

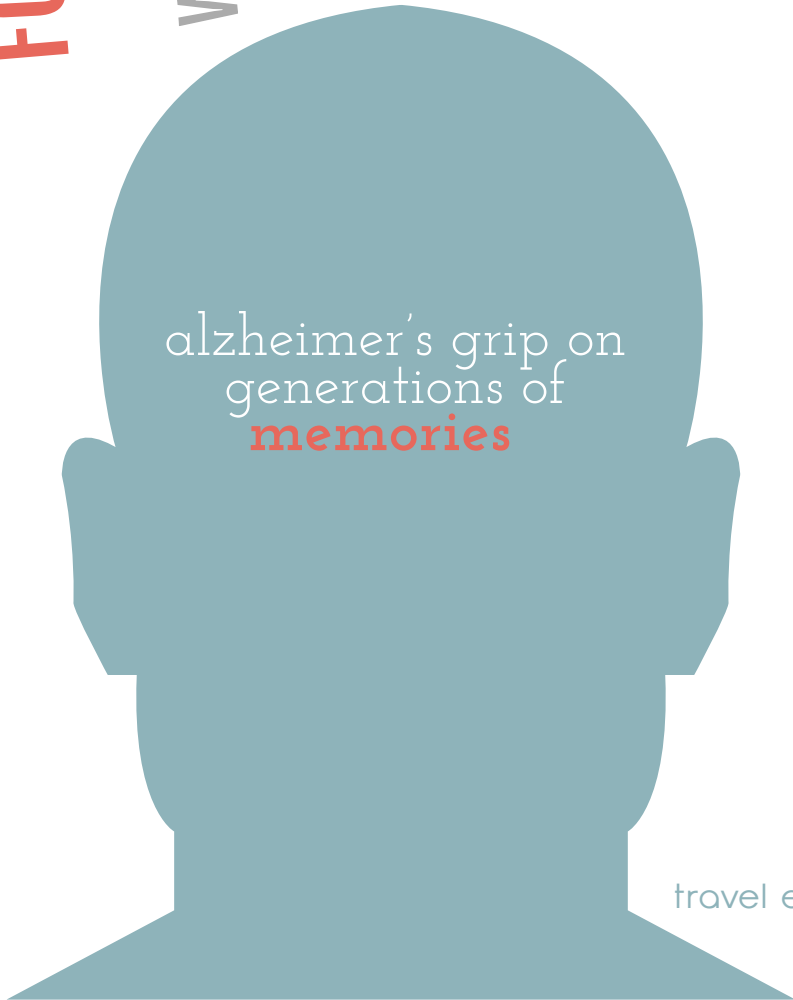
FORGETTING THE FUTURE

WHERE DID I PUT MY PHONE?

WHERE AM I GOING?

WHAT AM I DOING?

WHERE AM I?



alzheimer's grip on
generations of
memories

travel editor | phoebe xu

According to the Alzheimer's Association, every 65 seconds, someone in the United States develops Alzheimer's. More than 5 million Americans currently live with Alzheimer's, and this number is projected to grow to 14 million by 2050. "Between 2000 and 2015, Deaths from heart disease have decreased 11 percent while deaths from Alzheimer's have increased 123 percent," according to the Alzheimer's Association.

Alzheimer's is a brain disease that is one of the most prominent causes of dementia, a term that describes symptoms of memory loss. The effects of Alzheimer's in its early stages are very subtle and can include slower thinking and remembering seemingly insignificant problems. As time progresses, these symptoms worsen and memory loss continues. So, what exactly goes on in the brain that leads to diseases like Alzheimer's? There are different levels of brain waves that are determined by how many neurons are fired in a second. The lowest is called the delta wave, which usually occurs when you are sleeping. The middle is the beta, which happens when you are awake. The highest is the gamma wave, which is activated when being attentive or while memorizing things. In diseases like Alzheimer's, there are numerous disruptions in these gamma waves.

"Alzheimer's is a neurodegenerative disease, meaning neurons die and synaptic connections are lost," Neurosurgeon at NewSouth Neurospine, Mississippi's Spine Center, Jack Moriarity said. "On autopsy and with microscopy, the brains of people with Alzheimer's have a characteristic appearance with abnormal protein deposition and global atrophy. The actual cause of Alzheimer's is unknown, however, and there have been many theories postulated over the past three to four decades."

According to the Alzheimer's Association, "Alzheimer's is the only top 10 cause of death in the United States that cannot be prevented or cured." People who are diagnosed with this disease can only have treatment that would slow down the process and the spread of it in the brain. So what steps have been taken to help possibly find a cure for this disease in the near future since,

DID YOU KNOW?

- **5.7** MILLION AMERICANS ARE CURRENTLY LIVING WITH ALZHEIMER'S. BY **2050**, THIS NUMBER IS PROJECTED TO RISE TO NEARLY **14** MILLION
- ALZHEIMER'S DISEASE IS THE **6**TH LEADING CAUSE OF DEATH IN THE UNITED STATES
- **1** IN **3** SENIORS DIES WITH ALZHEIMER'S OR ANOTHER DEMENTIA AND KILLS MORE THAN BREAST CANCER AND PROSTATE CANCER COMBINED

according to Alzheimers.net, costs from this disease are projected to be around \$1 trillion in 2050 in the United States alone.

Non-profit organizations, like the Alzheimer's Association, have made it their mission to help global progress in creating more methods of treatment and preventions, and hopefully a cure. The Association helps fund research, advance public policy, and provides support for people living with Alzheimer's and their caregivers in hopes of trying to help find a cure. Every single person who has been diagnosed with Alzheimer's has had to live with it for the rest of his or her life because there has not yet been a cure. With funds and donations, the Alzheimer's Association can help the fight against Alzheimer's and to eradicate the lack of awareness surrounding it.



Clinical trials are also really important in potentially finding cures for not only Alzheimer's, but also for other health degenerative diseases.

"The importance of clinical trials is to rigorously test ideas developed in the laboratory on human patients," Moriarity said. "Clinical trials begin with testing for the safety of a drug, then its efficacy (or effectiveness), and finally whether it is better than what is already available. Without clinical trials, we would have no new medications or therapies for cancer patients. When I was a resident at Johns Hopkins, we were involved in trials testing an implantable chemotherapy wafer called Gliadel. It was ultimately approved for treatment of patients with brain tumors."

The National Institute of Health is another organization which helps fund treatments and trials for Alzheimer's patients. However, according to Alzheimers.net, "funding for Alzheimer's research has wavered between \$412 million to an estimated \$449 million in 2013" while "AIDS research, by comparison, has gone from \$2.9 billion to \$3 billion in the same time period." Funding is essential not only for treatment and medical research, but also for workers and caretakers who help these patients.

Upper School History Teacher Linda Rodriguez has had a first hand experience

of Alzheimer's and how the disease not only affects actual patients, but also everyone around them.

"My grandmother moved in with my family when I was in high school," Upper School History Teacher Linda Rodriguez said. "It became really hard for my mother, who was the primary caregiver, to take care of her as she lost the ability to physically take care of herself. Seeing your parents who have always been a sign of strength debilitated to an almost childlike individual was difficult emotionally for my mother. My mother took care of my grandmother for a long time until it got to the point where my grandmother couldn't even get out of the bed by herself, so she was put into a nursing facility. Taking care of someone who has Alzheimer's is emotionally draining because it is like taking care of a baby. The lack of autonomy and the lack of being able to do something by yourself is really hard and makes these patients angry."

There are also other associations and institutions that have been dedicated in helping the fight against Alzheimer's. According to the website of the Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment, the association "is the only professional society designed exclusively for individuals dedicated to Alzheimer's and dementia science."

The National Institute of Aging's is part of the U.S. Department of Health and Human Services. The NIA "commitment to the systematic study of the aging brain began with its establishment in 1974, and its support of neuroscience research, including research on Alzheimer's disease (AD), has increased dramatically since then. The NIA legislative mandate provides specific authority to support research on AD, establish AD research centers, conduct clinical trials for the treatment of AD, and promote research on the etiology, treatment, and diagnosis of AD."

Alzheimer's and other forms of dementia are diseases that will affect at least one person you know in your lifetime and can take a toll on anyone's family; however, these organizations are dedicated to find a cure for these diseases and hopefully create a world where no one has to forget.