

# CHAPTER-20

## MEDICATED GHRITA (GHEE): AN AYURVEDIC ELIXR FOR PEDIATRIC AND GERIATRIC MIND AND NERVOUS SYSTEM

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## **ABSTRACT**

*Medicated ghrita (ghee), a specialized form of clarified butter infused with potent herbs, known for its transformative impact on pediatric and geriatric mental neurological health. The infusion of medical drugs in to ghrita creates a synergy, that enhances the therapeutic effects of both components. Due to its potential to cross the Blood Brain Barrier (BBB), ghrita stands out as a remarkable substance. The synergy between ghee and potent herbs act as a brain tonic that promotes balances of neurotransmitters, cognitive functions, prevent degeneration, relives stress and ensure optimal mental wellbeing. In pediatric spectrum, ghrita offers a nurturing energy. Ghrita with potent herb becomes a catalyst for enhancing memory, concentration, cognitive growth and overall mental and physical wellbeing. In geriatric age neuroprotective, anti-inflammatory, and antioxidant properties of medicated ghrita supports neural degeneration, age related cognitive impairment. Calming influence of medicated ghrita alleviate stress and promote mental clarity and overall wellbeing. This article explores the therapeutic potential of medicated ghrita on pediatric and geriatric mental and neurological health. Through a comprehensive review of traditional knowledge and contemporary research, this article explains the ways in which ayurveda medicated ghrita nurture the neurological and mental wellness in both pediatric and geriatric age group with some ayurveda formulation as examples.*

**Keywords:** *Medicated ghrita, nervous system, pediatric, geriatric, ayurveda*

## **1. INTRODUCTION**

In ayurveda acharyas gave a detailed description about *Sneha Kalpana*. *Sneha Kalpana* is a pharmaceutical procedure in Ayurveda involving the preparation of medicaments. It utilizes *Kalka*, an herbal paste derived from various medicinal parts, *Kwatha*, a specially prepared decoction, or other liquids like milk and meat juice. These components are combined with a specific quantity of oil/ghee and heated accordingly, following therapeutic guidelines to create potent formulations for healing purposes<sup>1</sup>.

Medicated *ghrita* offers a nurturing touch in pediatric life. *Ghrita* infused with potent herbs and natural ingredients helps in the development of the brain, promoting emotional balance and cognitive growth<sup>2</sup>. Nurturing not only the physical health but also the mental faculties shape a child's future. Maintaining cognitive health is crucial in geriatric care. Medicated *ghrita* supports brain function and memory retention. Nourishing properties of medicated *ghrita* helps in managing neurodegenerative disorders thus promoting mental clarity and sharpness.

This article explores the importance of ayurvedic medicated *ghrita* in both pediatric and geriatric mind and nervous system with formulations as examples.

## 2. MATERIALS AND METHODS

Computerized literature search was performed to find out all published articles in the subject using keywords like *ayurveda*, medicated *ghrita* etc. The following database were used: PUBMED, SCOPUS, DHARA using specific keywords. Ayurvedic scriptures and modern textbooks were referred to review about the action of medicated *ghrita* in nervous system and mind in paediatric and geriatric age groups.

## 3. RESULT AND DISCUSSION

### 3.6 Ghrita: An Ayurvedic perspective

Ayurveda explained about eight types of *ghrita* which is obtained from eight types of animal's milk among the eight, cows' ghee is said to have superior quality<sup>3</sup>.

### 3.2 Properties of Cows Ghee

- a. **Rasa (taste):** Madhura (sweet)
- b. **Guna (properties):** Guru (heavy), Snigdha (Unctuous), Mridu (Light)
- c. **Virya (Potency):** Seeta (cold)
- d. **Vipaka (Post digestion):** Madhura (sweet)
- e. **Karma (Action):** Agnidipana (digestive), Medhya (intellect), Ojovardhaka (immunity booster), Balya (strength), Ayushya (lifespan increases), Rasāyana (Rejuvenative)
- f. **Therapeutic uses:** Apasmara (Epilepsy), Grahani (Malabsorption syndrome), Mada (Intoxication), Murcha (Syncope), Sirahsula (Headache), Smritinasa (Loss of memory), Unmada (Mania/psychosis)

Ghrita contain fatty acids provide nourishment to the brain cells. Butyrate in *ghrita* exhibit neuroprotective properties. These compounds protect the brain cells from oxidative stress and inflammation. Serotonin and dopamine in *ghrita* play a role in mood regulation. Anti-oxidant and anti-inflammatory properties of *ghrita* prevent inflammation and oxidative stress of nervous and brain tissue.

### 3.3 Importance of Ghrita

सर्पिस्तैलं वसामज्जा सर्वस्नेहोत्तमा मताः | एषु चैवोत्तमं सर्पिः संस्कारस्यानुवर्तनात् ||

Ghrita possesses a unique property known as *Samskarasya Anuvartanat*, according to Ayurveda. This characteristic allows *ghrita* to absorb the properties of added substances mostly herbs without compromising its own inherent qualities.

### **3.3.1 Significance of Sneha kalpana**

Enhance the drug absorption

Enhance the shelf life of preparation

Extract lipid soluble active principles from the drug

Therapeutic values of ghee/oil will add to the medicine.

### **3.4 Therapeutic Potential of Medicated Ghrita in Nervous System and Mind**

Madhura, seeta, Medhya, balya, ayushya properties of ghee promotes healthy growth and development in children and elderly. The cooling nature of *ghrita* helps to balance pitta, calming the mind and promoting mental clarity. Ghee is considered as *Medhya rasayana*, which means it nourishes the brain and enhances the intellectual properties. According to acharya *Susruta ghrita is jati satmya dravya*, means substances that settles with the body and soul, it does not create any disorder. According to acharya *Caraka, ghrita* is one among the *nitya sevaneeya dravya* (substances which can be taken daily). Due to *samskarasya anuvartana* property of *ghrita*, when substances having *medhya* and *balya* properties are processed with *ghrita*, it carries medicinal properties of herbs along with its own properties to the desired site.

Recent studies have explored *ghritas* ability to cross the BBB and to interact with specific receptors on BBB, facilitating its penetration. Medium chain fatty acid present in *ghrita* effectively pass through the tight junction. Lipophilic nature of *ghrita* allows it to dissolve in the lipid layer of the BBB, further enhancing its permeability.

### **3.5 Probable Mode of Action in Pediatrics**

Medicated *ghrita* has the ability to enhance pediatric brain and mind health. It offers a natural and holistic approach to nurturing the cognitive and emotional well-being of children<sup>9,10</sup>.

#### **1. Nourishing neurological pathways:**

Ghrita which is processed with ayurvedic herbs such as *Brahmi, Mandukkaparni* will

nurture neurological pathways. Bacosides present in *Brahmi* promotes dendritic growth and enhances the transmission of impulses between nerve cells. This

nourishment helps in brain development and support their cognitive abilities and leaning process.

**2. Balancing neurotransmitters:**

Ayurveda drug like *Shankhpushpi*, have adaptogenic properties that help to balance neurotransmitter level in the brain. This medicated *ghrita* helps to promote emotional stability by modulating neurotransmitters like serotonin and dopamine. This will aid in stress management and overall wellbeing.

**3. Calming mind**

Ayurveda herb like *jatamansi* possess calming and soothing effect. *Ghrita* containing *jatamansi* act as natural nervine tonic, helps to alleviate restlessness and anxiety in children. This medicated *ghrita* facilitate a peaceful state of mind, improve the focus and cognitive performance in children.

**4. Boosting Myelin Production:**

Myelin -a protective sheath around nerve fibres. Drugs like *vacha* and *ashwagandha* are believed to stimulate the production of myelin. Enhanced myelination supports efficient neural communication and strengthens cognitive function. This action is important during the growing years when neural connections are rapidly developing.

**5. Enhancing memory and concentration**

All the Medhya drug mentioned in ayurveda are known for their memory enhancing properties. It stimulates the brain cells and improve concentration. Intake of these *ghrita* believed to sharpen memory and attention span, which is essential for academic and cognitive growth in children.

Medhya rasayana drugs in ayurveda: *Mandukaparni* (*Centella asiatica* (L.)), *Guduchi* (*Tinospora cordifolia*), *Yashtimadhu* (*Glycyrrhiza glabra*), *Shankhpushpi* (*Convolvulus pluricaulis*)

### **3.6 Probable Mode of Action in Geriatrics 11,12**

The medicated *ghrita* infused with potent herbs will help in rejuvenating the aging mind and nervous system.

#### **1. Neuroprotective effects:**

Brahmi like herbs in medicated *ghrita* protect nerve cells from damage and promoting the growth of new nerve endings, thus fortifies the aging of nervous system.

#### **2. Antioxidant defence:**

Herbal components like ashwagandha, exhibit antioxidant properties. They neutralize harmful free radicals, support brain health by reducing cellular damage death. The antioxidant shield will preserve the cognitive function.

#### **3. Enhanced neurotransmitter activity:**

Herbs like *Shankhpushpi* enhances serotonin production, promotes the feeling of well-being and relaxation.

#### **4. Anti-inflammatory action:**

Mandukaparni, contain inflammatory compounds that reduce inflammation. By reducing brain inflammation, it protects the neural pathways and support optimal cognitive processing.

### **3.7 Important Ayurveda Formulations**

Sarswata *ghrita*, kalyanka *ghrita*, Brahmi *ghrita*, Panchagavya *ghrita*, kooshmanda swarasa *ghrita*, vachasidha *ghrita*, Mahapaishachika *ghrita* etc.

## **4. CONCLUSION**

Medicated *ghrita* stands as an Ayurvedic elixir, offering profound support for the pediatric and geriatric mind and nervous system. Medicated *ghrita* nourishes, promoting mental clarity, cognitive function and overall wellbeing. For pediatric population medicated *ghrita* nurture developing minds, helps in cognitive growth and emotional stability in geriatric community, its ability to rejuvenate the nervous system offers elderly to maintain mental faculty and thus improving their quality of life.

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