

**MOBILE PHONES AND ITS EFFECT ON HUMAN HEALTH:  
AYURVEDIC TREATMENT FOR EMF-INDUCED DISEASES**

Asvir Mandlavat<sup>\*1</sup>, Kamlesh Kumar Sharma<sup>2</sup>, Rina Sharma<sup>3</sup>, Rinku Kuwar K.<sup>4</sup> and  
Mamta<sup>5</sup>

<sup>1</sup>MD Scholar, P.G. Dept. of Ayurveda Samhita and Siddhant, MMM Govt. Ayurveda College  
(DSRRAU), Bhawrani Jalore, Rajasthan India.

<sup>2</sup>Professor & HOD, P.G. Dept. of Ayurveda Samhita and Siddhant, MMM Govt. Ayurveda  
College (DSRRAU), Udaipur, Rajasthan India.

<sup>3,4</sup>Lecturer, P.G. Dept. of Ayurveda Samhita and Siddhant, MMM Govt. Ayurveda College  
(DSRRAU), Udaipur, Rajasthan India.

<sup>5</sup>Assistant Professor, Agad Tantra department, NAC&RC, SKU, Visnagar, Gujrat, India.

Article Received on  
10 October 2024,

Revised on 30 October 2024,  
Accepted on 20 Nov. 2024

DOI: 10.20959/wjpr202423-34646



**\*Corresponding Author**

**Dr. Asvir Mandlavat**

MD Scholar, P.G. Dept. of  
Ayurveda Samhita and  
Siddhant, MMM Govt.

Ayurveda College  
(DSRRAU), Bhawrani  
Jalore, Rajasthan India.

**ABSTRACT**

The exponential rise in mobile phone usage over the last decade has raised concerns about its potential impact on human health. Numerous studies have documented the harmful effects of prolonged exposure to electromagnetic radiation (EMR) emitted by mobile phones, including risks of cancer, neurological disorders, and sleep disturbances. In response, the Ayurveda system of medicine has gained attention for its holistic and natural approaches to counteracting these effects. This review aims to synthesize research conducted over the last ten years regarding the impact of mobile phones on human health, diseases associated with it, and potential Ayurvedic treatments for mitigating these health risks.

**KEYWORDS:** Electromagnetic radiation (EMR), Radiofrequency (RF), Mobile phone, Cancer, Human health, Ayurveda, Insomnia.

**INTRODUCTION**

The proliferation of mobile phone technology has significantly transformed human life, providing instant communication and access to information. However, this rapid technological advancement has raised questions about the long-term health consequences of

electromagnetic fields (EMFs) generated by mobile phones. Over the past decade, there has been growing evidence linking mobile phone usage to various health disorders such as headaches, sleep problems, mental health issues, and in extreme cases, carcinogenesis. Ayurvedic medicine, with its holistic, natural, and preventive treatment approaches, offers potential strategies for mitigating the adverse effects of EMF exposure.

## Health effects of mobile phone usage

### 1. Electromagnetic Radiation and Human health

Mobile phones emit non-ionizing radiation through radiofrequency (RF) waves, which have been the subject of scrutiny in numerous studies. Researchers have found correlations between prolonged mobile phone usage and several health issues, although the exact mechanisms remain under investigation. Some studies show:

#### Sleep disorders

Continuous use of mobile phones disturbs the sleep cycle. As mentioned in Charaka Samhita about Kaal Nidra (Sleep in proper time) and Akal Nidra (Sleep in improper time). In the *Astauninditiya Adhyaya*, Acharya Charaka has explained that the sleep occurring at night is a natural & nourishing phenomenon so it is termed as *Bhutadhatri*-that nurses all the living beings. *Kala nidra* (Sleep in proper time) helps in a healthy long life and *Akalaja* and *Atiprasanga Janya Nidra* should not be practiced as it is described as *Kalaratri*.

Research indicates that RF exposure can interfere with melatonin production, which leads to sleep disturbances and disorders such as insomnia. This effect is particularly concerning in individuals who frequently use mobile phones before sleep. As noted earlier, mobile phone use—especially before bedtime—has been consistently linked with sleep disturbances, likely due to its interference with the body's natural circadian rhythms and melatonin production.

**Cancer risk:** There is evidence suggesting a potential link between RF exposure and gliomas or other brain tumors. For instance, the Interphone study reported an increased risk of glioma in individuals with long-term, high mobile phone usage. The World Health Organization's International Agency for Research on Cancer (IARC) classified RF radiation as a "possible carcinogen" (Group 2B) in 2011. The increased risk of gliomas and acoustic neuromas in high mobile phone users has been highlighted by several case-control studies.

**Cardiovascular diseases:** Mobile phone-induced EMFs have been associated with cardiovascular disturbances, including changes in heart rate variability and blood pressure.

Chronic exposure is suspected of contributing to increased oxidative stress in cardiac tissues, leading to heart-related complications.

**Cognitive Impairment and Neurodegenerative diseases:** Mobile phone usage is also associated with an increased risk of headaches, dizziness, and cognitive impairments, potentially due to the impact of RF on brain function. Recent findings have indicated that excessive RF exposure can lead to structural and functional changes in brain cells. Several studies indicate that chronic mobile phone exposure may lead to cognitive decline, particularly affecting memory and learning. Long-term EMF exposure has also been implicated in the pathogenesis of neurodegenerative diseases such as Alzheimer's and Parkinson's.

**Mental health issues:** Prolonged exposure to EMFs has been linked to increased anxiety, stress, and depression. Mobile phone addiction, coupled with constant exposure to RF radiation, has been correlated with the rise in mental health disorders.

## 2. Mechanisms of EMF-Induced Damage

The mechanisms through which EMFs from mobile phones affect biological tissues remain an area of active research. Hypotheses include:

**Oxidative stress:** Several studies suggest that EMF exposure generates free radicals, causing oxidative stress, DNA damage, and cellular apoptosis (Frei et al., 2012). This oxidative stress is believed to be a key contributor to neurodegenerative diseases like Alzheimer's and Parkinson's.

**Disruption of cellular communication:** EMFs may interfere with cellular signaling pathways and neurotransmitter release, potentially leading to the neurological and behavioral changes observed in mobile phone users.

### Ayurvedic approach to the treatment of diseases caused by mobile phone usage

Ayurveda, the ancient Indian system of medicine, offers a holistic approach to mitigating the health risks associated with mobile phone usage. Ayurveda emphasizes balance in lifestyle and diet, using natural remedies and preventive measures to reduce the harmful effects of modern technologies. Several Ayurvedic practices can be employed to counteract the effects of EMF exposure.

### 1. Rasayana therapy

Rasayana therapy, a rejuvenation treatment, focuses on enhancing overall health and longevity. It is particularly useful in combating oxidative stress, a significant factor in EMF-induced damage. Herbs such as Ashwagandha (*Withania somnifera*), Shatavari (*Asparagus racemosus*), and Amalaki (*Emblica officinalis*) are renowned for their antioxidant properties, supporting cellular repair and reducing free radical damage.

### 2. Herbal formulations for neuroprotection

For individuals experiencing cognitive decline or neurological disorders, Ayurveda recommends neuroprotective herbs such as Brahmi (*Bacopa monnieri*) and Gotu Kola (*Centella asiatica*).

These herbs enhance memory, improve cognitive function, and protect the nervous system from EMF-related damage.

### 3. Panchakarma detoxification

Panchakarma, a detoxification therapy in Ayurveda, is suggested for eliminating toxins (ama) that accumulate in the body due to prolonged exposure to EMFs. Regular Panchakarma treatments, particularly Virechana (Purgation therapy) and Basti (Medicated enemas), help cleanse the body and rejuvenate tissues.

### 4. Meditation and Yoga

Ayurveda also emphasizes mental well-being through meditation and yoga. Practices such as Pranayama (Breathing exercises) and Dhyana (Meditation) help reduce stress, improve focus, and mitigate the mental health impacts of mobile phone radiation.

### 5. Dietary and Lifestyle recommendations

Ayurveda advocates for the adoption of a Sattvic diet, which includes fresh fruits, vegetables, whole grains, and herbal teas to balance the body's doshas (energies). Additionally, minimizing mobile phone usage, especially before sleep, is a critical preventive measure recommended in Ayurveda to avoid disrupting circadian rhythms and melatonin production.

## CONCLUSION

The last decade of research has solidified concerns about the negative impact of mobile phone usage on human health, particularly about cancer, neurological disorders, cardiovascular issues, and sleep disturbances. While further studies are necessary to fully

understand the mechanisms and extent of EMF-induced damage, preventive and therapeutic measures are crucial. Ayurveda, with its holistic and natural approaches, offers promising strategies for both preventing and treating health conditions associated with mobile phone usage. Its focus on detoxification, rejuvenation, and neuroprotection presents a valuable complement to modern medical approaches, providing a balanced way to address the health risks posed by the modern mobile lifestyle.

## REFERENCES

1. Hardell, L., & Carlberg, M. Use of mobile and cordless phones and survival of patients with glioma. *Neuroepidemiology*, 2013; 40(2): 91-99.
2. Nittby, H., Grafström, G., Eberhardt, J. L., et al. Cognitive impairment in rats after long-term exposure to GSM-900 mobile phone radiation. *Bioelectromagnetics*, 2012; 29(3): 219-232.
3. Lowden, A., et al. Mobile phone exposure and sleep: A review of the literature. *Bioelectromagnetics*, 2011; 32(1): 48-57.
4. Thomee, S., et al. Mobile phone use and stress, sleep disturbances, and symptoms of depression among young adults: A prospective cohort study. *BMC Public Health*, 2011; 11(1): 66.
5. Frei, P., et al. Exposure to mobile phone electromagnetic fields and the risk of brain tumors: A case-control study. *Radiation Research*, 2012; 178(2): 161-171.
6. Singh, R., et al. Anti-oxidant and anti-aging properties of Ayurveda rasayana herbs: Implications for health. *Evidence-Based Complementary and Alternative Medicine*, 2012; 2012: 1-8.
7. Sharma, H., et al. Neuroprotective herbs in Ayurveda: A review. *Pharmacognosy Reviews*, 2013; 7(14): 165-175.
8. Vaidya, A. D. B., et al. Panchakarma and its role in disease prevention and treatment: A comprehensive review. *Journal of Ayurveda and Integrative Medicine*, 2014; 5(2): 71-75.
9. Telles, S., et al. Pranayama: The yoga of breath for stress management. *Journal of Ayurveda and Integrative Medicine*, 2012; 3(2): 100-104.
10. Pandey, R., et al. Mobile phone use and sleep quality: Recommendations from Ayurveda. *International Journal of Ayurvedic Medicine*, 2015; 6(1): 23-30.
11. P. Kashinath Pandey `Shashtri`, Dr. Gorakhnath Chaturvedi. *Charaka Samhita*. Chaukhambha Bharati Academy Varanasi, 2019; 2024.