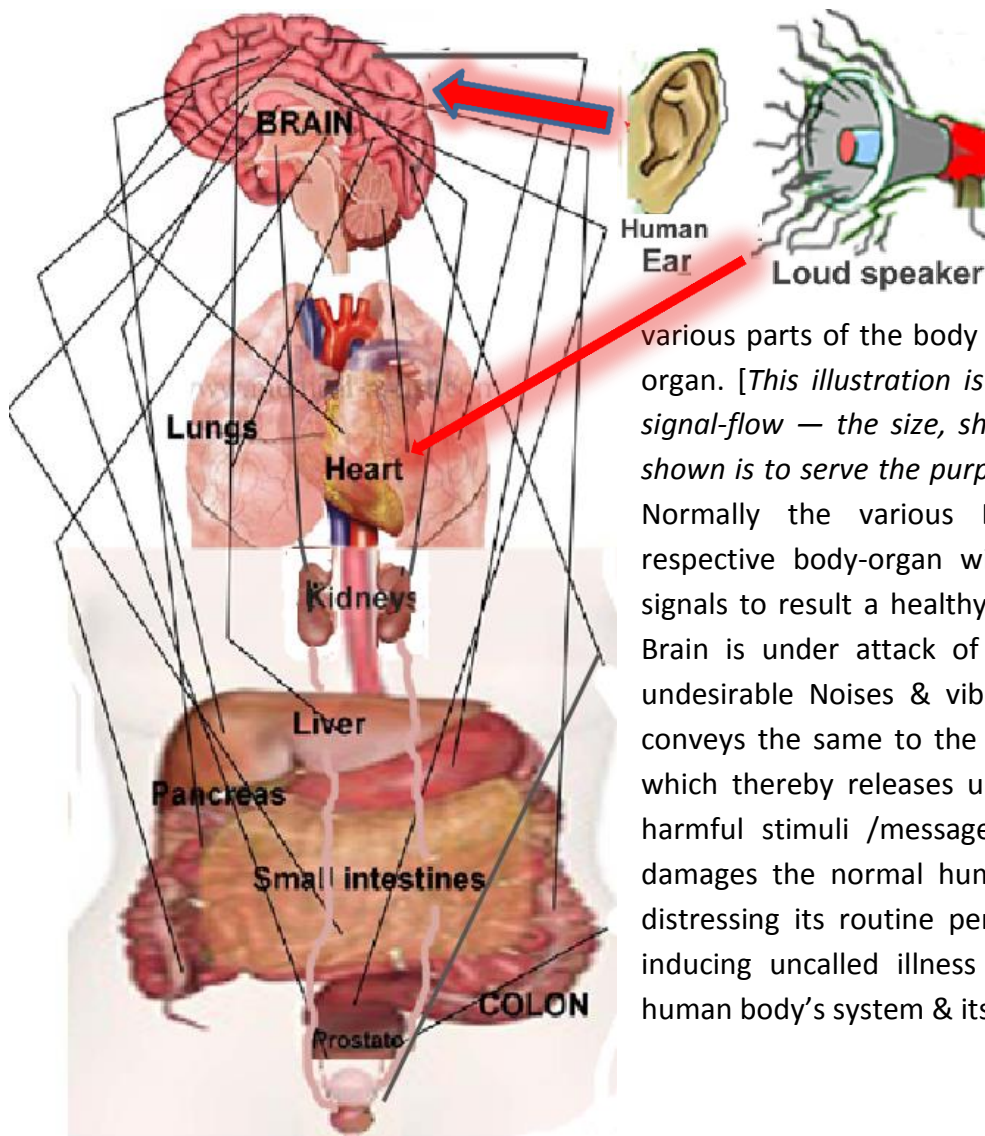


Excessive Noise/ Sound is extremely hazardous to human health. The human ear and its associated design linking the diaphragm to the senses & nervous system were not designed by Nature to bear higher loads. Various research have revealed that a human being can develop several unimaginable health problems when subjected to undesirable ambience containing higher noise decibels in the form of sound or vibrations. Negative-modernization which presented this contemporary world of ours with Hi-fi music & sound systems need to be experienced in sound proofing Auditoriums with provision of proper hearing-aid (protectors) if there be any requirement to listen to. Various countries have incorporated different Law to prevent its associated health hazards due to such undesirable exposures.



The black lines emerging outward from the BRAIN to the various body organs indicate how the signals and impulses travel to various parts of the body to affect the respective organ. [This illustration is prepared with random signal-flow — the size, shape, location of organs shown is to serve the purpose of this article only]. Normally the various Brain-parts trigger its respective body-organ with proper functioning-signals to result a healthy-system. But, when the Brain is under attack of hostile forces such as undesirable Noises & vibrations; the human-Ear conveys the same to the brain /nervous- system which thereby releases undesirable and discreet harmful stimuli /messages & toxic signals that damages the normal human-immune system by distressing its routine performance thereby also inducing uncalled illness and diseases into the human body's system & its related various organs.

The normal design of human system for suitable sound adaption is below about 50 decibels which corresponds just enough to a normal air-conditioner or a fridge working in a room. Instead, modern time enigmas now demands for human to listen the inbuilt music called *NAD*.

Significance of ***Nad*** within human beings: one must learn the most ancient & precious concept of wisely listening to the **Nad**. Just like fragrance out of flowers; this is a continuous heavenly hymn that emanates out of the **Creator** with a soothing rhythm within the human brain/ mind. If one can latch onto its melody; the true potency of a human being could be realized. Try best to get grips with this Divine piece of wondrous tune which is somewhat similar to that of the gentle buzzing of the bee-like creature —heard in village farm-fields at night. Moreover, proper understanding of this exclusive music could also lead one to the ENERGY Powerhouse of Nature. Various applications could be envisaged by virtue of harnessing this natural-mechanism leading one towards joyous and comfortable-living; it could also help promoting every purpose of human life upon our Universe and much Beyond.

Noise polluting hazard is a social evil thrust upon ignorant Public so as to deprive them of their birth-right towards a more civilized & comfortable life. Please do not hesitate to call-up the Police on No.100 and have such erring miscreants brought to justice when they violate the norms established for our healthy /comfortable living. Such offenders are bound to be within our society as negative forces who unfortunately try and thrive at our cost. Such Noise Pollution amounts to **Cruelty upon children** as it not only causes various health hazards but also reduces their learning & understanding capability. This evil also degrades and diminishes the quality of our life by its foul ambient-unpleasantness besides the various aspects already mentioned.

**Annexure 1 contains the various types of diseases caused by Noise Pollution, as extracted/downloaded from various websites. Annexure 2 is the presentation made by the Govt. of India in regard to such menace. Various health hazards alongwith punitive measures are also mentioned herein so as to prevent uncalled dangers upon the citizens' health.**

## **SECTION 1**

### **NOISE POLLUTION EFFECTS**

Noise pollution is the disturbing or excessive noise that may harm the activity or balance of human or animal life. Outdoor noise is summarized by the word environmental noise. Poor urban planning may give rise to noise pollution, since side-by-side industrial and residential buildings can result in noise pollution in the residential areas.

**High noise levels can contribute to cardiovascular effects in humans, a rise in blood pressure, and an increase in stress and vasoconstriction, and an increased incidence of coronary artery disease. Loud**

music such as in a discothèque can be a risk for human health. Noise pollution affects both health and behavior. Unwanted sound (noise) can damage psychological health. Noise pollution can cause trouble, hypertension, high stress levels, tinnitus, hearing loss, sleep disturbances, and other harmful effects.[3][4][5][6] Furthermore, stress and hypertension are the leading causes to health problems.[4][7]

Sound becomes unwanted when it either interferes with normal activities such as sleeping, conversation, **or disrupts or diminishes one's quality of life.**[8]Chronic exposure to noise may cause noise-induced hearing loss. Older males exposed to significant occupational noise demonstrate more significantly reduced hearing sensitivity than their non-exposed peers, though differences in hearing sensitivity decrease with time and the two groups are indistinguishable by age 79.[9] High noise levels **can contribute to cardiovascular** effects and exposure to moderately high levels during a single eight-hour period causes a statistical rise in blood pressure of five to ten points and an increase in stress,[3] and vasoconstriction leading to the increased blood pressure noted above, as well as to increased incidence of **coronary artery disease.**

### **Effects of noise pollution**

Generally, problems caused by noise pollution include stress related illnesses, speech interference, hearing loss, sleep disruption, and lost productivity. Most importantly, there are two major effects we can look at: The immediate and acute effect of noise pollution to a person, over a period of time, is impairment of hearing. Prolonged exposure to impulsive noise to a person will damage their eardrum, which **may result in a permanent hearing.**

Health effects of noise include anxiety and stress reaction and in extreme cases fright. The physiological manifestations are headaches, irritability and nervousness, feeling of fatigue and **decreases work efficiency.** It is worth noting that these effects may not sound troubling, but the truth is, with time, the consequences can be very worrying.

### **What is Noise Pollution?**

Sound is essential to our daily lives, but noise is not. Noise is generally used as an unwanted sound, or sound which produces unpleasant effects and discomfort on the ears. Noise is considered as environmental pollution, even though it is thought to have less damage on humans than water, air or land pollution. But people who are affected by severe noise pollution know that it is a massive issue that needs attention. Places of worship, discos and gigs, parties and other social events also create a lot of noise for the people living in that area. Noise and nuisance Construction of soundproof rooms for noisy machines in industrial and manufacturing installations must be encouraged. This is also important for residential building—noisy machines should be installed far from sleeping and living rooms, like in a basement or garage. noise and nuisance Community **law enforcers should check the misuse of loudspeakers,** worshipers, outdoor parties and discos, as well as public announcements systems. **Noise and nuisance Community laws must silence zones near schools / colleges, hospitals etc.**

## What are the harmful effects of Noise Pollution:

Noise is considered a serious threat to the environmental health. Some of the adverse effects of noise pollution are given below:

1. It interferes with speech. In the presence of noise we may not be able to follow what the other person is saying.
2. Noise leads to emotional and behavioral stress. A person may feel disturbed in the presence of loud noise such as produced by beating of drums.
3. Noise may permanently damage hearing. A sudden loud noise can cause severe damage to the eardrum.
4. Noise increases the chances of occurrence of diseases such as headache, blood pressure, heart failure, etc.
5. Noise leads to increased heart beat, constriction of blood vessels and dilation of pupil.
6. Noise is a problem especially for patients who need rest.
7. **Noise may cause damage to liver, brain and heart.**

### Hearing Impairment

Probably the most obvious consequence of noise pollution is hearing loss. Noise pollution is worst in cities, where car horns and sirens are common noises. Hearing loss can be small or can be significant, depending on the level of exposure to noise and even age. As people get older, hearing loss occurs naturally. If you add noise pollution to that, the hearing loss might speed up. Noise pollution can also cause ringing in the ears, also known as tinnitus. When hearing loss occurs in children, it can lead to speech problems.

**Stress** According to a 2002 study published in the "Noise & Health" journal, people exposed to nocturnal aircraft noise on a regular basis had higher levels of the stress hormone in their bodies. Higher levels of stress can raise blood pressure and interfere with sleep. A 2009 article in "Express" claimed that over 6 percent of people experience so much noise pollution in their homes that they feel miserable and under constant stress.

### Cardiovascular Effects

Since stress causes elevated high pressure, it can also lead to cardiovascular problems. The "Environmental Health Perspectives" study mentions ischemic heart disease as a possible side effect of noise pollution. The stress from noise pollution can also cause vasoconstriction, **which might reduce the delivery of oxygen to your heart and brain.** For pregnant women, this can lead to development issues with the fetus.

### Other Problems

Noise pollution can cause a number of other problems, although research on how serious those problems can get is scarce. According to a 2000 paper published in the "Environmental Health

Perspectives" journal, noise pollution can cause problems including **decreased school performance, weakening of the immune system and sleep disturbance.**

## SECTION 2

### GOVT of INDIA

#### THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000

S.O. 123 (E), dated 14th February, 2000.1-Whereas the increasing ambient noise levels in public places from various sources, inter-alia, industrial activity, construction activity, generator sets, loud speakers, public address terms, music systems, vehicular horns and other mechanical devices have mysterious effects on human health and the psychological well being of the people; it is considered necessary to regulate and control noise producing and venerating sources with the objective of maintaining the ambient air quality standards in respect of noise.

1. Published in the Gazette of India, Extraordinary, Pt.II, Sec. 3 (ii) dated 14th February, 2000.

Now, therefore, in exercise of the powers conferred by Cl. (ii) of sub-section (2) of Sec. 3, sub-section (1) and Cl. (b) of sub-section (2) of Sec. 6 and Sec. 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following rules for the regulation and control of noise producing and generating sources, namely: -

1. Short title and commencement. -

(1) These rifles may be called the Noise Pollution (Regulation and Control) Rules, 2000.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions. - In these rules, unless the context otlier7oise requires,-

(a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);

(b) "Area/zone" means all areas which fall in either of the of four categories given in the Schedule annexed to these rules;

(c) "Authority" means any authority or officer authorised by the Central Government, or as the case may be, the State Government in accordance with the laws in force and includes a District Magistrate, Police Commissioner, or arm other officer designated for the maintenance o the ambient air quality standards in respect of noise under any law for the time being in force;

(d) "Person" in relation to any factory or premises means a person or occupier or his agent, who has control over the affairs of the factory or premises;'

(e) "State Government" in relation to a Union territory means the Administrator thereof appointed under Art. 239 of the Constitution.

3. Ambient air quality standards in respect of noise for different areas/zones. -

(1) The ambient air quality standards in respect of noise different areas/ zones shall be such as specified in the Schedule annexed to these rules.

(2) The State Government may categorize the areas into industrial, commercial, residential or silence areas/zones for the purpose of implementation of noise standards for different areas.

(3) The State Government shall take measures for abatement of noise including noise emanating from vehicular movements and ensure that the existing noise levels do not exceed the ambient air quality standards specified under these rules.

(4) All development authorities, local bodies and other concerned authorities while planning developmental activity or carrying out functions relating to town and country planning shall take into consideration all aspects of noise pollution as **a parameter of life to avoid noise menace** and to achieve the objective of maintaining the ambient air quality standards in respect of noise.

**(5) An area comprising not less than 100 meters around hospitals, educational institutions and courts may be declared as silence area/zone for the purpose of these rules.**

4. Responsibility as to enforcement of noise pollution control measures.-

(1) The noise levels in any area/zone shall not exceed the ambient air quality standards in, respect of noise as specified in the Schedule.

(2) The authority shall be responsible for the enforcement of noise pollution control measures and the due compliance of the ambient air quality standards in respect of noise.

5. Restrictions on the use of loud speakers/public address system. –

(1) A loudspeaker or a public address system shall not be used except after obtaining written permission from the authority. -

(2) A loud speaker or a public address system shall not be used at night (between 10.00 p.m. to 6.00 a.m.) except in closed premises for communication within, e.g. auditoria, conference rooms, conference rooms, community halls and banquet halls.

6. Consequences of any violation in silence zone/area.-Whoever, in any place covered under the silence zone/area commits any of the following offence, he shall be liable for penalty under the provisions of the Act :-

(i) Whoever, plays any music or rises any sound amplifiers,

(ii) Whoever, beats a drum or tom-tom or blows a horn either, musical or pressure, or trumpet or beats or sounds any instrument, or

(iii) Whoever, exhibits any mimetic, musical or other performances of a nature to attract crowds.

7. Complaints to be made to the authority-

(1) A person may, if the noise level exceeds the ambient noise standards by 11) dB (A) or more given in the corresponding columns against any area/zone, make a complaint to the authority.

(2) The authority shall act on the complaint and take action against the violator in accordance with the provisions of these rules and any other law in force.

8. Power to prohibit etc. continuance of music sound or noise.-

(1) If the authority is satisfied from the report of an officer in charge of a police station or other information received by him that it is necessary to do so in order to prevent annoyance, disturbance,

discomfort or injury risk of annoyance, disturbance, discomfort or injury to the public **or any person** who dwell or occupy property on the vicinity, he may, by written order issue such directions as he may consider necessary to any person for preventing, prohibiting, controlling or regulating: -

(a) The incidence or continuance in or upon any premise of-

(i) Any vocal or instrumental music,

(ii) Sounds caused by playing, beating, clashing, blowing or use in any manner whatsoever of any instrument including loudspeakers, public address systems, appliance or apparatus or contrivance which is capable of producing or re-producing sound, or

(b) The carrying on in or upon, any premises of any trade, avocation or operation or process resulting in or attended with noise.

(2) The authority empowered under sub-rule (1) may, either on its own motion, or on the application of any person aggrieved by an order made under sub-rule (1), either rescind, modify or alter any such order:

Provided that before any such application is disposed of, the said authority shall afford to the applicant an opportunity of appearing before it either in person or by a person representing him and showing cause against the order and shall, if it rejects any such application either wholly or in part, record its reasons for such rejection.

#### SCHEDULE

(See rule 3 (1) and 4 (1))

Ambient Air Quality standards in respect of Noise

3. **Silence zone is defined as an area comprising not less than 100 meters around hospitals, educational institutions and courts. The silence zones are zones, which are declared as such by the competent authority.**

4. Mixed categories of areas may be declared as one of the four-abovementioned categories by the competent authority.

\*dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is related to human hearing. A "decibel" is a unit in which noise is measured.

"A" in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

**Noise due to loud speakers.-Extensive and common use of loud speakers whether for political meetings, marriages, religious functions, musical nights, advertising, etc., are most disturbing source of noise to the urban dwellers in particular.** Though the use of loud speakers is governed by administrative restrictions and some laws but their widespread use remains continuing, as the restrictions and the laws are not seriously imposed. If loud horns are used near hospital zones, they disturb the patients and also doctors at serious operations. **Loud horn noises in school zones, create disturbance in teaching work.**

**Statutory Control on loud speakers. -(i) The permitted strength of the power amplifier should be adjusted to cover the audience, and noise level beyond the boundary limit of the noise source premises should not be increased by more than 5 dB above the ambient noise level.**

- (ii) Licence must be obtained by all parties intending to use loud speakers or public system for any other occasion.
- (iii) Public address system and loud speakers should not be used at night between 9.00 p.m. to 6.00 a.m. except in closed premises.
- (iv) **Loud speakers should be directed at the audience and not away from audience (i.e., not towards the neighborhood).**
- (v) Loud speakers should not be allowed for advertisement and commercial activities.

Effects. -The effects of noise pollution are multifaceted and interrelated. Noise pollution has ill effects not only on the human beings but also on other living and non-living things, which will be discussed broadly as follows.-

(i) Effects of noise interference with peoples life.

It may be classified under the following topics :-

- (a) Repeated interference with sleep of Human beings.
- (b) Effect on hearing or Deafness
- (c) Effect on communication or speech interference.
- (d) Mental or Physiological Effects
- (e) Effects on physical health and working efficiency or psychological.
- (ii) Effects on other animals and other living things.
- (iii) Effects on Non-Living things.

(i) How noise interferes with people's lives. -The generation of unreasonable noise within the environment is considered a form of pollution **because it lowers the quality of life**. There are several specific ways in which excessive noise can affect people adversely.

(a) Repeated interference with sleep.-In a social survey carried out amongst people living in the vicinity of London Airport, some 22 per cent said that they sometimes found difficulty in getting to sleep because of airport noises. In areas where the noise level was particularly high, up to 50 per cent complained about the noise. An even higher percentage said they were awakened by high intensity noises, usually early at night when sleep was not yet deep. After people have been asleep for some hours, they do not readily wake up, even when subjected to very loud noises. Different people have different depths of sleep and they can adjust to nocturnal sounds. Undoubtedly, however, noisy conditions near residential areas at night must be avoided lack of continuous sleep has as counteract it. Many techniques for sound insulation are available today and can be applied at relatively modest expense.

(b) Effect on hearing or Deafness. -These effects only become of real importance if the sounds are exceptionally loud. Continuous exposure to noise levels much above 100 dB has an adverse effect on hearing ability within a fairly short time. Many workers who are exposed to the noise of jet aircraft or very noisy workshops for even moderate periods soon develop detectable hearing defects. Today it has



become the practice for workers in these situations to be equipped with ear protectors and provided these are worn all the time-hearing ability is not affected.

(c) Effect on communication or speech Interference. -External sounds can interfere with conversation and use of the telephone, and well as the enjoyment of radio and television programmes and like pastimes. It can thus affect the efficiency of offices, schools and other places where communication is of vital importance. The maximum accepted level of noise under such conditions is 55 dB. 70 dB is considered very noisy and serious interference with verbal communications is inevitable.

(d) Mental or Physiological Effects.-Many people complain that noise makes them mentally ill. Experiments have been performed to attempt to confirm or disprove these claims. According to the H.M. Stationery Office report Noise; noise certainly does not contribute in the least to mental illness. Doctors and scientist have now medically confirmed that noise disturbs the biological organisms and their respective functions of the humans. Fire crackers and other excessive and continuous explosives become physically painful giving rise to neurosis, mental illness, cardiovascular diseases, stomach ulcers and respiratory disorders reducing human life. Recent researches have concluded that short exposures to noise (in excess of about 100 dB) leads to adverse effects on foetus, headache and, dizziness, **dilatation in intestines, stomach problems and effects on eye sights to the extent that these at times become incurable.**

(e) Effects on Physical health and working efficiency or Psychological problems. -Noise has little physical effect on the biological performance provided that the noise level is below about 90 dB. Damage to the inner ear may result if continuous noise levels exceed about 100 dB as has been observed by the Doctors leading to physical illness. Psychiatrists and psychologists have in recent researches have made observations that noise has certain relation with physical health causing tension resulting in problems such as speech interference, annoyance, fatigue, sleep interference and emotional distress. Noise levels in industries causes interference in efficiency and communication and raises possibilities of accidents. World Health Organization has estimated remarkable loss in the industries annually.

**Loss of concentration and weakening of memory are the indirect consequence in the metropolitan cities of India causing adverse effect on students and growing child. To conclude, every individual is suffering directly or indirectly due to rising noise levels which will surely be fatal to the coming generation and if precautions are not taken from today we will surely ruin the total personality of physical beings of the universe.**

The biggest contributor to the noise pollution as a source which had been identified as small scale power generating sets used for domestic and commercial purposes causing tremendous effect on working efficiency to the users as well as non-users causing serious psychological problems.

PERMISSABLE Noise level in **dB** as extracted these Rules; for the purpose of this article:

	<b>Daytime</b>	<b>Night time</b>
<b>Residential Area:</b>	<b>55</b>	<b>45</b>
<b>Silence Zone i.e. School etc.:</b>	<b>50</b>	<b>40</b>

**UNQUOTE:** *“ Statutory Control on loud speakers as provided is very vital as it requires that the noise just outside the premises of such hosting-place must not exceed 5 dB than its normal ambient value etc. this means that the ambient quality of sound level already present immediately outside Noise source premises without playing any Loudspeakers should not be exceeded by 5dB when the Loudspeakers in such Noise source premises start playing. i.e. the sound of loudspeakers MUST remain contained within the premises of its premises of the source of ‘Noise Pollution’ . Moreover, the direction of speakers must be towards their audience and not towards the residential area. The use of DJs with its thumping sound drum-beats is too painful; it must be prohibited.”*

### **A partial /related Download from Chandigarh Police website:**

**Control Room : 100**

#### **PREVENT NOISE POLLUTION**

- **Using loudspeakers without valid permission or in contravention of conditions contained in the permission is prohibited.**
- **Contravention is punishable with imprisonment for six months or fine Rs. 1000/- or both under the Control of Noise Act.**
- **We appeal to the public to prevent Noise Pollution in the city.**
- **Complaints against misuse of loudspeakers be made to the Police Control Room/ Concerned Police Stations.**

**Please note:** *that the download in both sections have been partly extracted & arranged for the purpose for this article mainly. For all official & Legal purposes the information be read & considered directly from the respective sites.*