

Excessive Use of Earphone's Side Effect and Management through Panchakarma.

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ABSTRACT

The earphone or headphone is such unwanted so much many times, in the hours of use of headphones, you forget that it can harm your ears as well as the body. People often use it for fashion style, but you do not know about its effect on the body. Earphones or headphones the use of which can cause problems to the ear as well as the body. Hearing loss by hearing music in high voice continuously from earphones and headphones first affects your ears. The hearing capacity of the ears is only 90 decibels, which gradually reduces 40 to 50 decibels by continuous listening due to which the complaint of deafness, headache or sleeplessness.

In Ayurveda, by using panchakarma therapy one can cure all the major hearing problem cause by excessive use of earphone or headphone.

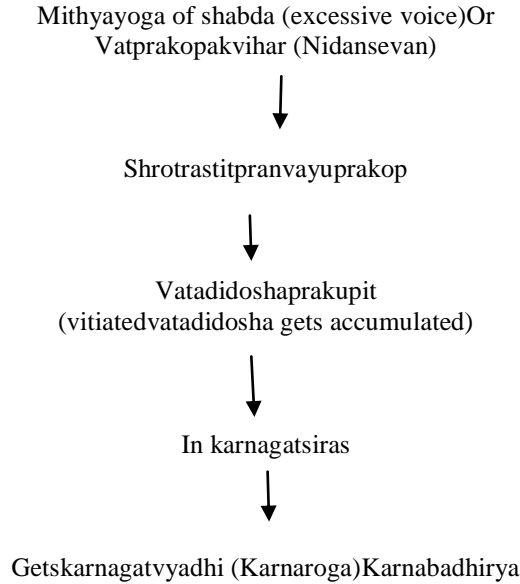
I. INTRODUCTION

Technology is the most necessary evil of our times and one such necessity currently is that of earphones/headphones. While taking early morning walk, crossing the street, boarding a metro, traveling in a bus, sipping coffee in a café or just a call in the office, throughout the day you will encounter several people listening to music or talking through earphones. However, by letting your earphones plugged in too much, you might not be disturbing the people around you, but you certainly are harming yourself enough without taking note of it.¹

The World Health Organization (WHO) estimated that around a billion young people across the globe could be at the risk of hearing loss because of the unsafe listening habits, they practice through earphones. The primary concern with the headphones is the volume exposure that they give the ears. Earphones are capable of producing very loud levels of sound very close to the ear and hence are very dangerous. However, it must be noted that it is not always about the volume of the headphones but also the long duration for which the earphones are used.²

In Ayurveda according to Shushrutaacharya there are 28 types of Karnaroga in Uttartantra³ According to Ayurveda, Shrotendriya originates from AkashaMahabhoota. Shabda (sound) travelling through Vata in the presence of Aakasha(space) comes in contact with ShrotendriyaAdhishthana (Karna) and transmitted through Shrotendriya to the ShravanaBuddhi which is responsible for perception of sound. So, Vata plays important role in normal hearing procedure.⁴ According to AcharyaVagbhatta, Vata associated with Kapha and getting increased or by neglect Karnanada, gives rise to hearing of loud sounds only, hearing with difficulty and gradually leads to deafness.⁵ common causes of karnaroga is mithayoga of excessive voice causes vitiatedvatadidosh gets accumulated in karnagatsiras giving rise to karnagatyadhis (Karnarog).

Samprapti:



Aim and objective

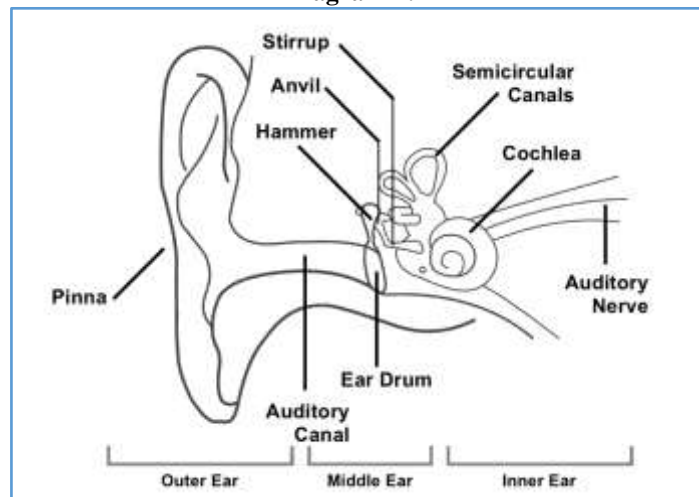
- To assessment the role of AyurvedicPanchakarma treatment in the prevention and management of the side effects of earphone or headphone.
- To assessment the Ayurvedic literature in useful life style disorder. Importance of Panchakarmand how it is beneficial in curing

harmful side effects of earphone that isKarnagatroga.

**Material and method-
Short anatomy and physiology of Ear.⁶**

What is the ear?
 The ear is the organ of hearing and balance.

Diagram 1:



What is the ear?

The ear is the organ of hearing and balance.

The parts of the ear include:

- **External or outer ear**, consisting of:
 - **Pinna or auricle.** This is the outside part of the ear.
 - **External auditory canal or tube.** This is the tube that connects the outer ear to the inside or middle ear.
- **Tympanic membrane (eardrum).** The tympanic membrane divides the external ear from the middle ear.

- **Middle ear (tympanic cavity)** , consisting of:
 - **Ossicles.** Three small bones that are connected and transmit the sound waves to the inner ear. The bones are called:
 - Malleus
 - Incus
 - Stapes
 - **Eustachian tube.** A canal that links the middle ear with the back of the nose. The eustachian tube helps to equalize the pressure in the middle ear. Equalized pressure is needed for the proper transfer of sound waves. The eustachian tube is lined with mucous, just like the inside of the nose and throat.
- **Inner ear** , consisting of:
 - **Cochlea.** This contains the nerves for hearing.
 - **Vestibule.** This contains receptors for balance.
 - **Semicircular canals.** This contains receptors for balance.

How do you hear?

Hearing starts with the outer ear. When a sound is made outside the outer ear, the sound waves, or vibrations, travel down the external auditory canal and strike the eardrum (tympanic membrane). The eardrum vibrates. The vibrations are then passed to 3 tiny bones in the middle ear called the ossicles. The ossicles amplify the sound. They send the sound waves to the inner ear and into the fluid-filled hearing organ (cochlea). Once the sound waves reach the inner ear, they are converted into electrical impulses. The auditory nerve sends these impulses to the brain. The brain then translates these electrical impulses as sound.

How does blaring earphone damage your ears?7

Earphones produce sound waves that reach our ears, making the eardrum vibrate. This vibration spreads to the inner ear via the small bones and reaches the cochlea which is a chamber in the inner ear which is filled with a fluid and consists of thousands of small hairs. When this vibration reaches the cochlea, the fluid vibrates making the hairs also move. The louder the sound, the stronger the vibrations and the more the hairs move.

The continuous and long-term exposure to loud music makes the hair cells to eventually lose their sensitivity to vibration. Sometimes the loud music also results in the cells bending or folding over which leads to the sensation of temporary hearing loss. The hair cells may or may not recover from these extreme vibrations. However, even when they recover, they mostly cannot function

normally which can cause permanent hearing loss or deafness and is almost impossible to be recovered from.

Side Effects of Using Earphones.⁷

Some of the harmful ways in which earphones can affect our ears are:

- NIHL(Noise-Induced Hearing Loss)
- Tinnitus
- Hyperacusis
- Hearing loss
- Dizziness
- Ear infection
- Excessive ear wax
- Pain in the ears
- Effect on the brain

NIHL: It is not only about the volume that you expose your ears to through those earphones but also the duration that can lead to noise-induced hearing loss (NIHL).

Tinnitus: The damaged hair cells in cochlea can result in a ringing, buzzing, or roaring noise in the ear or the head. This consequential electrical noise is called tinnitus.

Hyperacusis: More than 50% of the people who suffer from tinnitus are prone to develop high sensitivity to normal environmental sounds too. This condition is referred to as Hyperacusis.

Hearing Loss: As mentioned above, loud music or long exposure tends to make the hair cells bend down too much and severely, the extent of which can lead to temporary or permanent hearing loss.

Dizziness: Many times, the increased pressure in the ear canal due to loud noise can also result in dizziness.

Ear infections: Since the earphones are directly placed into the ear canal, they block the passage of air which enhances the chances of infections in the ear. The regular and long-term use of earphones also increases the growth of bacteria. These bacteria stay on the earphones and on more usage infect the ear. When the earphones are shared, the same bacteria from one person's ear transfer to the other person, exposing the person also to serious ear infections.

Excessive ear wax: Using the earphones for a long time also develops excessive ear wax which further accelerates the chances of tinnitus, hearing difficulty, earache, and frequent ear infections.

Pain in the ears: Long-term usage of earphones as well as using earphones that poorly fit can induce pain that can often extend to the inner ear as well,

leading to soreness in the vicinity of the ear i.e. from the jaws to the top of the head.

Effect on the brain: The electromagnetic waves that the headphones generate result in problems for the brain as well in the long term. High decibel noise levels withdraw insulation from nerve fibres that carry signals from the ear to the brain. Ear infections can also affect the brain.

MANAGEMENT OF PANCHAKARMA

Panchakarma is an ancient practice of healing and rejuvenation, which takes an individual through the journey of discovery, cleansing and awakening of one's healing energies and senses. The methods of Panchakarma treatment have been recorded in the thousands of years old Vedic texts along with other ancient medical teachings practised traditionally in India.

What is Panchakarma Treatment?⁸

Ayurvedic Panchakarma treatment is an Ayurvedic way to achieve a balanced mind, body and spirit. Panchakarma meaning is derived from two Sanskrit words – Pancha, which means five, and Karma, which means actions. Thus, Panchakarma procedure is a five-step process that detoxifies the human body.

How Panchakarma Can Help You?

Ayurveda is a science and art of appropriate living that helps to achieve longevity of life. Ayurveda emphasizes on the preventative and healing therapies, but apart from healing the body, it uses various methods of purification and rejuvenation of the body which ensures that the body will not only heal but also will be off to a healthy start.

Table 1

Abhyanga (Massage)	It is a form of Ayurvedic Panchakarma massage which is performed with warm oil infused with a dosha-specific herb. Abhyanga massage is beneficial for skin health, reducing muscle stiffness and promoting lymphatic drainage. Performing Abhyanga or massaging the head i.e. Shiroabhyanga and foot i.e. Padabhyanga is crucial in alleviating this condition from the ears.
Swedan	Swedan is an Ayurvedic method of sedation in which the individual is allowed to sit in a large tub filled with medicated steam like Bilba, Arand, Arka, Punarnava, Dhatura, Shigru, Ashwagandha or by Nadisweda.
Vaman	A procedure in which toxins present in the body are removed by inducing the vomiting. It has great effects on treating the various type of Karnagatropa. As it deeply rinses the body by eliminating the morbid Dosh out from the body and leads to healthy life.
Virechan	It is a procedure of expulsion of toxins of the lower gastrointestinal tract through the anal route. It helps in healing karnagat disorders.
• Kawala & Gandush:	Another helpful Ayurvedic therapy is kawala which is gargling of medicated oils or liquids and Gandush that implies withholding the medicated oil or liquid within the mouth without gargling for a certain amount of time. Performing either of this holds high significance in calming the vata doshas and minimizing the side effect earphones discomfort.
Shirodhara	Shirodhara (Shiro-Head, Dhara-flow) is considered as the most divine all Ayurvedic therapies. Shirodhara treatment is extremely relaxing,

	rejuvenating and enhances the functioning of the central nervous system.it can be used to treat a variety of condition including Karnagatroga.(NIHL,Tinnitus, Hearing loss, stress)
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II. DISCUSSION

Why choose Panchakarma treatment?

The Panchakarma therapy is a holistic treatment approach that has profound impacts on the mind, emotional balance and the body. Right from the sessions, where one is prepared for the Panchakarmatreatments, they can discover many distresses within themselves as their self-awareness increases. By the end of the treatment, they can be more in sync with their body and form a strong connection with the mind and spirit.

III. CONCLUSION

Everything you need to respite from the stress and noise that burdens our daily lives, you can find it here at this beautiful Ayurvedic centre in India. Plan your journey to healing and rejuvenation with us to achieve a mind-body balance that will enable you to live a happy and fulfilling life.

REFERENCE

- [1]. <https://roboguru.ruangguru.com>
- [2]. Make listening safe-WHO (<https://www.who.in>)
- [3]. KavirajaAmbikadattaShastri; SushrutaSamhita of MaharshiSushrutaSamhita with the Ayurveda tattvaSandipikahindi Commentary; ChaukhambaSanskritaSansthan Varanasi, reprint 2013 Uttartantra 20/3-6,pg. No.111
- [4]. KavirajaAmbikaduttaShastri; SushrutaSamhita of MaharsiSusruta with the Ayurveda tattvaSandipikahindi Commentary; Chaukhambha Sanskrit SansthanVaranasi,reprint 2013;Uttartantra 20/8, pg. No. 116.
- [5]. Brahmanandtripathi; astangahrdayam of srimadvagbhata with the nirmalahindi commentary; Chaukhambha Sanskrit pratishthandelhi, reprint 2014; Uttartantra 17/10, pg. No. 1000.
- [6]. @2022 University of Rochester Medical Center Rochester, NY (<https://www.urmc.rochester.edu>)
- [7]. Harmful effects of listening music with earphones- Manipal Hospitals (<https://www.manipalhospitals.com>)

- [8]. Ayurvediyapanchkarmavigyan by VidyaHaridasshridharkasture. (2010) Prakashan Shri BaidyanathAyurvedBhavan PVT.