

The Diseases that Scare Us:

- Alzheimer's is the 6th leading cause of death in the U.S. (CDC, 2021) During the span of 2000-2019, Alzheimer's diagnoses have gone up 145.2%. This becomes more significant considering that Alzheimer's accounts for 60-70% of dementia diagnoses.
- One of every 9 people in the U.S. age 65 and older has Alzheimer's (10.9% of those 65 and over). (Alzheimer's Disease Facts and Figures, 2024)
- There are 1.1 million people in the U.S. living with Parkinson's disease, and this is expected to be 1.2 million by 2030. There are nearly 90,000 new diagnoses each year.

The People:

- The number of people aged 65 and older in the United States has grown rapidly over most of the 20th century, from 3.1 million in 1900 to 35 million in 2000, (12.4% of the total U.S. population.)
- More recently, the age 65 and over cohort has increased from 16.0% in 2018, 17.3% by 2022, and by 2030 is projected to make up 20% of the U.S. population. Older adults are projected to outnumber children under age 18 for the first time in U.S. history by 2034, according to Census Bureau projections. (U.S. Census Bureau, 2019).
- Worldwide, in 2018 the number of people aged 65 and over outnumbered the number of people under age 5 for the first time in recorded history.
- With the increasingly large percentage of the world's population featuring people aged 65 and over, the projections for brain disease are substantial. By 2050, in the U.S. there are projected to be 12.7 million Alzheimer's patients, more than doubling the 2020 number of 6.1 million. For Parkinson's disease the worldwide projections are 25.2 million by 2050, which is a whopping 112% jump from 2021 Parkinson's numbers.

Key Takeaway: This group has both the means (financial and time) and the motivation (brain health is a highly relevant topic).

An Ounce of Prevention

This cohort of people have **both** the *means* and the *motivation* to prevent brain disease and are willing to devote financial and time resources to do so. Additionally, slowing the progression of a diagnosis is an equally attractive prospect for those who already have a diagnosis.

And critically, there are over 18 different lifestyle factors related to dementia, Alzheimer's (the most common form of dementia), and Parkinson's. Some of the most significant and impactful factors are modifiable such as physical activity, sleep, nutrition, and stress.

Lifestyle – Promotion or Prevention of Disease

There are numerous health and lifestyle factors related to dementia risk.

In the list below, if a percentage is listed in parentheses, this refers to the [Lancet Commission Report](#) estimating the percent reduction in dementia occurrence if this risk factor is eliminated. (Livingston, 2024)

(1) Cardiovascular Disease: Cardiovascular disease risk factors put people at greater risk for reduced cognitive function and dementia later in life. (Hakala, 2021), (Albai, 2019) Cardiovascular disease could just as easily be called cerebrovascular disease.

(2) Stress: Zero stress is not the goal. That is a purposeless life. Hitting the “sweet spot of stress” involves allowing enough stress into your life to give you purpose, meaning, and direction for your energies and efforts while avoiding getting locked into a pattern of chronic stress that will tear down both your brain and your body. Successful stress mitigation during periods of unavoidable or higher stress is the key.

(3) Sleep: Poor quality and/or inadequate sleep quantity reduces the time that the brain spends cleaning up after itself.

(4) Obesity (1%): With deleterious effects for every organ and every bodily system, obesity unsurprisingly increases the likelihood of dementia. (Solas, 2017)

(5) Diabetes (2%): When blood sugar gets too high, the sugar sticks to cells, disrupting proper cellular function and this wreaks havoc throughout the body. With a brain keenly dependent on efficiently using a large amount of fuel, diabetes is potentially disastrous for brain health.

This is also another way to understand how powerful physical activity can be in managing blood sugar and maintaining brain health. Resting muscles remove no sugar from the bloodstream, but contracting muscles remove sugar rapidly from the bloodstream and can do so without requiring insulin.

(6) Depression (3%) – depression typically features low-BDNF, less social interaction, poor nutrition, and decreased physical activity so it’s relationship to dementia is strong.

(7) Smoking (5%) – It is interesting how during the Covid-19 pandemic of 2020, when society decided to do “whatever it takes to save lives,” cigarettes remain legal.

(8) Traumatic Brain Injury – Falling is the most common cause of TBI. According to the U.S. Centers for Disease Control, 36 million people 65 and over experience a fall annually. TBI need not occur when older to contribute to dementia as TBI at any age is considered a risk factor.

(9) Hearing Loss (7%): By itself, hearing loss will greatly decrease both cognitive stimulation opportunities and social interaction. (Note that it is the highest percentage risk factor for dementia of the ones assigned a percentage by the Lancet Commission Report.)

(10) Peripheral Vision Loss – Areas of the brain that control peripheral vision deteriorate early in AD. (Javaid, 2016)

(11) Social Isolation (5%): Social connection is to our spirit like oxygen is to our lungs. Most of humanity became the subject of an unplanned experiment on the effect of social isolation during the Covid-19 pandemic of 2020. The “results” of this study showed incontrovertibly that social isolation degrades mental health in general and engenders or accelerates cognitive decline specifically. People with extant dementia or MCI experienced rapidly worsening symptoms.

Meta-analyses have identified that social isolation is both a primary and secondary risk factor for increased mortality risk (Holt-Lunstad, 2015) and that the type of social interaction was meaningful with closer, more complex relationships showing a more positive effect than simply living in proximity to other people. (Hold-Lunstad, 2010)

And in another example of how modifiable lifestyle factors are inextricably linked, for most of human history, eating has occurred in a context of social connection. Sharing a meal with friends and loved ones not only contributes to the enjoyment of the subjective experience of eating, doing so activates the parasympathetic nervous system, relaxing you and enhancing optimal digestion and nutrient absorption. (Browning, 2014)

This is another in a seemingly endless list of ways that we have changed the way we used to live and do things – yet we rarely seem to change things for the better. More often than not, we eat alone and/or in front of a screen.

(12) Gut bacteria/microbiome: Dementia risk is increased by harmful bacteria in your colon. (Saji, 2019) The gut of people with Alzheimer’s disease exhibits a distribution of bacteria that looks much like someone with obesity or type-2 diabetes. (Vogt, 2017) The brain and gut are mutually influential of each other and improvement of the gut microbiome for neuroprotection is a rapidly growing area of research. (Lombardi, 2018) Gut bacteria eat what we eat and if we feed the type of bacteria that cause inflammation, we increase our risk for dementia. (Solas, 2017) Further, inflammation in the gut increases gut permeability, allowing more toxins out into our body. Alternatively, if healthy gut bacteria flourish, cognitive function may improve (Kobayashi, 2019). If unhealthy bacteria are dominant, the process to restore gut health may involve (1) antibiotics to kill off bacteria, (2) providing healthy bacteria through nutrition and/or supplementation, and (3) supporting the flourishing of the healthy bacteria through continued participation in a healthy lifestyle (the same place we always end up when discussing how to promote health!)

Gut health naturally leads to conversations about fiber. Soluble fiber is soft, dissolves in water, and bulks up stools. Insoluble fiber (indigestible fiber) ferments in the colon, supplying food for healthy bacteria such as short-chain fatty-acids that are important signaling molecules for the nervous system and brain. Probiotic foods supply beneficial bacteria and prebiotic foods provide the food the beneficial bacteria thrive on.

(13) Education (Cognitive Reserve) (7%): this concept states that the more learning you accumulate, the more you build up a cognitive reserve so that if cognitive decline happens, you are subtracting from a higher amount of cognitive ability, delaying the onset of symptoms. People with more education have lower prevalence of dementia, more years of cognitively healthy life, and fewer years with dementia (Crimmins, 2018), and a meta-analysis of studies found robust support for the cognitive reserve hypothesis. (Meng, 2012)

(14) Hypertension (2%) – The Whitehall II study of 8,639 people followed for 25 years and ongoing, has evaluated participants at age, 50, 60, and 70. It found that systolic blood pressure > 130 at age 50, but not at age 60 or 70, increased dementia risk by 40%. High blood pressure at mid-life is thus highly correlated with increased dementia risk. (Abell, 2018)

The SPRINT study, a blood pressure intervention which kept systolic blood pressure below 120 was stopped early due to the significantly positive results. (SPRINT Research Group, 2015) Building on this, the SPRINT-MIND study incorporated memory challenges with < 120 blood pressure interventions and found that over three years, the risk of getting MCI decreased by 19%. (Williamson, 2019)

(15) Nutrition – we are made of what we eat. Pro/Anti-inflammatory diet is highly correlated with Alzheimer’s disease

(16) Exercise and Physical Activity (Physical Inactivity 2%): These would most helpfully be considered as two separate categories: “Dedicated exercise,” which would be physical activity done at a high enough intensity to create a stimulus for change; and “Incidental physical activity,” which would be physical activity from housework, walking the dog, etc., which would be done much more frequently than dedicated exercise.

(17) Excessive Alcohol Consumption (1%) – defined as greater than 21 units/servings per week by the Lancet Commission Report.

(18) Air Pollution and Exposure to Secondhand Smoke (3%) – where we live, work and workout determines what we breathe and take into our bodies.

What Current Research Says: Dementia May Be Preventable

The FINGER trial is the first randomized controlled trial showing that it is possible to prevent cognitive decline using a multi-domain lifestyle intervention among older at-risk individuals. For two years, over 2,600 people in Finland between age 60-77 participated in this study which used the following lifestyle interventions: diet, exercise (including both strength and aerobic training), cognitive training, and vascular risk monitoring. The results showed that the interventions improve or maintain cognitive functioning in at-risk elderly people. (Ngandu, 2015)

In a massive study of over 300,000 people aged 50-73 years who were monitored for eight years to see who did and did not develop dementia, six healthy lifestyle behaviors were tracked:

- Eating a healthy diet with more fruits and vegetables, and less processed meat and refined grains
- Meeting physical activity guidelines of 150 or more minutes a week of moderate-to- vigorous physical activity
- Sleeping 6 to 9 hours each day
- Drinking alcohol in moderation
- Not smoking
- Not having obesity, meaning they had a BMI (body mass index) of under 30

The results showed that adopting healthy lifestyle behaviors can lower dementia risk even among people who are at higher risk due to a family history of dementia. Following all six healthy lifestyle behaviors cut the risk of dementia by almost half and following three of the healthy behaviors was associated with a 30% reduced risk compared to following two or less healthy behaviors, even when investigators considered familial dementia and accounted for related risk factors for dementia like age, race, sex, education, hypertension, Type-2 diabetes, and depression. (Brellenthin, 2021)

A scientific statement from the U.S. American Heart Association titled “A Primary Care Agenda for Brain Health: A Scientific Statement From the American Heart Association,” states that dementia is associated with the following list of modifiable risk factors – most of which are in the numbered list of risk factors above: (Lazar, 2021)

- Depression
- All heart attack risk factors
- High blood pressure
- Diabetes
- Obesity
- High cholesterol
- Physical inactivity
- Inflammatory diet
- Smoking
- Social isolation
- Excessive alcohol use
- Sleep disorders
- Hearing loss

POINTER Trial

The POINTER trial involved 2,111 adults, ages 60 to 79, across five locations, who were healthy but at risk for cognitive decline and dementia, because of lifestyle factors, including a poor diet, lack of regular exercise or cardiovascular risk. (Baker, 2024)

The participants were randomly assigned to one of two lifestyle intervention groups: one with a structured program and another with a self-guided program.

Both groups focused on physical activity, diet, cognitive training, social engagement and vascular health over the course of the two-year study.

Participants in the self-guided group received general education on health, diet and exercise and were encouraged to make the lifestyle changes that they thought best suited their needs. They also met six times with facilitators and other group participants in their communities for discussions on what they are learning. In contrast, the structured group had a far more intensive and demanding regime.

- Physical health: Each week, participants had four days of aerobic exercise, two days of resistance training and two days of stretching and balance exercises.
- Nutrition: They were encouraged to adhere to the [Mediterranean-DASH Intervention for Neurodegenerative Delay \(MIND\) diet](#), which is designed to promote healthy brain aging.
- Cognitive training: Participants engaged with a web-based cognitive training program three times a week.

In addition, the structured group met 38 times with facilitators and fellow participants, received biannual health coaching from a medical adviser, as well as phone calls and clinic visits to assess diet and cardiometabolic health.

Having participants meet their peers offers a social component for support that is a key ingredient in the intervention.

Both groups showed cognitive improvements throughout the two years of the trial.

But participants in the structured lifestyle group did better than people in the self-guided group.

The Take Home Message

Everywhere you look in the research community, you find clear evidence of the above modifiable risk factors relating to dementia. Our brains are a particularly sensitive part of our bodies. As many of the above risk factors put all organs and bodily systems at risk, protecting our brain is done by doing what protects our bodies, and vice versa. This is welcome – if unflashy – news.

What Can an Aromatherapist Do to Help?

Important Note: Different individuals experience and identify what is stressful differently and likewise experience relief from stress differently. Further, the benefits of any EOs listed below apply *only* if the client has no subjective negative opinion or feeling toward that scent. ***In other words, psychology > physiology.***

STRESS

Many oils to choose from for stress management – one of the reasons essentials oils are so impactful. The oils you choose will depend on the stress you are dealing with.

- If you need a nervous system reset/calming of the mind, oils like LAVENDER, CHAMOMILE, CLARYSAGE, YLANG YLANG, GERANIUM.
- If you need to feel more grounded essential oils of VETIVER, SANDALWOOD or FRANKINCENSE are valuable.
- Essential oils that boost mood are citrus oils like ORANGE, BERGAMOT AND LEMON.

Delivery methods: Diffusion, Topical or Bath

Recipe: Total Calm (from Rose Chard of [Your Body Needs](#)):

YLANG YLANG, FRANKINCENSE, CLARYSAGE using a 1:2.43:3.29 diffusion ratio

Research example: In an eight-week study, 19 nurses who work with cancer patients at the Infusion Center at the West Virginia University (WVU) Cancer Institute carried aromatherapy patches attached to badges worn on lanyards around their necks. The patches were infused with a blend of various essential oils, including orange, pink grapefruit, lime, peppermint, lemongrass, and lemon. Interviews with the nurses showed that after wearing the patches they felt significantly less stressed, anxious, fatigued, and overwhelmed. (Reven, 2020)

SLEEP

Same essential oils that are listed above in STRESS for calming the mind. It can also include the grounding oils. A good diffusion recipe will be: LAVENDER 5 drops, CLARYSAGE 4 drops, VETIVER 3 drops.

Diffuse 20 mins before bedtime. Also place drop on cotton round and place near your bed.

EXERCISE / PHYSICAL ACTIVITY

Oils that help strengthen muscles and circulation – BLACK PEPPER, GINGER, FRANKINCENSE

Oils that will promote easier breathing and energy – PEPPERMINT, EUCALYPTUS, ROSEMARY

COGNITIVE FUNCTION (concentration, focus, thinking, memory, problem-solving, alertness, etc.)

ROSEMARY, SWEET BASIL, GRAPEFRUIT, CEDARWOOD (supports focus, calming and balancing)

Great in combination with a blend

Final Research Example:

Studies in Japan show that an essential oil derived from turmeric could help defend brain tissue against deterioration caused by Parkinson's disease.

In these lab tests, aromatic turmerone (ar-turmerone) was discovered to support the function of neurons that produce dopamine, the neurotransmitter that's in short supply in Parkinson's patients. As Parkinson's progresses, these neurons – called dopaminergic neurons – die off. When they stop processing dopamine, communication among important parts of the brain breaks down, which can lead to tremors, the inability to move, rigid muscles, and other movement impairments associated with the disease.

The Japanese scientists believe that ar-turmerone helps to protect the neurons by reducing inflammation in microglia, immune cells that are supposed to attack pathogens and eliminate damaged neurons in the brain. (Hori, 2021)

When they're inflamed, microglia can cut off dopamine production. But ar-turmerone may restrict this harmful inflammation and, as an antioxidant, reduce problematic oxidative stress.

Want even more on this topic?

The [Alzheimer's & Brain Fitness Specialist Course](#) goes into detail on the lifestyle factors that are most modifiable and how to modify them and includes:

- Over 11 hours of video
- Nearly 100 exercise videos

- 200+ page manual with expanded information
- Interviews from people whose loved ones died from and are living with the disease as well as people who have used strategies from the course to avoid it.

→ Save 30% with code **ADFS30**

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Facebook Professional Page: “[Funtensity](https://www.facebook.com/funtensity)”

E-newsletter sign-up at [Funtensity.com](https://www.funtensity.com)

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