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A REVIEW ARTICLE ON AFTERNOON SLUMP: AN AYURVEDIC PERSPECTIVE

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ABSTRACT

The afternoon slump is a commonly experienced decline in alertness and performance occurring typically between 13:00 and 16:00 hours. Modern physiology attributes this dip to circadian rhythm modulation, postprandial metabolic changes, and neuroendocrine fluctuations. Ayurveda conceptualizes this phenomenon primarily as a transient aggravation of **Kapha dosha** following meals, leading to heaviness, lethargy, and sleepiness. This review article explores the afternoon slump through both biomedical and Ayurvedic frameworks, examining the role of Kapha in diurnal rhythms, its relationship with sleep (Nidra), and the implications of daytime sleep (Divaswapna). Short- and long-term consequences of habitual afternoon sleep are discussed, along with integrative strategies for management using Ayurvedic and contemporary approaches.

KEYWORDS: Kapha kala, Afternoon slump, postprandial sleepiness.

1. INTRODUCTION

The term “afternoon slump” refers to a predictable period of reduced cognitive alertness, diminished concentration, and increased sleepiness typically occurring in the early to mid-afternoon (Monk, 2005). This decline in alertness is considered a normal component of the

human circadian rhythm and is observed even in well-rested individuals (Carrier and Monk, 2000).

Physiologically, this phenomenon has been attributed to circadian oscillations in core body temperature, fluctuations in cortisol and melatonin secretion, postprandial blood glucose dynamics, and parasympathetic nervous system activation following meals (Waterhouse et al., 2005). Postprandial somnolence is particularly pronounced after large, carbohydrate-rich meals (Wells et al., 1997).

In Ayurveda, the afternoon slump may be interpreted as a transient increase in **Kapha dosha** following food intake. Kapha is characterized by heaviness (guru), slowness (manda), coldness (sheeta), and stability (sthira). After meals, especially those that are heavy, oily, sweet, or excessive in quantity, Kapha increases, resulting in drowsiness (nidra), lethargy (alasya), and heaviness (gaurava) (Sharma, 2014).

Thus, the afternoon slump may be viewed as a convergence of circadian physiology and Kapha predominance in the postprandial state.

2. Kapha and Its Relation to Day, Night, and Meals

2.1 Kapha in the Diurnal Cycle

Ayurveda describes the daily cycle (Dinacharya) as divided into doshic phases

- 06:00–10:00: Kapha period
- 10:00–14:00: Pitta period
- 14:00–18:00: Vata period
- 18:00–22:00: Kapha period
- 22:00–02:00: Pitta period
- 02:00–06:00: Vata period

These cycles are documented in classical Ayurvedic texts such as the *Ashtanga Hridaya* (Murthy, 2000). The *Kapha* periods are associated with heaviness and inertia, while Pitta governs digestion and metabolism, and *Vata* governs movement and neural activity.

Although early afternoon falls under the Vata phase, post-lunch physiological processes promote Kapha predominance, especially when meals are heavy or excessive. This aligns with modern observations that parasympathetic dominance increases during digestion (Waterhouse et al., 2005).

2.2 Kapha and Meals

According to Ayurveda, Kapha increases with

- Sweet (madhura), sour (amla), and salty (lavana) tastes
- Heavy (guru) and oily (snigdha) foods
- Overeating

Lunch is traditionally recommended as the principal meal due to heightened digestive fire (Agni) during midday (Pitta phase). However, improper food combinations, overeating, or low digestive strength (Mandagni) may lead to Kapha accumulation and postprandial drowsiness (Sharma, 2014).

3. Kapha and Its Relation with Sleep

Sleep (Nidra) is considered one of the three pillars (Trayopastambha) of health in Ayurveda (Sharma, 2014). Kapha's qualities—stability, heaviness, lubrication—facilitate the onset and maintenance of sleep.

From a neurobiological standpoint, sleep regulation involves complex interactions between homeostatic sleep pressure and circadian rhythms (Borbély, 1982). Parasympathetic dominance and reduced cortical arousal following meals may contribute to sleepiness, paralleling Kapha's stabilizing properties.

Excess Kapha, however, is associated with excessive sleep (Atinidra), mental dullness, metabolic sluggishness, and impaired digestion.

4. Effects of Afternoon Sleep (Divaswapna)

Daytime sleep (Divaswapna) is generally discouraged in classical Ayurvedic literature, except in specific conditions such as exhaustion, illness, childhood, old age, or during summer (Murthy, 2000).

4.1 Short-Term Effects

Short-term consequences of post-lunch sleep may include

- Heaviness of body and head
- Impaired digestion
- Reduced alertness upon waking
- Increased Kapha accumulation

Modern research suggests that long naps (>30 minutes) may induce sleep inertia, characterized by grogginess and reduced cognitive performance (Tassi and Muzet, 2000).

4.2 Long-Term Effects

Habitual daytime sleep may result in:

- Agnimandya (weak digestion)
- Obesity
- Metabolic disorders
- Kapha-related conditions

Epidemiological studies have linked prolonged daytime napping with increased risk of metabolic syndrome and type 2 diabetes (Yamada et al., 2016). Ayurveda conceptualizes similar outcomes under Kapha and Prameha pathologies.

5. Strategies to Tackle Afternoon Slump

5.1 Ayurvedic Approaches

1. **Dietary modification**

- Light, warm, freshly prepared lunch
- Inclusion of digestive spices (ginger, black pepper, cumin)
- Avoidance of heavy, cold, and oily foods.

2. **Post-meal practices**

- Short walk (Shatapavali)
- Sitting in Vajrasana
- Avoid lying down immediately

3. **Herbal support**

- Dry ginger decoction
- Trikatu (under supervision)

4. **Breathing practices**

- Kapalabhati
- Bhastrika

These interventions aim to stimulate Agni and reduce Kapha accumulation.

5.2 Modern Approaches

1. Balanced macronutrient composition (protein-rich meals)
2. Adequate hydration
3. Controlled caffeine intake
4. Short power naps (15–20 minutes)
5. Adequate nocturnal sleep (7–9 hours)

Research indicates that brief naps (<20 minutes) can improve alertness without inducing sleep inertia (Tassi and Muzet, 2000).

6. CONCLUSION

The afternoon slump represents a physiologically predictable dip in alertness influenced by circadian rhythms and postprandial metabolic changes. Ayurveda interprets this state as a temporary increase in Kapha dosha following meals, leading to heaviness and sleepiness. While occasional mild drowsiness is normal, habitual daytime sleep may disrupt digestive and metabolic balance.

An integrative approach—combining dietary regulation, daily routine (Dinacharya), digestive support (Agni stimulation), and evidence-based modern strategies—offers a comprehensive framework for managing afternoon lethargy effectively.

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