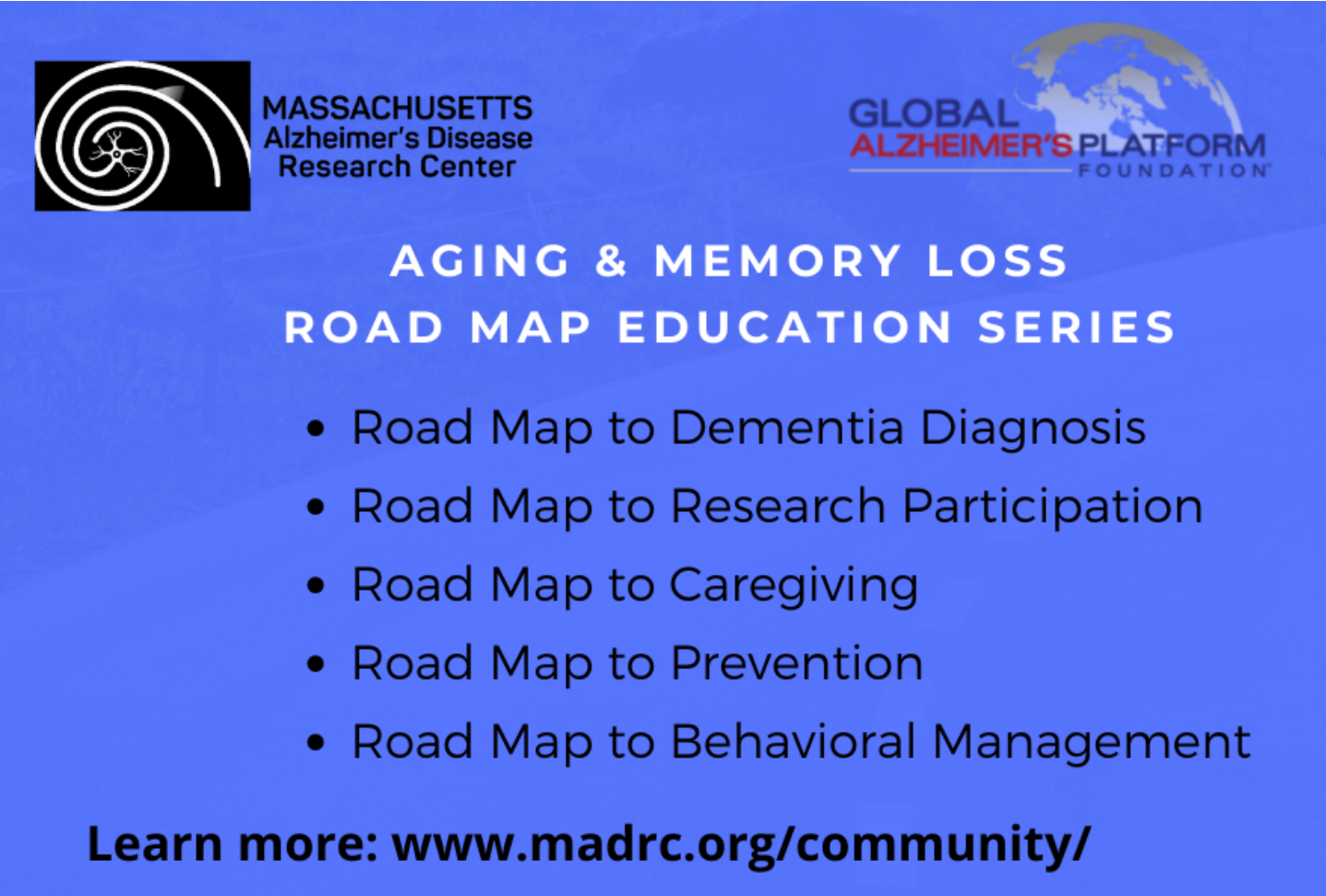
Alzheimer's Association, MA/NH Chapter
National Helpline: 800-272-3900, www.alz.org

Lewy Body Dementia Association
LBD Caregiver: 888-204-3054, www.lbda.org

Association for Frontotemporal Degeneration
Helpline: 866-507-7222, www.theaftd.org

Alzheimer's Foundation of America
National Hotline: 866-232-8484, www.alzfdn.org

National Institute on Aging: Alzheimer's Disease Education
and Referral Center (ADEAR) ADEAR Center: 800-438-4380,
www.nia.nih.gov/health/about-adear-center



The graphic is a blue rectangular box with white text. At the top left is the logo for the Massachusetts Alzheimer's Disease Research Center, which consists of a stylized brain icon. At the top right is the logo for the Global Alzheimer's Platform Foundation, which features a globe icon. Below these logos, the text "AGING & MEMORY LOSS ROAD MAP EDUCATION SERIES" is centered. Underneath this, there is a bulleted list of five items: "Road Map to Dementia Diagnosis", "Road Map to Research Participation", "Road Map to Caregiving", "Road Map to Prevention", and "Road Map to Behavioral Management". At the bottom, the text "Learn more: www.madrc.org/community/" is displayed.

MASSACHUSETTS Alzheimer's Disease Research Center

GLOBAL ALZHEIMER'S PLATFORM FOUNDATION

**AGING & MEMORY LOSS
ROAD MAP EDUCATION SERIES**

- Road Map to Dementia Diagnosis
- Road Map to Research Participation
- Road Map to Caregiving
- Road Map to Prevention
- Road Map to Behavioral Management

Learn more: www.madrc.org/community/

National Clinical Trial Information

Participation in research studies, by either the person with dementia and/or their caregiver, will significantly help scientists find more effective treatments for Alzheimer's disease and related dementias. Numerous research opportunities are available through the Massachusetts Alzheimer's Disease Research Center sites (see graphic below).

For national clinical trial information: www.clinicaltrials.gov

National Institute on Aging: Alzheimer's Disease Education and Referral Center (ADEAR):
800-439-4380

Alzheimer's Association TrialMatch: 800-272-3900

Alzheimer Prevention Network: www.alzpreventionnetwork.org



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Massachusetts General Hospital
Frontotemporal Disorders Unit
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Massachusetts General Hospital
Lewy Body Dementia Unit
(617) 726-1728
mquan4@mgh.harvard.edu



Massachusetts Alzheimer's Disease Research Center
<https://www.madrc.org/join-a-study/>
To speak with someone about research studies: (617) 278-0600

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