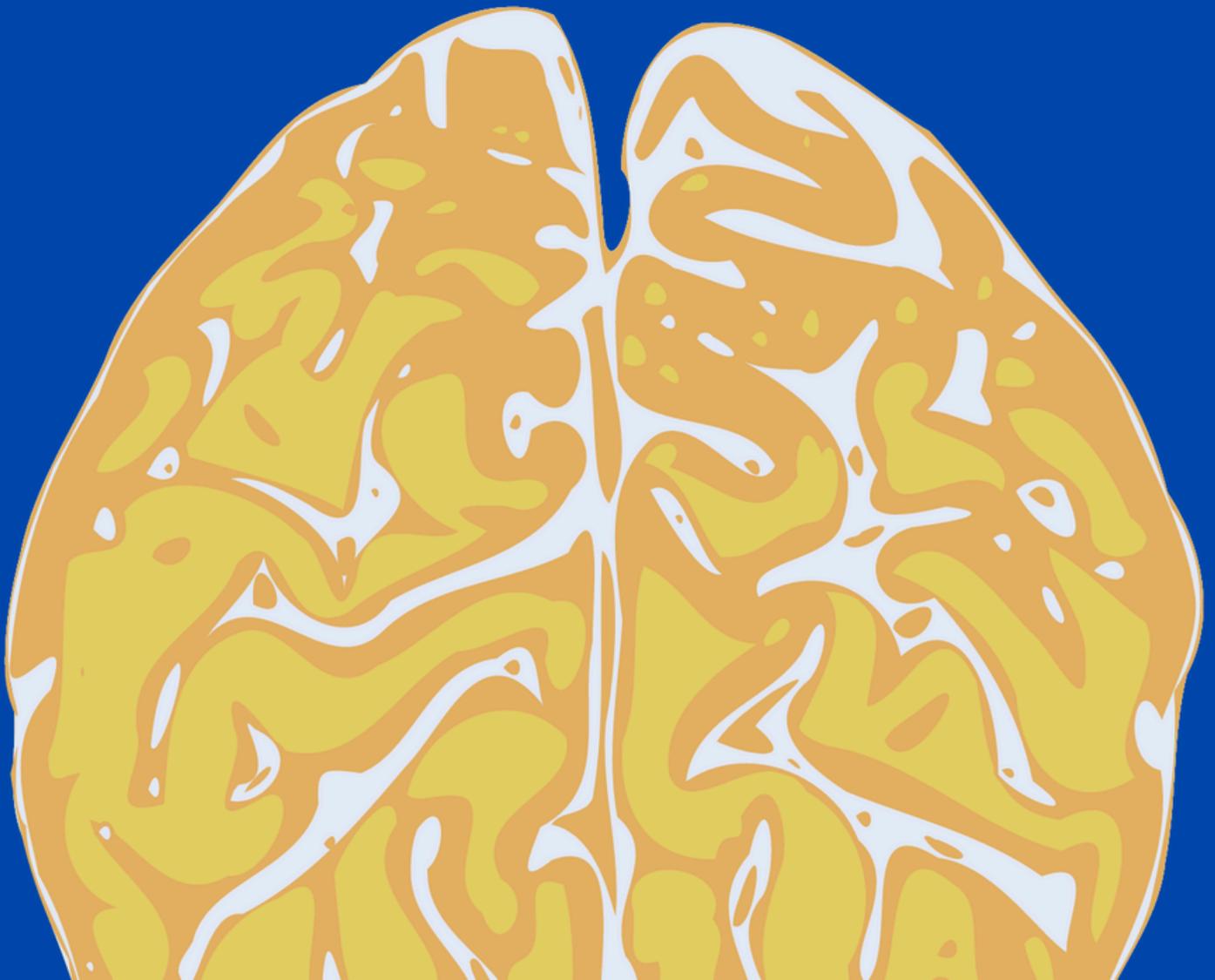


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DR DAVID AJIBADE

# DEMENTIA'S DIRTY DOZEN

eBook



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# Introduction

Thank you for downloading our summary of *Dementia's Dirty Dozen!*

This guide is designed to provide valuable insights to caregivers, individuals with dementia, and those concerned about their Alzheimer's disease (AD) risk. Our goal is to offer a straightforward explanation of the factors that contribute to dementia risk and show how to recognize and address them effectively.

**Overview:** Each chapter will explore a critical aspect of AD risk and how it relates to medications. Now, let's delve into the core concept:

**Understanding Alzheimer's Disease (AD): Beyond Plaques and Tangles:** AD is a complex condition that goes beyond plaques and tangles in the brain. There is a whole host of factors including infections, heavy metals, and compromised blood flow that play roles in the development of the disease. Genes, age, and lifestyle also contribute but don't solely cause AD.

**The Tipping Point:** AD progresses when the brain, influenced by various factors, initiates a self-destructive program leading to its decline. This program follows a predictable pattern, which will be discussed in other books/courses.

What Initiates this Sequence? Enter "The Dirty Dozen": 12 categories of problems, other than aging and genetics, that can trigger AD. While symptoms often appear after 65, AD-related changes can begin in the early 40s, making early awareness crucial.

### **The Dirty Dozen in a Nutshell:**

1. Illness
2. Inactivity
3. Insults and Intoxicants
4. Injury
5. Imbalances
6. Insufficiencies
7. Insulin Resistance
8. Infections and Infestations
9. Immune Dysfunction
10. Indigestion and Food Intolerances
11. Insomnia
12. Isolation

## CHAPTER 1

# Illness

Illnesses, whether physical, neurological, or psychological, can adversely affect the brain. Chronic conditions like cardiovascular disease, diabetes, and obesity increase AD risk. Mental illnesses such as depression and stress-related conditions can also contribute. Neurological disorders and sensory impairments (especially hearing loss and loss of smell) play roles, especially when they occur earlier in life (in the early 40s, for instance).

**More Factors to Consider under Illnesses:**

- The direct impact on the brain.
- The effect of drugs used to treat the illness.
- The body's response to both the illness and its treatment.
- The dimension of time: Longer unresolved issues worsen brain effects.

**Drugs and Dementia:** Medications can impact brain health differently as we age. Changes in drug processing, side effects, and interactions become significant. Certain drugs, including benzodiazepines, antihistamines, and tricyclic antidepressants, may be inappropriate for older adults due to side effects. Conditions like diabetes and chemotherapy can also affect brain health. Specific drugs have been associated with an increased risk of AD, including antidepressants, antiparkinson drugs, antipsychotics, and others.

**How Illnesses Can Lead to AD:** Chronic illness, in many cases, leads to chronic inflammation, elevated stress hormones, low oxygen levels, and dysregulated blood sugar levels, all of which can damage brain cells.

**Tests and Action Steps:** Regular monitoring of blood pressure, weight, BMI, body fat percentage, blood sugar, insulin levels, and inflammatory markers is crucial. Collaborate with your doctor to manage chronic illnesses effectively and adhere to prescribed medications.

## CHAPTER 2

# Inactivity

**Definition and Impact of Inactivity:** Inactivity can be physical, mental, or both, with each often influencing the other. Physical inactivity is when someone engages in less than 150 minutes of moderate-intensity activity per week, according to the World Health Organization (WHO). This sedentary lifestyle poses a significant health risk, as it's the fourth leading cause of death, contributing to approximately 3.2 million annual deaths and 32.1 million DALYs (2.1% of global DALYs). Those who engage in little physical activity face a 20% to 30% higher risk of all-cause mortality compared to those who exercise regularly.

**The Importance of Movement: "The Ultimate Law of Life":** Humans are built for movement, both physically and mentally. Our brains require constant activity to function optimally. Physical activity, like exercise, stimulates the release of Brain-Derived Neurotrophic Factor (BDNF), which promotes brain cell growth, synapse formation, and overall brain development.

## Two Types of Inactivity:

1. **Physical Inactivity:** When we spend too much time sitting (or sleeping). This can lead to cardiovascular issues, inflammation, musculoskeletal problems, and more.
2. **Intellectual Inactivity:** lack of engaging in mentally challenging activities, such as reading, learning, or solving problems. Higher education levels and meaningful work that engages both the mind and body have been shown to play a protective role against dementia.

**Additional Thoughts on Intellectual Activity:** Engaging in intellectual pursuits not only benefits brain health but also enriches social connections, which have been linked to dementia prevention. Increasing muscle strength and activity, especially through weightlifting or resistance training, produce beneficial brain-protective chemicals.

### **How Inactivity Can Lead to Alzheimer's Disease:**

1. Regular physical activity promotes neuron and synapse development, while inactivity leads to the opposite - the pruning of connections. Since AD primarily affects synapses, a greater number of synapses can provide better protection.
2. Physical activity triggers the release of substances like BDNF and NGF, possibly even generating new brain cells (neurogenesis). Inactivity deprives the brain of these benefits.
3. Reduced physical activity results in less blood flow to the brain, slower toxin clearance, impaired digestion, and other adverse effects.
4. Muscle contraction, especially during strenuous activity, stimulates the production of brain-protective chemicals called myokines. Inactivity hinders the production of these chemicals.
5. Inactivity can lead to excess weight gain, especially around the abdomen, producing inflammatory chemicals and other health issues.

**"Use It or Lose It":** Regular mental effort is essential for maintaining a healthy brain. Exercise is one of the most well-researched methods to prevent dementia, as it stimulates the release of BDNF, a critical protein for nerve cell survival and brain health.

## CHAPTER 3

# Insults/Intoxicants/Intoxication

**Definition and Impact of Insults:** Insults, in our context, refer to events or occurrences that damage body tissues or organs. This category includes toxins, such as smoke, alcohol (especially excessive consumption), lead, mercury from dental fillings, and excessive consumption of certain nutrients like glucose, copper, and iron.

## Categories of Toxins:

1. **Atmospheric Toxins:** These are present in the environment, including air pollution, mold, and chemicals in the atmosphere, like pesticides, herbicides, and antibiotics in food.
2. **Deliberately Ingested Toxins:** These include substances ingested or inhaled, such as alcohol, illicit drugs, sugars, artificial sweeteners, and harmful chemicals in processed foods.
3. **Toxins from Personal Care Products:** Toxins applied to the skin through personal care products, such as makeup, hair sprays, and deodorants.
4. **Toxins Generated Internally:** Some chemicals are produced within the body as a result of metabolic processes or from failed attempts to break down certain foods, like gluten, leading to the accumulation of toxic forms of the incompletely digested or metabolized foods.

**How Toxic Substances Can Harm the Brain and Lead to Dementia:** Accumulation of toxins, including heavy metals like mercury, can cause direct damage to the brain. Additionally, toxins trigger the brain's defensive mechanisms, leading to neuroinflammation. Prolonged exposure to these toxins and inflammatory chemicals can contribute to the development of Alzheimer's disease.

**Intoxicants:** Intoxicants include toxins intentionally taken into the body, chemicals applied to the body, and those generated internally due to metabolic processes. These substances can include alcohol, drugs, sugars, artificial sweeteners, chemicals in processed foods, pesticides, antibiotics, hormones in food, GMOs, additives, and artificial flavorings.

**Side Note on Toxicity and Brain Health:** Ineffective removal or clearance of chemicals from the brain and body can also contribute to toxicity. This can result from liver issues, inadequate production of detoxifying substances like glutathione, or difficulty in breaking down certain chemicals.

## CHAPTER 4

# Injury

**Definition of Injury:** Injury, in the context of Alzheimer's Disease (AD), refers to physical trauma or damage to brain structures. Some examples include head injuries (concussions and traumatic brain injuries), repeated exposure to blast injury (from artillery or other projectile fire common in warfare), and Chronic Traumatic Encephalopathy (CTE) often seen in football players. Additionally, vascular damage, such as strokes, transient ischemic attacks (TIAs), and aneurysm ruptures, can disrupt blood flow, oxygen, and nutrient supply to brain cells.

## How Past Injuries Contribute to AD:

- 1. Chronic Inflammation:** Injuries can trigger long-term inflammation, with activated microglia attacking brain tissue.
- 2. Reduced Oxygen Supply:** Damaged blood vessels can decrease oxygen delivery to brain cells.
- 3. Microvascular Damage:** Damaged small arteries and veins can lead to inadequate nutrient and oxygen supply, promoting chronic neuroinflammation and degeneration.

## CHAPTER 5

# Imbalances

**Definition of Imbalances:** Alzheimer's Disease fundamentally involves an imbalance between synapse-building (synaptogenesis) and synapse-destroying (synaptoclastic) activity, with the latter dominating. Maintaining equilibrium in various aspects of brain health is vital. Imbalances in sex hormones (testosterone, estrogen, and progesterone), trace metals (zinc and copper), omega-6 and omega-3 fatty acids, excitatory versus inhibitory neurotransmitters, and glutathione/mercury balance can adversely affect brain structure and function.

**How Imbalances Lead to AD:** Chronic cortisol dominance relative to sex hormones and copper dominance relative to zinc (which is very common in both neurodevelopmental and neurodegenerative conditions) can damage brain structure and function. Emotional stress, aging, menopause, and illness can disrupt hormone balance, affecting brain health.

## CHAPTER 6

# Insufficiencies/Inadequacies

**Insufficiencies/Inadequacies and Alzheimer's Disease:** The brain, a highly demanding organ, requires resources...lots and lots of resources. These include oxygen, water, macronutrients (like omega-3 fatty acids and certain sugars), micronutrients (such as B vitamins, vitamins C, D3, K2, and minerals like zinc, magnesium, and potassium), and essential hormones (estrogen, testosterone, progesterone, and thyroid hormones).

## How Insufficiencies/Inadequacies Lead to AD:

- 1. Nutrient Deficiency:** Neurons rely on oxygen and nutrients for their functions, and when these are insufficient, neuronal functions like repair, reproduction, synaptic signalling, and memory processing suffer.
- 2. Inadequate Oxygen:** Insufficient oxygen supply to the brain can trigger inflammation, similar to the response to an insult or injury.
- 3. Toxin Accumulation:** Brain cells require nutrients to remove toxins. Insufficiencies can lead to toxin buildup, such as homocysteine and amyloid beta, contributing to AD.

## CHAPTER 7

# Insulin Resistance

**Definition of Insulin Resistance:** Insulin resistance refers to reduced sensitivity to insulin in the body's insulin-dependent processes, such as glucose uptake and lipolysis. Insulin plays a vital role in memory formation and glucose utilization in the brain. Maintaining steady, low insulin levels is crucial for brain health.

## How Insulin Resistance Can Lead to AD

Insulin resistance in the brain results in:

- **Inadequate Glucose Supply:** Brain cells do not receive the necessary glucose for energy.
- **Impaired Cognitive Function:** The brain loses the cognitive benefits of insulin. Insulin controls several key brain functions, including the protection of synapses and formation of memories.

**Tests and Precautions:** Regularly monitor glucose levels to check for prediabetes or diabetes and maintain healthy blood glucose levels. Additionally, monitor insulin levels even if blood sugar levels are normal to detect and address insulin resistance.

## CHAPTER 8

# Infections

**Definition of Infections/Infestations:** Infections/infestations involve the presence of pathogenic agents like bacteria, protozoans, or viruses in or on a host's body. Recent research challenges the belief that the brain is sterile. Certain infections in various body parts, such as the mouth, sinuses, and gut, have been associated with Alzheimer's disease. Pathogens like Herpes simplex virus, *Borrelia burgdorferi*, and fungi have been linked to dementia.

## How Bugs/Infections Can Lead to AD

1. **Direct infection of brain cells:** Some viruses preferentially target the brain and nerve cells, causing ongoing damage.
2. **Immune Response:** The brain's immune cells, such as microglia, may react to invading pathogens, triggering neuroinflammation.

COVID-19 is a good example. More and more neurologists have reported seeing an upsurge in the incidence of dementia cases following viral infection.

## CHAPTER 9

# Immune Dysfunction

**Definition of Immune Dysfunction:** Immune dysfunction encompasses various failures in the body's defense mechanisms against infectious organisms. It includes immune deficiency diseases (like AIDS), autoimmune disorders, and allergies.

**The Immune System's Role in Brain Health:** The immune system is crucial for protecting the brain from infections and damage and providing feedback to the brain. Immune and nervous systems develop together, influencing each other's growth and development.

## How a Dysfunctional Immune System Can Lead to AD:

- 1. Overactive Immune Response:** An overly active immune system can inadvertently damage brain cells.
- 2. Underactive Immune Response:** An underactive immune system may fail to control infections, allowing them to harm the brain.
- 3. Allergies and Food Intolerances:** Immune responses to harmless substances can lead to attacks on the protective barriers around brain cells.
- 4. Infections Triggering Brain Immune Response:** Illnesses in the body can activate the brain's immune system, causing microglia to damage brain cells.

A well-balanced immune system is vital for brain health, protecting against infections and supporting recovery. However, immune dysregulation can have negative consequences for brain function, contributing to neuroinflammation, cognitive decline, and mood disturbances. Understanding the complex relationship between the immune system and the brain is essential for addressing neurodegenerative diseases and mood disorders effectively.

## CHAPTER 10

# Intestinal Dysfunction

Intestinal challenges encompass a range of issues, including stomach ulcers, food intolerances, low stomach acid, low bile salt levels, and leaky gut syndrome. These challenges can have direct or indirect effects on brain health.

**How Intestinal Dysfunction Leads to Brain Disorders: Intestinal dysfunction can affect the brain in several ways:**

- 1. Nutrient Absorption:** Impaired digestion and absorption in the gut can result in nutrient deficiencies. For example, zinc absorption can be hindered by conditions like gastric bypass surgery, Crohn's disease, and in certain populations like vegetarians, pregnant and breastfeeding women, sickle cell patients, and alcoholics.
- 2. Gut-Brain Connection:** The gut contains a significant number of neurons, a diverse microbiome, and produces neurotransmitters like serotonin and dopamine. Dysfunctional gut health can influence brain function, mood, and cognition.
- 3. Inflammatory Impact:** Gut disorders can lead to systemic and neuroinflammation, contributing to brain inflammation and related issues.
- 4. Medications and Brain Health:** Drugs used to treat digestive problems, like proton pump inhibitors (PPIs), can inhibit the release of bile acids and pancreatic enzymes, resulting in severe malabsorption of nutrients essential for brain health. Prolonged use of PPIs has also been linked to an increased risk of heart attacks, which can indirectly affect brain function.
- 5. Immune Complex Formation:** Partially digested proteins entering the bloodstream due to gut issues can lead to the formation of immune complexes. These complexes can potentially damage the blood-brain barrier.

**Gut-Brain Relationship:** The gut is closely linked to the brain and nervous system, and understanding this connection is essential for comprehensive health. Research suggests that neuro-enterology, a field studying the interaction between the gut and the nervous system, could provide valuable insights into various health conditions.

In summary, intestinal challenges and gut dysfunction can have profound effects on brain health. These challenges may lead to nutrient deficiencies, inflammation, and digestive medication-related issues, all of which can impact brain function, mood, and cognitive abilities. Maintaining a healthy gut is crucial for overall well-being and may help prevent brain-related disorders.

## CHAPTER 11

# Insomnia

**Definition of Insomnia:** Insomnia is characterized by inadequate or poor-quality sleep or an inability to fall asleep and stay asleep. It is a common sleep disorder that can have significant effects on physical and mental health.

Quality sleep is essential for brain health and cognitive function.

## Consequences of Insomnia on Brain Health:

1. **Cognitive Decline:** Chronic insomnia is linked to cognitive decline and an increased risk of neurodegenerative diseases like Alzheimer's.
2. **Memory Problems:** Poor sleep can lead to memory deficits, difficulty concentrating, and reduced problem-solving abilities.
3. **Mood Disorders:** Insomnia is associated with an increased risk of mood disorders, including depression and anxiety.
4. **Neuroinflammation:** Sleep deprivation can trigger neuroinflammation, which is implicated in various brain disorders.
5. **Reduced Creativity:** Lack of REM sleep, which is essential for creative insights, can hinder creative problem-solving.

## CHAPTER 12

# Isolation

**Definition of Isolation:** Isolation refers to a state of limited or reduced social contact or interaction with others. It can result from physical separation, emotional disconnection, or a lack of social relationships.

**The Importance of Social Connections:** Humans are inherently social beings, and social connections are vital for physical, mental, and emotional well-being. Research, including a landmark study from Harvard University, has shown that social connections contribute significantly to health and longevity. Both the quality and quantity of social interactions matter, with deep personal relationships being particularly beneficial.

**The Importance of Staying Socially Active:** Maintaining social connections and staying socially active is crucial for brain health. Engaging in social activities, building relationships, and participating in meaningful interactions can help prevent or mitigate the negative effects of isolation on the brain.

In conclusion, isolation and loneliness can have a profound impact on brain health, leading to an increased risk of dementia, mood disorders, and cognitive decline. Prioritizing social connections and staying socially active is essential for maintaining a healthy brain and overall well-being.

**Impact of Isolation on Brain Health:** Isolation and loneliness can have detrimental effects on brain health and overall health:

- 1. Higher Risk of Dementia:** Loneliness and social isolation are associated with a higher risk of Alzheimer's disease and other forms of dementia.
- 2. Mood Disorders:** Social isolation can lead to an increased risk of mood disorders such as depression and anxiety, which can compromise brain structure and function.
- 3. Social Frailty:** Loneliness and isolation can contribute to social frailty, a state characterized by a lack of social engagement and a decline in social activities. Social frailty is linked to cognitive decline.
- 4. Memory and Cognition:** Both loneliness and social isolation can impact memory and cognitive function, ranging from mild to severe effects.

## Discussion:

We must not forget the influence of factors such as time, genes, age, individual reparative capacity (ability to “bounce back from injury”), age, socio-cultural environment, lifestyle factors, diet, emotional factors (e.g. stress can delay recovery) and physical environment (moving to a warmer, sunnier climate can significantly improve your chances of recovery).

Each of these would require a separate study, but this is just to get you started. Most of us can see ourselves in one or more of the conditions mentioned above. Take yours truly (me), for instance: because of my being in the military, I have suffered a concussion (or more, it's all blurry to me now 😊), have repeatedly been exposed gun fire; during a difficult time in my life, I have suffered through long periods of severe depression and terrible migraines. During those times, I remember experiencing cognitive deficits, including trouble remembering words and names and having trouble sleeping.

Knowing how dangerous these were to my long-term health, I had to apply many of the principles I will be talking about in subsequent reports/emails, so be sure to subscribe and follow us.

## Conclusion:

Thanks so much again for taking this vital step to securing your brain health by downloading this discourse.

All this is an attempt to classify the causes of dementia in a way that is simple, straightforward and easily understandable to the average person, so that the average person (if that's you) can make better decisions and take better steps to safeguard the health of your brain.

In real life, things usually tend to be much more complex than this; there's the interplay of genes, the environment, social contexts, developmental challenges, and other factors that factor in that can attenuate or worsen certain situations.

Everything and everyone is different. In other reports, we will be talking about the 12 factors above can eventually lead to dysfunction, damage and death of brain cells...and more importantly, show you the simplest, most direct way to counter these threats or contributors to Alzheimer's disease.

Thanks again, and stay tuned for more information.



## ABOUT THE AUTHOR

# David Ajibade M.D.

**Dr. David Ajibade is the founder and medical director of Brain and Body Solutions, Ltd., an integrated health center in Abuja, Nigeria, and the Executive Director of Brain and Body Foundation LLC, a non-profit organization established in Nigeria and the U.S. Over the years, he has actively advocated for the use of nutrients and nutraceuticals as adjuvants in the treatment of brain disorders, especially for conditions that do not have a satisfactory, clear-cut treatment. Such disorders include but are not limited to diseases like cerebral palsy, epilepsy, dementia, and other cognitive impairments to name but a few.**

**Since 2013, he has treated thousands of patients that have seen remarkable improvements in their mental, neurological, and physical health through the use of various supplements. It is through this treatment practice that he continues to see very promising results in a yearlong Nigerian study researching the use of Vitamin D3 in the treatment of sickle cell disease. Early results indicate it is highly likely that the results from this study will forever change the way sickle cell disease is treated in Nigeria, and around the world.**

**In addition to several business interests, Dr. Ajibade is currently volunteering as a Community Health Educator for the Alzheimer's Association, assisting with education, outreach programs, and the providing of support for families living with dementia. His extensive experience on TV, radio, and large speaking engagements enables him to deliver a wealth of knowledge on the challenges associated with Alzheimer's, especially for those in the black community.**