

NAMA-Seminars in Ayurveda

Peering through the Fog: Ayurvedic Management of Alzheimer's Disease

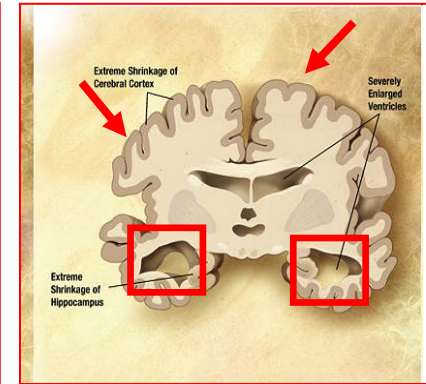
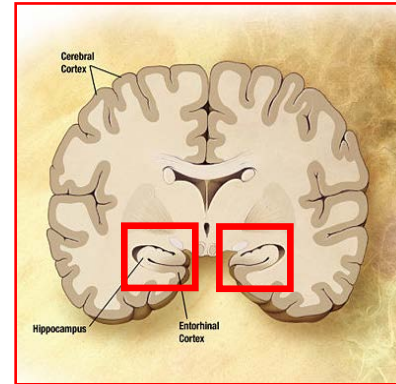
Monday, April 26, 2021

5:00 PM - 6:00 PM.

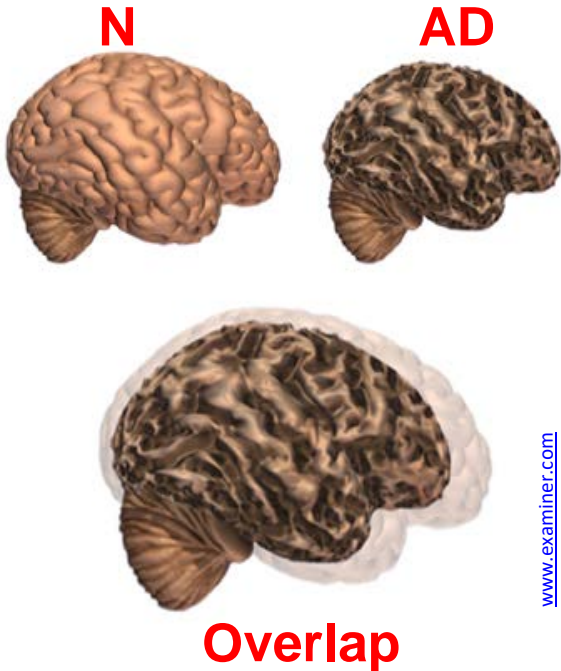
Alzheimer's Disease

Alzheimer's disease (AD) is a progressive, age-associated neurodegenerative disease.

~5 million Americans with AD



<https://en.wikipedia.org/wiki/Alzheimer>



Alzheimer's Disease-Stages

<http://www.alz.org/>

**Prodromal (earliest stage before any classic AD symptoms appear-
Purvarupa)**

Subjective Cognitive Impairment

Increasing forgetfulness

Losing a train of thought

Early-stage Alzheimer's (mild)

A person may function independently. Will experience Brain Fog and memory lapses on a frequent basis that is evident

Alzheimer's Disease-Stages

<http://www.alz.org/>

Middle-stage Alzheimer's (moderate)

Middle-stage Alzheimer's is typically the longest stage and can last for many years. The person will require a greater level of care as he/she becomes more dependent on the caregiver

Late-stage Alzheimer's (severe)

In the final stage of the disease, dementia symptoms are severe. Individuals need 24/7 assistance and care.

At this stage, individuals may:

Have difficulty communicating.

Become vulnerable to infections, especially pneumonia.

The perfect Alzheimer's drug would:

| INCREASE/ENHANCE/IMPROVE/OPTIMIZE | DECREASE/REDUCE/PREVENT |
|--|--|
| α -cleavage | homocysteine |
| neprilysin | APP β -cleavage |
| IDE | APP γ -cleavage |
| microglial clearance of A β | caspase-6 cleavage |
| autophagy | caspase-3 cleavage |
| BDNF | APP β -oligomerization |
| NGF | P-Tau and PHF |
| netrin-1 | oxidative damage and optimize ROS production |
| ADNP | NF κ B |
| SIRT1 | glial scarring |
| PP2A activity | inflammation |
| phagocytosis index | synaptoclastic signaling |
| insulin sensitivity, | Neuronal cell death |
| axoplasmic transport | |
| mitochondrial function and biogenesis | |
| cholinergic neurotransmission | |
| increase synaptoblastic signaling | |
| improve LTP | |
| vitamin D, B12, and Zn | |
| resolvins | |
| detoxification | |
| vascularization | |
| cAMP | |
| Glutathione | |
| optimize estradiol, progesterone, E2:P ratio, free T3, free T4, TSH, pregnenolone, testosterone, cortisol, DHEA, GABA, and insulin | |

Other options for AD?

Ayurvedic Approach to Alzheimer's Disease

Ayurvedic Approach to Alzheimer's Disease

Vata Vyadhi- (Neurodegenerative diseases):

AD= Prana Vrta Samana Vatavyadhi

SANCHAYA & PRAKOPA: Vayu Accumulation and Aggravation- vishama agni, faulty digestion, constipation and gas.

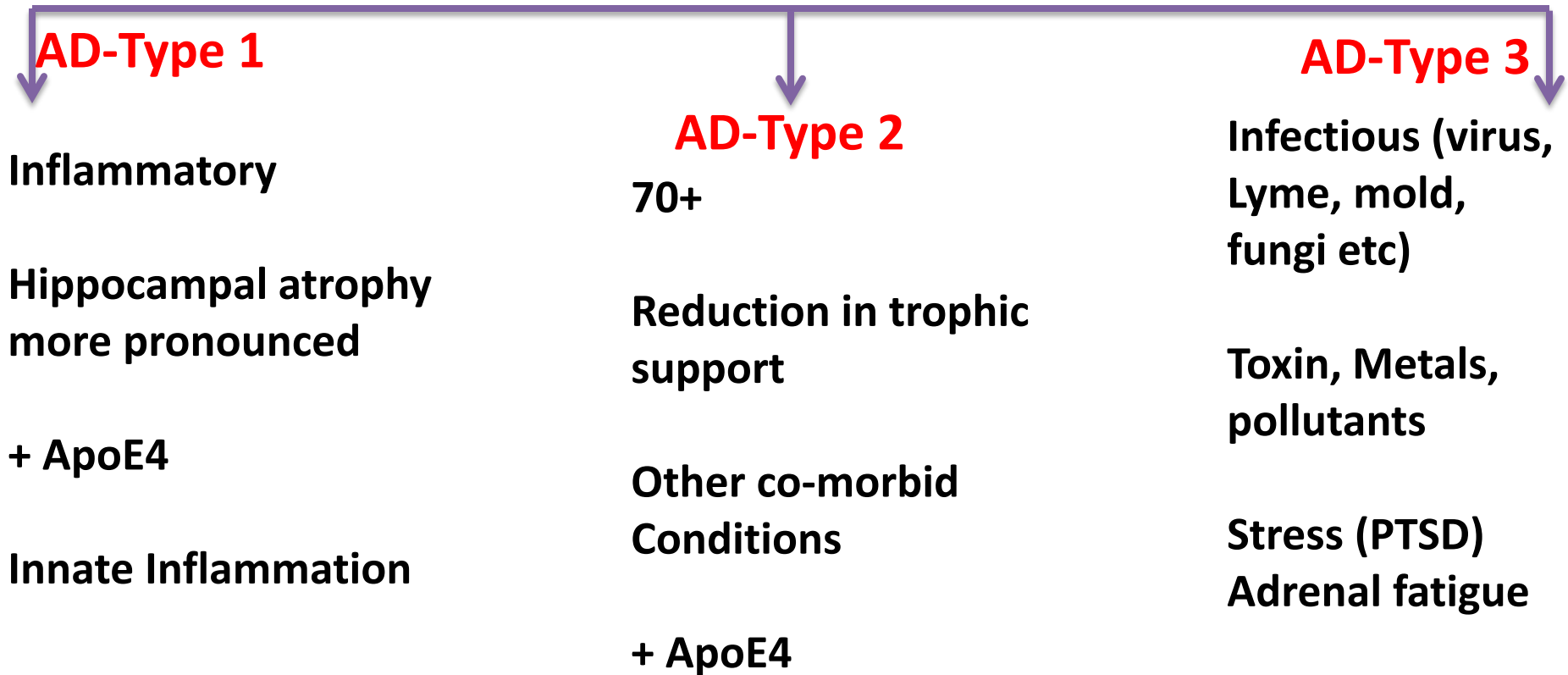
PRASARA & STHANA SAMSHRAYA: Vata- Overflow (circulatory system- Rasa/ Rakta dhatus)

Vyakti & BHEDA: A preexisting weakness in the brain areas triggers Vata Relocation to the nervous system and we have a condition of all 5 *Vayus imbalance* in the *Majja dhatu* of the *Majja Vaha & Mano Vaha Srotas*.

The condition is exacerbated by *pitta or Kapha* provoking lifestyles, This defines the major *Vata/Pitta* pathology or *Vata/Kapha* physiology

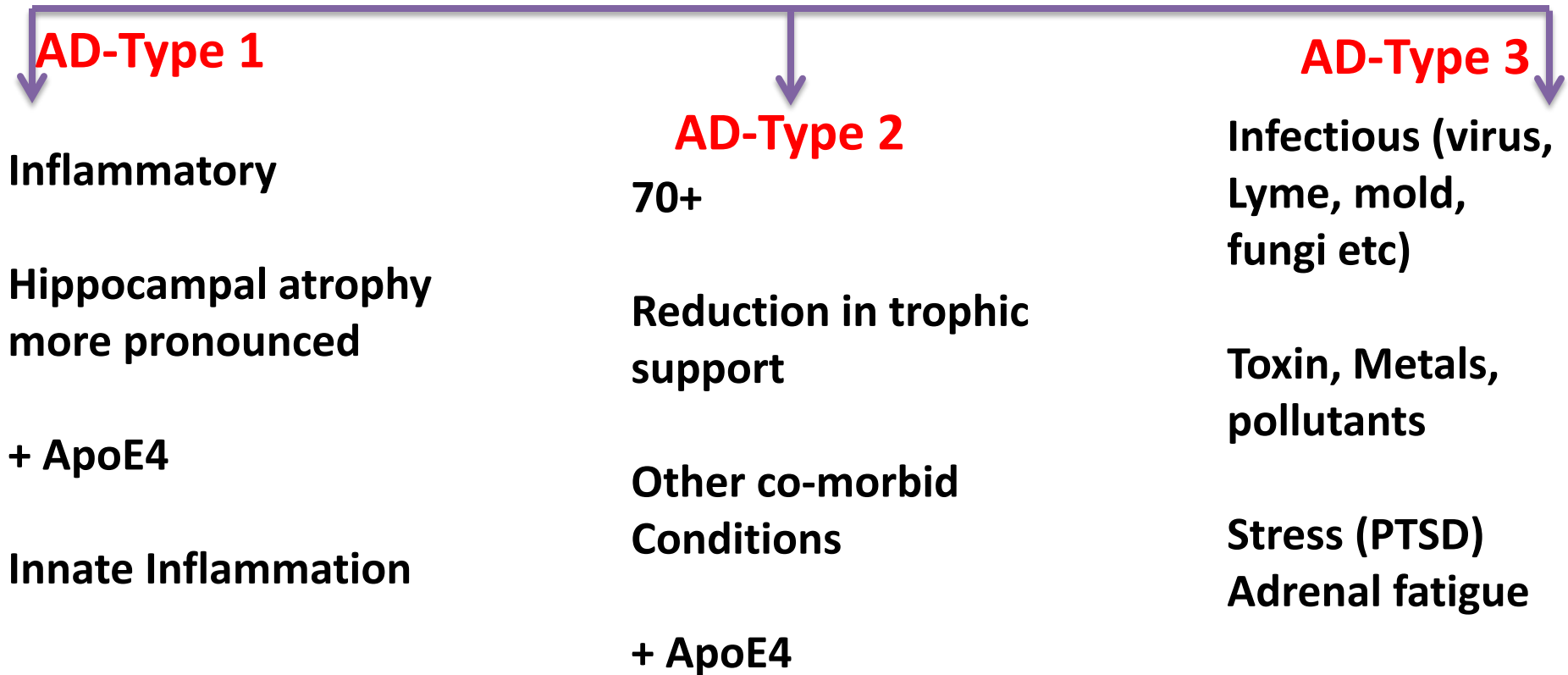
AD-Subtypes-Characteristics

AD-Subtypes



AD-Subtypes-Characteristics

AD-Subtypes



PITTA

Vata

Krimi

A Multicomponent Therapeutic approach to reverse/delay AD

Personalized therapeutic plan

1. DIET (Strengthen the gut environment)
2. Nutritional supplementation and **Herbs** to correct deficiencies (Zn, Vit D, Vit B12, Fe, Na/K, Homocysteine, Blood Glucose etc)
3. Engage in regular cardiovascular activity, strength, and balance/stretching physical activity



Personalized medicine- individualized for each patient

A Multicomponent Therapeutic approach to reverse/delay AD

4. Optimize sleep

5. Have regular social engagement

6. Meditation & Pranayama

15 mins 2x/day

Pranayama: 15 mins 2x/day

Anuloma/Viloma- Alt Nostril



Personalized medicine- individualized for each patient

A Multicomponent Therapeutic approach to reverse/delay AD

7. *Mental stimulating tasks

Memory

Attention

Visual spatial

Brain flexibility

Cognitively-stimulating activities **to induce**

Neuroplasticity



Personalized medicine- individualized for each patient

YOGA as a therapeutic option for AD

INVERSIONS: A combination of age and AD results in a decline in the volume of the blood flow into the brain. This in turn decreases the hemoglobin, sugar and oxygen content to the brain.

Yoga- Simple Inversions.

Heart is superior to the Head



<http://www.yogaartandscience.com/>

BALANCE: Small blood vessel damages in the brain can reduce cognitive function

Strengthen the blood vessels and also the brain centers through balance poses.



<http://yogaforhealthyaging.blogspot.com/>

Ayurvedic 'nervines'- Medhya Rasayana

| | Pitta (T1-AD) | Vata (T2-AD) | Krimi (T3-AD) |
|-----------------------------------|--------------------------|----------------------|---------------------------------|
| Chief | Mandukaparani | Ashwagandha | Shilajitu |
| Support | Guduchi | Mandukaparani | Mandukaparani |
| Support | Yashtimadhu | Sankhapushpi | Ashwagandha |
| Assist | Turmeric | Brahmi | Haritaki |
| Assist | Sankhapushpi | Pippali | Garlic |
| Digestive enhancer (D) | Jiraka (cumin) | Turmeric | Turmeric |
| Digestive enhancer (P) | Shunti – (Ginger) | Nutmeg | Dhanyaka (coriander) |

Tablets (vati/gutika), Churnas (Tea), Medicated oil –Massage (Thailam-Abhyanga) and Nasya.

PK & RASAYANA

Pancha Karma

Massage with suitable medicated oil reduces stress and increases cerebral blood flow

Significant brain functional activation in participants who received a massage.



Other Routes of Administration-Transcranial therapy

Transcranial oleation therapies

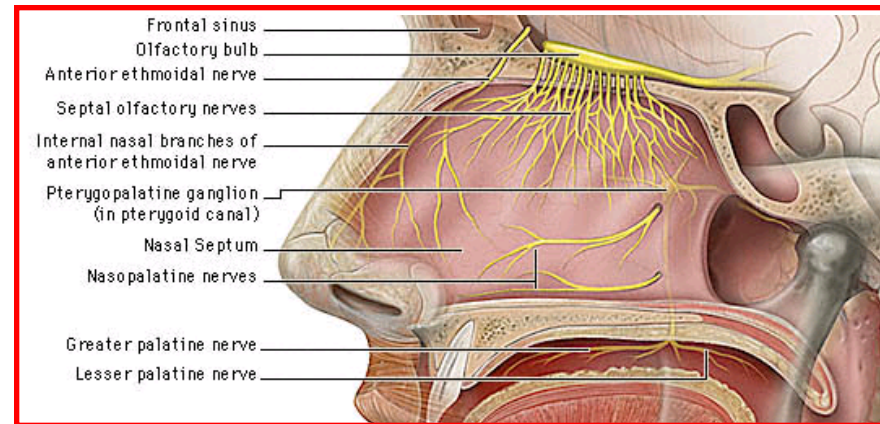
- Shirobasti** (a special leather cap is placed over the shaved head of a patient and medicated oil is poured and retained over the head for 30 to 45 minutes),
- ShiroAbhyanga** (medicated oil is smeared on the head followed by a gentle massage),
- ShiroSeka** (medicated oil is poured over the head in a continuous stream)
- Shirodhara** (gentle dripping of the medicated oil on the forehead)

influence hormonal and cerebral blood flow



Intra Nasal Administration of Herbs

The lack of barrier at the nasal-olfactory region of the brain, facilitates the dispersion of intra nasally administered herbs



INA (Nasya karma) is recommended for memory, sleep issues and other neurodegenerative conditions.



Comprehensive Individualized Systems-based Therapy for AD

-Good Dietary & Eating Practices

-Good Sleep Practices

-Physical and Mental Exercise

-Supplements

-Neuroceuticals, Cogniceuticals



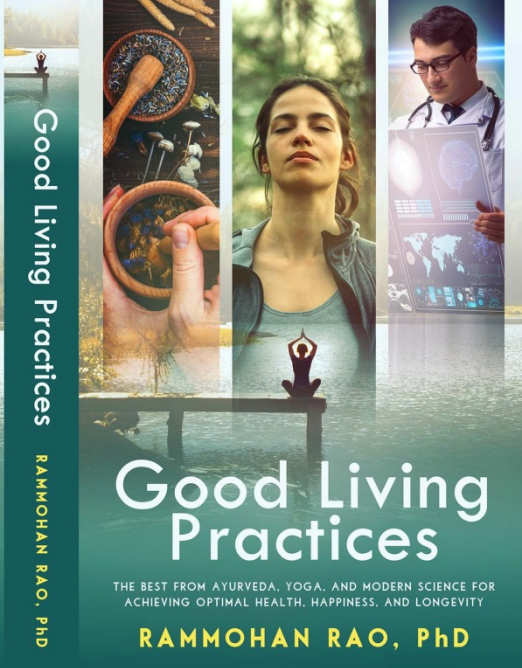
- Exercise for at least 30 minutes, four to six days a week
- Sleep eight hours a night
- Reduce chronic stress
- Eliminate simple carbs, trans fats and processed foods
- Eat more organic fruit and vegetables and omega-3-rich foods and less meat
- Take vitamin D3, fish oil and coenzyme Q10
- Practice mindfulness, meditate twice a day, and do yoga, especially gentle yoga inversions and one-leg balance poses
- Practice intermittent fasting by waiting at least 12 hours between dinner and breakfast
- Don't eat anything three hours before bedtime
- Reduce or avoid drinking alcohol
- Create new brain synapse pathways by using your nondominant hand for activities like brushing teeth, eating, writing and computer use
- Learn a new language or take up a musical instrument
- Stimulate the brain with puzzles, reading, bridge or study of new subjects
- Discuss hormone replacement therapy with your doctor (women)
- Maintain exceptional oral hygiene
- Even if you have retired, engage yourself in some activity or learn new professional skills
- Volunteer and serve your community
- Have an active social life and maintain positive relationships and deep connections
- Find inner peace



Ayurvedic Management of Alzheimer's Disease

My presentation is supported by the following peer-reviewed publications from our lab:

1. Schechter G, Azad GK, **Rao R**, et al (2020). *A Comprehensive, Multi-Modal Strategy to Mitigate Alzheimer's Disease Risk Factors Improves Aspects of Metabolism and Offsets Cognitive Decline in Individuals with Cognitive Impairment*. *Alzheimers Dis Rep*. 4(1):223-230
2. **Rao RV** (2017). *Ayurveda and the science of aging*. *J Ayurveda Integr Med* 9:225.
3. **Rao,RV** et al (2017). *Ayurvedic Profiling of Alzheimer's Disease*. *Altern Ther Health Med*. 23(3):46-50.
4. **Rao,RV** et al (2012). *Ayurvedic medicinal plants for Alzheimer's disease: a review*. *Alzheimer's Research & Therapy*, 4:22



Dr. Ram Rao's new book shares the best from Ayurveda, Yoga, and modern science for achieving optimal health, happiness, and longevity.

r Rao2006@gmail.com

[Good Living Practices-Amazon, USA & Worldwide](#)

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<https://www.youtube.com/watch?v=xDYpeAVzyrw&t=26s>

[Good Living Practices](#) - <http://www.kaivalyawellness.com>