

FOCUS

Lead-poisoning Causes Intellectual Death

by Md Asadullah Khan

THE lead threat to general population, especially to children, is far worse than it was thought earlier. In developed nations, many health officials thought the problem was long since solved. They had banned leaded paint and water pipes as far back as 1920s and in the 1970s started to phase out leaded gasoline, the worst remaining source of lead contamination. Happily, in some western cities air has less lead in it today than if had 20 years ago. Because of general awareness, new house-paint generally contains little or no lead. Many lead pipes have been replaced with copper. In the developed countries, on average, people have less lead in their blood. In the US and at other international health organisations, top officials are now calling lead the No. 1 environmental threat to children.

The new concern is based on evidence that for smaller doses of lead than previously understood can harm children. Studies conducted over the last 10 years suggest that ingesting the lead equivalent to three granules of sugar a day can impair development and may make children less intelligent. Taking that to be true, even the dust created by a lead-painted window rubbing against its sill can be toxic to children in the same way as medical experts suggest that old networks of lead water pipes pose serious hazards. This makes lead a health risk in many homes from the crum-

bling city apartments to suburban houses which were once thought to be relatively safe from lead contamination.

Reports reveal that 20 years ago authorities believed that children were safe with up to 40 micrograms of lead in each deciliter of blood. The "safe" level has slowly fallen since: very recently the US centres for disease control issued urgent new warnings alerting doctors that anything higher than 10 mg/dl can be harmful to children. The CDC recommendation urges all children to be tested for lead as part of their regular checkups. Dr Louis Sullivan, the then US Secretary of health and human services, warns, "Lead poisoning is entirely preventable, yet it is the most common and societally devastating environmental disease of young children."

Lead threat, so to say, awareness of the new concerns is only starting to emerge. Paradoxically millions of homes in the western countries still have old lead paint and lead pipes. The potential for an added threat comes from leaded gas, which is still common in Asian countries and throughout Europe. In most of the European countries where surveys have been conducted, leaded gas accounts for two thirds of all gasoline sold at the pump. In our country the main sources of human exposure to lead include leaded gasoline, industrial processes such as lead smelting, coal combustion, lead-based paint and leaden pipes of lead

based solder in water supply system. We live in a city with lead in our car exhaust, our house paints, even in our pottery.

In recent times, concentration of lead in the air of Dhaka city, supposed to be one of the highest in the world, poses threat to the city dwellers, especially children. Scientists of BAEC (Bangladesh Atomic Energy Commission) in a study conducted by them at the behest of International Atomic Energy Agency (IAEA) indicated that the concentration of lead in Dhaka's air during the low rain period of November to January was 463 nanogram (billionth of a gram) per cubic metre of air; second in the list is Mexico City with a concentration of 383 nanogram while Bombay ranks third with 360 nanogram.

Unlike many developing countries in the world, fuels in all vehicular traffic in Bangladesh are leaded. Lead has long been recognised as a neuro-toxin and it has adverse effects on brain developments in children. Scientific evidence shows that lead retards the mental and physical development of children causing reading and learning disabilities, hearing loss, respiratory problems, hyperactivity and lack of concentration even at low levels of exposure. It has been further emphasized that upper respiratory tract of humans cannot stop passage of these fine particles

and thus they are deposited in the lungs and eventually enter the blood stream. Children represent the highest risk group due to their propensity to ingest significant quantities of contaminated dust and soil. Adults are more susceptible to lead exposure through inhalation.

In singling out the culprit, vehicular traffic comes as the single largest source of environmental lead pollution in the urban areas especially in our region accounting for 90 per cent of all lead emissions into atmosphere. Vehicular lead emissions also accumulate in the soil and enter the food chain. Other than the warning that BAEC scientists have recently sounded, the problem till the recent past appears even less well documented and understood than in the western countries. Surprisingly, health officials in the country have not been trained to recognise the signs of lead poisoning, particularly low-level lead poisoning in children which produce symptoms as banal as stomachaches, constipation and vomiting. The result, says Dr Yves Manuel, a toxicologist and adviser to the French Environment Ministry, is that "children all over the country are damaged mentally, for life."

Even if we do not know exactly how many, but millions of children, it is learnt, are at risk. Reports revealed by Joel Schwartz, a senior scientist at the US Environmental Protection Agency indicate that even in America, one of the most developed countries in the world, one out of nine American children under 6 has enough lead in his blood to place him in what scientists now consider the risky zone — that is, above 10 mg/dl. Other agencies put the number of children at risk as high as one child in six. Evidently, these numbers must be taken with reservation. They do not suggest that of the 22 million American children under 6, one in nine — or more than 2 million — is severely brain damaged. These numbers indicate that several thousand children have absorbed enough lead to significantly slow their minds and alter their behaviour.

In Europe the available evidence also is not encouraging.

Among children in Britain, the average quantity of lead in the blood is between 7 and 7.5 mg/dl. Elsewhere, including Paris, studies have found average lead in blood levels in children at 10 mg/dl. Another study has indicated that in Paris since 1985, 600 children living in old areas have been hospitalised with severe lead poisoning. Further reports are very much alarming. Two died, and an additional 200 had severe brain damage, including loss of manual dexterity, hallucinations, memory loss and other symptoms.

In the backdrop of such alarming consequences in the developed countries, the situation in our country is totally frightening. We do not know how many children in our country are suffering from lead poisoning because the country, even the big cities, lack any facility, nor there are any efforts of testing blood-lead levels in the children.

Lead is dangerous to children in particular because they take more lead than adults. They eat more than adults as a percentage of body weight, and they suck their fingers after touching the walls and windows. Children also absorb more of the lead than they ingest — about 50 per cent, compared with about 10 per cent in adults. Inside the body, lead attacks the brain and other organs and consequently lead gets attached to essential enzymes and disrupt vital organ functions.

More worrisome, recent studies have linked even low blood-lead levels to a host of problems associated with the brain and nervous system, including IQ loss, aggressiveness, hyperactivity, reduced attention, hearing loss, slow reflex, slow growth and problems with balance.

The lead industry advances the argument that many of the harmful effects of lead may not have been proven meaning that small doses of lead are truly harmful to kids. But most public health officials assert that evidence warrants action for children — and raises a troubling question for adults as well.

Precisely true, we have woken up to the danger arising from lead only very recently and many people in the past suffered from lead poisoning but it did not surface because of public ignorance. Administration has to be careful about the dangers lead poses and it has to take all out efforts to control the threat from lead, the most abundant heavy metal from earth's crust. Despite the widespread restrictions on leaded gas pipes and paint, worldwide lead consumption and production have been rising steadily since World War II, albeit, at a slower pace in recent years.

But in manufacturing, lead is uniquely useful. It is soft and workable and it never decays and is largely impermeable to sound, water, even electricity and radiation. So people keep finding ever increasing new uses for this almost deadly

metal in products from batteries to circuit boards.

Most alarming, in recent times lead contamination flows freely across international borders. Output in lead mines and smelters in eastern Europe is rising where smokestacks lack modern emission controls and can spew lead over hundreds of miles. In most cases the waste from crude open air smelting pots is dumped into nearby rivers. Besides, nations with weak environmental laws export ceramics and other products with dangerously high lead content. Most worrisome, industries in countries with tougher laws skirt the rules through shipment of lead waste to Third World countries like ours for disposal or recycling.

In short, one nation's effort to lower the lead threat can easily be thwarted by negligent neighbours. And that calls for an international agreement to control lead production and consumption setting a wide range of lead standards, limiting the acceptable amount of lead in everything from children's blood to smokestack emissions and ceramics. The agreement should also seek a ban or replace lead in products wherever possible and would keep on exerting pressure on all nations to comply.

In our own country, the government has never taken the threat too seriously evidenced by the fact that it has never urged the general public nor has it opened any centre anywhere in the country asking people to have their children tested for blood-lead.

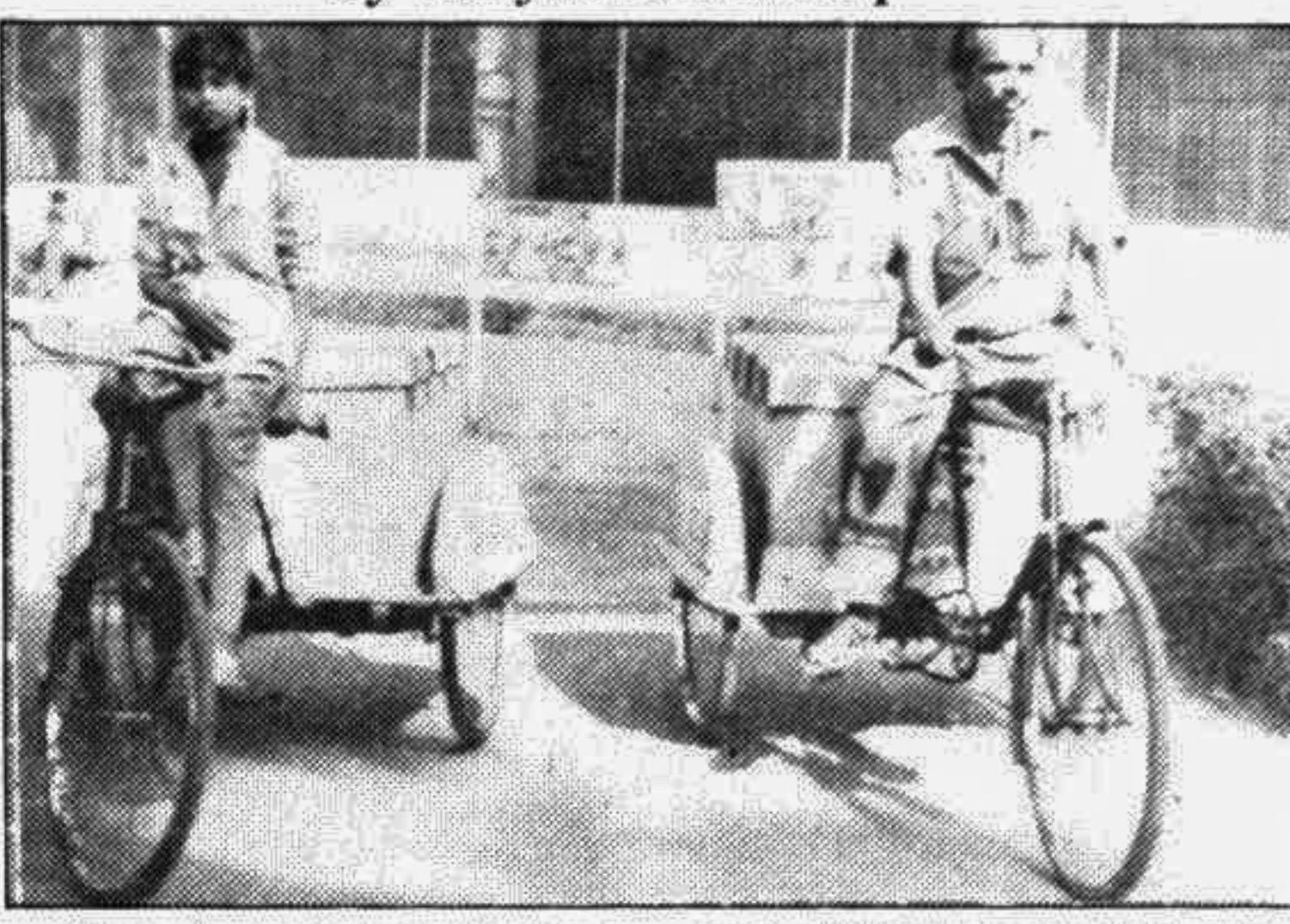
When the situation is so grim even in the developed countries, we can hardly ignore the problem and allow people to use lead pipes for their water lines. The problem is most severe in areas where lead pipes have been laid in zones with "soft" or highly acidic water, which can accelerate the leaching of lead particles. Neither the government nor the general public should be harbouring any such impression that lead poisoning has disappeared because no one talked about it. And because no one suspected it, no one looked for it and so no one found it. Especially the moment a child complains of stomach pains and headaches and without any ostensible reason becomes hyperactive and inattentive in school he should be tested for blood-lead level.

However, it may be a very extensive and expensive measure to clean up old residues of lead. Lead dust is the main problem and to get rid of it is a very costly and delicate job. A cheaper approach is prevention and that we should adopt by substituting calcium or zinc for lead in plastic pipes and cables. Sweden is following that path. The result is that Swedish children show few cases of lead poisoning. They hunt sources of lead almost mercilessly. In our country, the danger is there in the air and we are just beginning to realize with the warning bell sounded by the BAEC (Bangladesh Atomic Energy Commission) scientists. Precisely speaking, it will take years to rid the country of the lead threat. We don't simply have the money to retrofit for large-scale production of unleaded gas. Even then we might adopt some measures that is hardly costly. Physicians have recommended some home-spun measures to keep kids and adults away from lead. Parents should roll up car windows when travelling with children. Let tap water run for a while before using it — so that any lead accumulations would wash out. We should throw out lead-laden pottery, cookware and wash fruits and vegetables carefully. All these measures can help reduce exposure substantially. But one can never escape lead entirely, so state level further measures are obviously required.

Dhaka Day by Day

Tinkle Tinkle, It's the Ice-cream Man

by Tanya Mehnaz Haq

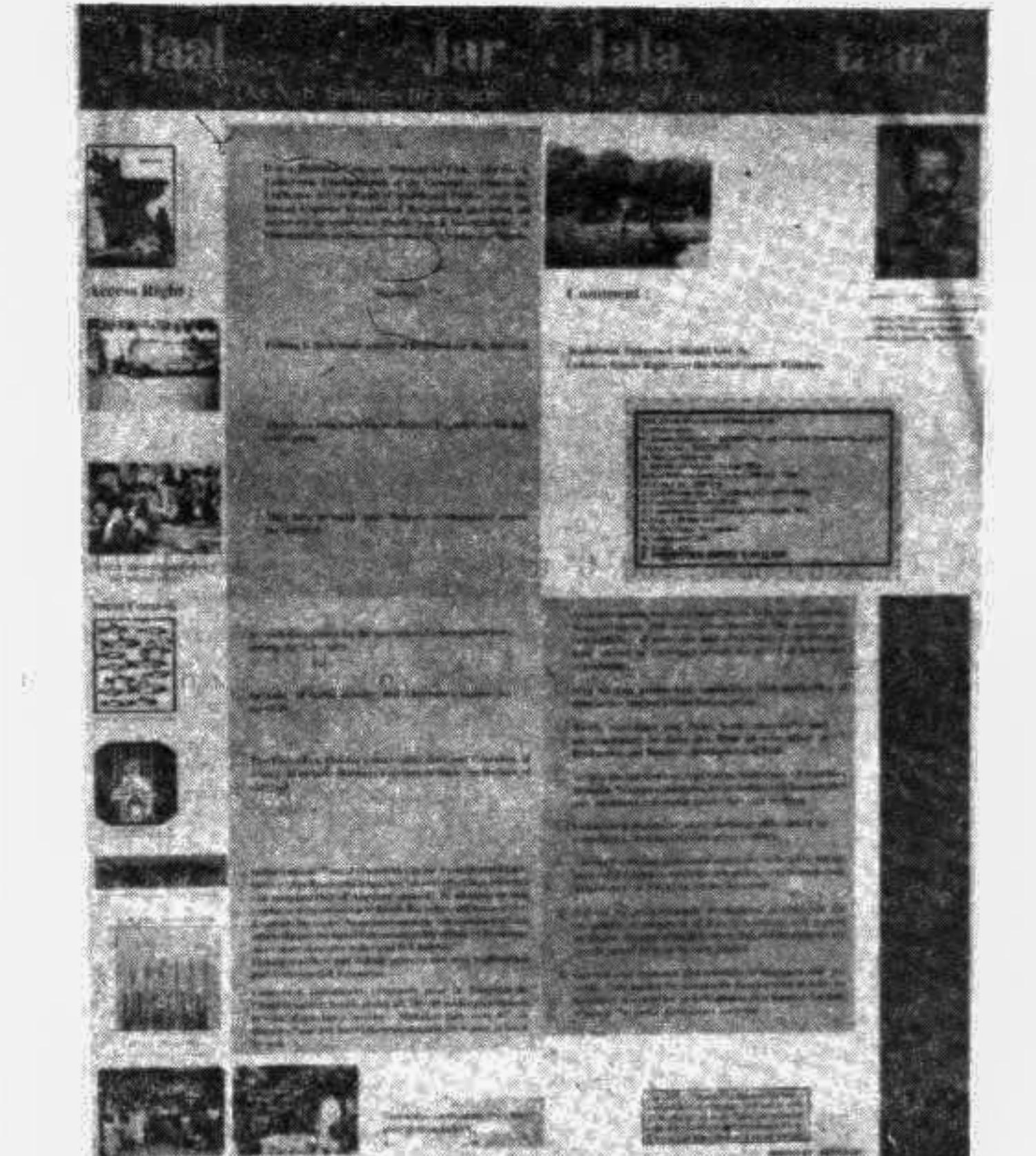


most of his wares and when he is practically mobbed by the kids!

He has been selling ice-cream for the last ten years. According to Mobarak Ali, the job is okay but it is difficult to ride the cycle in the heat and he wishes that the company would give him a proper van or truck to drive around. He doesn't dislike the job as he realises that things could be lot worse for him and his five children without this occupation. Being a regular in that residential area, he has made friends with both the children and adults who buy his ice-creams. So he is always willing to stop and chat.

The ice-cream man is almost like the postman. Despite being always around to do his job, he is hardly noticed by his customers. Perhaps he could spare a kind word or two for these persons who seem to have carved a place for themselves (be it very small) in the communities.

Presentation at World Fisheries Congress



To augment the trend of improving world fish resources, the Second World Fisheries Congress was held last year (July 28-Aug 2) at Brisbane, Australia. Nine hundred delegates from all over the world took part. From Bangladesh, the secretary general of National Fishermen's Association Mr Md Islam Ali represented sending a write-up and a poster on the popular theme 'Jaal Jar-Jala Taar' (the waterbody belongs to him who carries the fishing net).

Mr Ali believes that this theme may work wonder in the process of augmenting fish resource not only in Bangladesh but also elsewhere having similar socio-economic conditions.

The poster was exhibited at the Congress and his views heard, the feedback had been very positive. The Congress chairman Dr John Glaister in a personal letter to Ali said: "The Congress was an important opportunity to discuss the significant issues facing world fisheries, and your presentation was an important part of this information exchange."

The Daily Star Entertainment Guide

Tuesday 21st January
(All programmes are in local time. There may be changes in the programmes.)

BTV

3:00 Opening Announcement
Al-Quran Programme Summary
3:10 News in Bangla 3:15
Patriotic songs 3:20 Recitation from the Geeta 3:25 The Album Show 3:50 Cartoon film 4:15
Unmesh 4:50 Coach 5:00 News in Bangla 5:22 Sangeeta 6:00pm National Television Debate Competition 6:50 Open University 7:00 The News 7:25 Silver Jubilee of Freedom Fighter-A Documentary 8:00 News in Bangla 8:25 Silver Jubilee of Freedom Fighting-Mujibnagar Govt 9:00 Drama Serial: 10:00 The News 10:25 Those day of Freedom Fighting 10:30 sur Lahari 11:35 Wednesday's programme summary 11:40 Close down

In Bangladeshi culture, it is a common practice to give pre-lacteal food as soon as a baby is

utilising this priceless resource — 'Breast feeding'. Traditionally, Bangladesh is a breast-feeding community. Among the rural per cent mothers, about 98 per cent do breastfeed their babies for some time. But exclusive breastfeeding virtually does not exist. 'Exclusive breastfeeding' means giving only breast milk to the baby. And no other food, even water, should be given. Ideally, exclusive breastfeeding should be done up to five complete months under any circumstances.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

allowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-

lowed to take adequate balanced food because of the belief that it may cause abdominal upset to the baby. Fruits, vegetables and spices are discouraged. Considering all these facts, it may be well understood why mothers need special help and support for successful breastfeeding even when they firmly believe that it is good for their babies.

From day-to-day experience, it has been observed that there are many barriers for breastfeeding. Social, cultural, traditional factors, interference of others, and sometimes, lack of knowledge/attitude and confidence of mother play a great

influence on lactation failure. In many occasions, mothers feel that they do not have enough milk. Whatever might be the reason lactation failure should not be allowed in a country like Bangladesh.

Family members specially mother-in-laws have many prejudices against breastfeeding. Breastfeeding is easily discontinued whenever the mother or the baby is ill. Breast feeding mothers usually are not al-