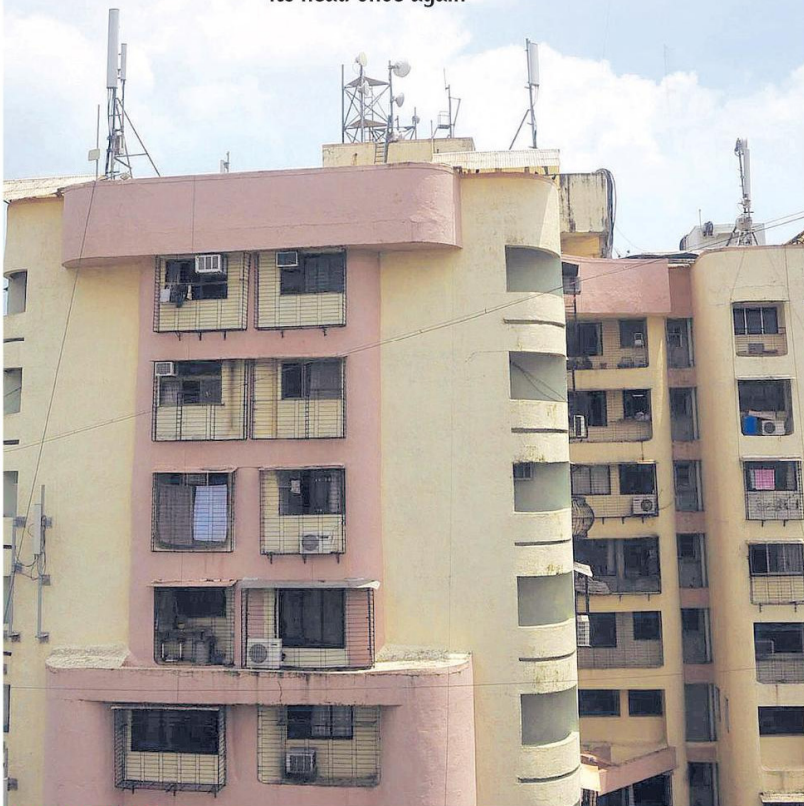


A TOWER-ING ISSUE

With the government recommending that the standards for radio frequency emissions from cell phone towers be reduced, the debate over whether these structures are actually harmful rears its head once again



CAUSE FOR MONEY OR WORRY? Cell phone towers on residential societies are a common sight in Mulund. PIC/ANITA ANAND

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Harmful or not. That is the question when it comes to cell phone towers. The debate over these monetarily profitable towers has sharply divided the citizens of Mumbai — this is epitomised by a current, sharp debate on in the suburb of Mulund. The government recently issued a notification, urging cell phone operators to lower the radiation the towers emitted to one-tenth from September 1.

However, Mulund residents' reaction to this announcement runs the gamut from disbelief, relief at the step taken to tension and even anger about its implications, thereby exemplifying the confusion that all Mumbaikars are feeling about the issue. While citizens from South Mumbai recently held an awareness meet about the hazards from cell tower radiation, those who reside in Mulund are, like the rest of the city, yet to take a collective stand.

Risk or no risk?

Janak Keshriya, who resides near Yogi Hills in Mulund (W), is one of those who thinks that there is a definite danger. "My building doesn't have a tower, but the building next to mine has several on its roof. I worry that the radiation emitted will affect me," he says. He also alleges that the tower, which came up around three years ago, is the reason he is suffering from constant headaches and lack of ability to sleep. However, he is not aware of any other resident facing any illnesses due to radiation.

K M Mudaliyar, chairman of Om Shiv Shakti Co-operative Housing Society near Mulund railway station, insists there is no danger. "We have only one operator and we installed the towers 10 years ago. There have been no health problems reported at all in the society," he says, dismissing the concern with a wave of his hand.



More studies need to be conducted regarding cell phone tower radiation. Till studies get more evidence, it is impossible to say anything

- DR DURU SHAH

Sandeep Vinekar, chairman of Swapna Sangeet housing society in Swapna Nagari in Mulund, agrees with Mudaliyar. Vinekar says that he is aware of the news reports suggesting that radiation from cell phone towers is harmful. "We installed the first tower in 2005 and the second a couple of years later. There have been no reports of any illness caused by radiation in our society. The operators had given us literature about the towers and we took the decision to install them only after we had read all the material," he says. D S Samarth, the treasurer of the same society, adds, "Even if we do take off the towers, the surrounding buildings have them anyway."

However, not all Mulund residents are of the same opinion. Guljit Singh Luggani, an advocate and resident of Kumudini Housing Society in Mulund, is a strong opponent of further cell phone tower installations. "We host two operators on our building — one for the past 15 years and another for the past five years. I know that there is no conclusive evidence that cell phone tower radiation is harmful, but I do believe that there is definitely a possibility that it can cause harm." In fact, at a recently held Extraordinary General Body Meeting (EGM) on the issue, the majority of the residents voted against installing further towers on their building, regardless of how much rent the operators are willing to pay.

Money talk

The cell phone towers are profitable for members of all the buildings that host them as operators pay them a hefty deposit and an equally impressive monthly rent. These amounts run into lakhs of rupees. Couple this with the fact that often, these operators have certificates that testify to the tower's safety and it is not surprising that many housing societies, hospitals and schools give in to the operators. Tavinder Singh, a resident of Kumudini, elaborates, "They (the cell phone companies) showed us certificates saying that these towers are safe and within permissible limits set by the government. I firmly believed that there is no danger. Now the government has lowered the limits and I don't know what to believe. I trusted the government."

He adds that those operators whom the society refused to allow into their building, are now hosted by their two neighbouring buildings. "They are getting paid and we are suffering the adverse effects," he says. He refers to the situation as a "kill or die" one. His solution? To shift to some place safer. His fellow resident AK Uchil — who is against cell phone towers — says, "The government is doing even this much because of pressure from the public and the media. Independent bodies should conduct studies and give the data to the government. We have to think of society as a whole."



DIFFERING OPINIONS: AK Uchil (left) looks on as Guljit Singh Luggani (right) makes a point to Tavinder Singh (centre). PIC/SAMEER MARKANDE

Expert speak

That is what Prof. Girish Kumar of Indian Institute of Technology's (IIT) Electrical Engineering Department has been trying to do for the past decade. Kumar was one of the first to raise the issue of radiation from cell phone towers with the Indian Government. However, he isn't an opponent of the towers themselves, he says. "Towers are necessary for better connectivity. The problem is that they emit too much radiation. Health hazards are possible even when the radiation emitted is 1 milliwatt per metre square. Before the reduction, the levels were 9200 milliwatt per metre square. After the reduction, they became 920 milliwatt per metre square. Operators claim that they were transmitting at that rate earlier too but even then, it is way too high." If the cell phone operators reduce the emission, then each tower will cover lesser area, making it necessary for the operators to install more towers, thereby increasing the cost, he explains. "A human brain is made up of 90 per cent water. When the radiation comes in contact with these water molecules, they vibrate. This causes friction among them

which results in creation of heat." If there's a tower near a residential society, the radiation will affect the residents, he feels. The effect will be more on those who stay at home the entire day — such as housewives — and lesser on those residents who go to work during the day. "When a person is away from home, their body gets time to recover from the radiation's harmful effects and ready to absorb it again when the person returns home. But when someone is at home the entire day, the body doesn't get any time to recover."

But Kumar admits that it is not easy to predict what effect the radiation will have on the residents as every individual's capacity to absorb radiation is different. According to him, the possible harmful effects of this radiation include the weakening of the blood brain barrier (which will allow more bacteria to enter the brain), irreversible infertility, sleep disorders, changes in DNA, lack of concentration, memory loss, high or low blood pressure, joint pains and cancer.

Medical view

Doctors, meanwhile, are reluctant to take sides till there is more evidence. When asked

A Matter of Protection

Your cell phones are also a source of radiation. A recent guideline from the government has asked manufacturers to reduce the emissions in the handsets that are made from September 1 this year onwards. Here are a couple of things you can do till you are able to switch to a safer handset:

- ▶ Try to limit the time you spend talking on your cell phone to 18-24 minutes a day. Texting is

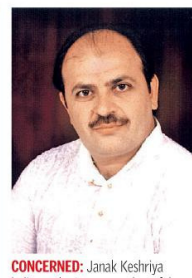
actually less harmful.

- ▶ Avoid keeping your phone in your trousers pocket or shirt pocket. When handsets come in contact with your heart or reproductive organs, they can cause cardiological and gynaecological problems.
- ▶ When you are at work, try to keep the phone atleast two feet away from you. At home, it will be a good idea to keep it in a different room.

whether radiation from cell phone towers can really affect fertility rates, Dr Duru Shah, scientific director Gynaecoworld, said that till date, there is no concrete evidence from scientific studies or enough statistics that prove whether these towers are safe or harmful. She says, "For example, there is enough evidence to prove that radiation can affect pregnant women so we can say for sure that there is a risk there. But more studies need to be conducted regarding the cell phone tower radiation. I have looked at scientific data of studies done in the 1990s that

claim there is minimal risk, but at that time, there weren't so many users. Till studies get more evidence, it would be impossible to say anything about the towers. But yes, I do believe we should be cautious while using our cell phones."

Dr Manish Motwani, laparoscopic surgeon, too sounds the same note of caution. He is the founder of Aastha Hospital in Mulund Colony, which is next to a cell phone tower. "The operator had approached us first for the tower last year. I don't have any clinical scientific evidence — neither good nor bad. We got



CONCERNED: Janak Keshriya believes the towers are harmful

Operators speak

Rajan S Mathews, director general, Cell phone Operators Association of India, insists, "there is no scientific basis for a link between tower emissions

and impact on health." He added, "There are several studies in the public domain, the majority, including the report by World Health Organization (WHO), has concluded that considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak signals from base stations and wireless network caused adverse health effects."

Excerpts from an interview:

Q: The DoT guidelines state that cell phone towers should not be constructed on residential buildings, yet several operators are known to have entered into agreements with builders to do just that. Why?

Ans: DoT guidelines do not restrict installation of cell phone towers in residential areas. BTS (Mobile Towers) are responsible for handling the cellular traffic as well as the cellular coverage (signals). For provision of cellular services, installing mobile towers in all areas as per RF (Radio Frequency) planning is a requirement. In fact, there is a mandate for coverage in the Unified Access Service License (UASL) given by DoT to all cellular service providers, wherein clause 34.2 states: "Coverage of a DHQ/town would mean that at least 90 per cent of the area bounded by the Municipal limits should get the required street as well as in-building coverage."

Therefore, planning and calculations for locating a tower is ensured in advance and it is to be taken into consideration that maximum coverage and QoS as required by license and regulatory conditions need to be achieved.

Q: Would a cell phone operator, put a tower atop his own building or opposite to where he stays?

Ans: Yes, if the building of the cellphone operator is the ideal location for the towers.

Q: Operators ask for 'conclusive' proof between cell phone towers and illness. What 'conclusive' proof are you waiting for? People to die of cancer? Earlier, there was no 'proof' that tobacco led to lung cancer. Later, a link was established. It might be the same with cell towers.

Ans: The ICNIRP guidelines followed by the industry are designed to provide more than adequate headroom between the safe levels of emissions from towers and the actual recommended level of tower emissions, thus ensuring that there is negligible possibility for any harmful impact of emissions. The telecom industry in India has always been proactive to adopt and ensure compliance with the international safety standards on EMF (Electro Magnetic Field) exposure limits, upholding public health and environment as its foremost concern.

The debate continues...



BETTER SAFE THAN SORRY: Dr Manish Motwani refused to install cell phone towers at his hospital in Mulund. PIC/SAMEER MARKANDE



ZAP 'EM WITH SCIENCE: Prof Girish Kumar demonstrates how radiation from a handset can light up an LED bulb. PIC/SHADAB KHAN