

## Infertility: Reasons & remedies

DR PARVEEN FATEMA

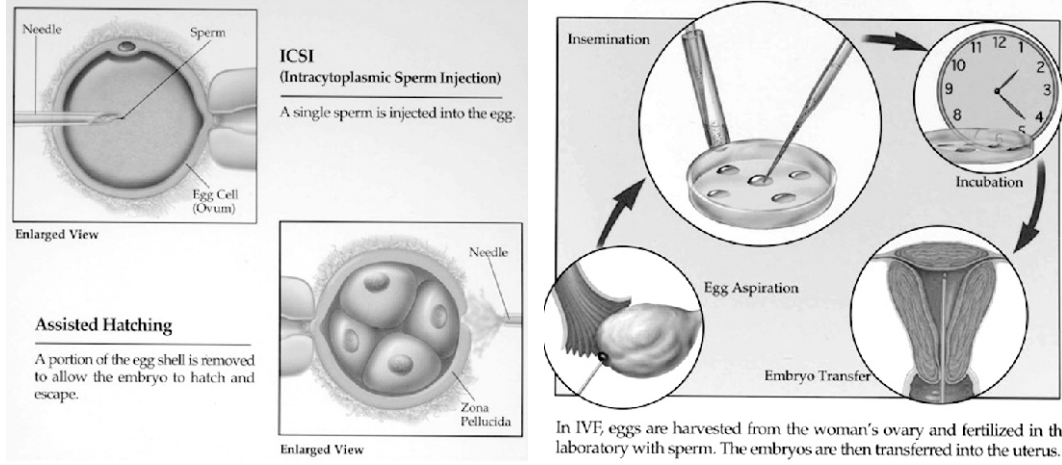
The best time for conceiving for the females is in their mid twenties. For conception, to take place and to continue, several events have to occur in precise order. Disruption of any of these event can cause infertility.

For a male to be fertile, the sperm must be produced and it must be viable and motile. Although only one sperm is required to fertilise an egg, a huge number of sperm is required to assist in fertilisation. The sperm may be formed but not released due to block in the male genital tract due to infection, injury or congenital absence of the duct named vas deference. The man may be impotent and unable to ejaculate or the ejaculation can be released in the backward direction.

The block can be even in the female genital tract due to block in the fallopian tube, or the sperm may be unable to penetrate the coverings of the egg and thereby unable to fertilise. Even if the egg is fertilised on its way back into the uterus it may be stuck in the fallopian tube or it may not be implanted in the uterus.

Male infertility is on the rise due to environmental pollutants and unhealthy lifestyle. Smoking and drugs are detrimental for fertility.

Low socioeconomic condition



leading to poor bygone and sexually transmitted diseases, termination of first pregnancy by MR (menstrual regulation) and poor post-abortion care and post delivery care are important factors for female infertility in our country.

Infertility evaluation and treatment is planned at least after one year of normal conjugal life. Early interferences is done if there is some known problems of the couple.

Investigation can reveal problem in the women, men, or both or the usual investigation may reveal no problem in any of the couple, but still they may need help to achieve a pregnancy. Waiting may be rewarding for some, but not for all, rather long

waiting can make a treatable condition untreatable due to aging process of the couple especially the women's age since with the increase of age, the number of egg depletes as well as the quality of eggs also deteriorates. Elderly women are prone to develop tumours in the uterus and affected by disease process like endometriosis.

Sometimes small lifestyle modification can do the trick and solve the problem. Knowledge about the fertile period of the cycle and advice regarding sexual frequency can do the trick. Body weight adjustment both for the under and over weight can be beneficial. Avoidance of environmental pollution and understanding risk factors in different profes-

sion can help some of the patients.

Patients may require medication or surgical procedures to overcome their infertility. Stepwise fertility treatment may be enough for most of the couples. Only a small percentage will require advanced technology to overcome their treatment.

Ovulation induction is done with oral medication and injections, which are costly and the cost depends on the requirement of the women to develop mature eggs.

Intrauterine insemination can be done for patients with at least one patent tube in the females and moderate to mild male factor infertility and in patients in whom earlier treatment has failed.

During this procedure, mature eggs are produced with drugs and then the husband's semen is processed to separate and enrich the sperms so that the fertilisation potential is increased and then it is introduced into the womb.

Conventional in-vitro fertilisation is done in couples where there is problem in the female as for example if both the fallopian tube is blocked or there is severe endometriosis or simpler measures has failed to help the couple and the male partner has a normal seminogram. It is quite a safe procedure as it mimics the nature for the selection of the sperm and penetration of the ovum. If the quality of eggs and sperms are good it is a safe procedure.

In couples where male partners have moderate to severe problems found in the semen analysis; or no sperm is present in the semen but sperm is present in the testis of the males; or during IVF cycle fertilisation is documented to be poor, intracytoplasmic sperm injection (ICSI) can be done where one sperm is injected into the ovum with a fine needle under a special microscope. ICSI has allowed men with extremely low sperm count to become the father of children which is not possible by any other means.

As a backup procedure Cryopreservation of semen and embryos helps in providing

proper service to the patients. On the day of IVF, the husband may be unable to give a sample of semen for the procedure or for some undue reasons, cannot come to the clinic. In those situations the prior cryopreserved sample can solve the problem. There can be excess of embryos produced in a particular cycle which can also be cryopreserved and used in latter cycles or embryo transfer can be deferred for latter cycle to avoid the risk of hyperstimulation.

Assisted hatching is done in patients where the covering of the embryo is thick and in patients with previous failed IVF cycles to increase the chance of pregnancy.

Healthcare policy makers, medical insurance companies and banks may rethink their policies to help people.

A lot of simple steps can help in prevention of infertility. Proper weight management should start from puberty and thereby many long term complication of adulthood can be prevented. Nutrition, smoking environmental pollutants, personal hygiene, unsafe abortion or poor postpartum care, previous MR, sexually transmitted diseases are some of the preventable steps for developing infertility.

Dr Parveen Fatema is an assisted reproduction specialist.

## Caring for your thyroid

Thyroid diseases could affect thousands of Bangladeshis and many of them do not know it. The disease masquerades as a variety of medical troubles, which are so delicate that they can often be missed. Under-active or overactive thyroid conditions may go undiagnosed for months or even years and it is known as the hidden disease.

The body contains two kinds of glands: exocrine and endocrine. Exocrine glands secrete their products into ducts. The ducts then carry the secretions into body cavities or to the body's surface. Endocrine glands, by contrast, secrete their products into the extracellular space. Since they secrete internally, the term 'endo' - meaning 'within', is used. Thyroid is one of the endocrine glands and all the endocrine glands together make up the 'endocrine system'. The secretions of endocrine glands are called hormones (hormone means - 'set in motion').

The thyroid gland sits at the base of the throat and is the body's trendsetter. It weighs only about 25 grams yet its significance to the body. It is essential to body's growth and metabolism. An under-active thyroid refers to a condition where the thyroid gland does not produce enough thyroid hormone. If it is under-active the body function slow down, if it is overactive they speed up.

Symptoms of thyroid conditions include fatigue (most prevalent), puffiness around the eyes, cold intolerance, cold hands or feet, dry and sparse hair, dry skin, weight gain, poor memory, gradual

change in personality, constipation, no stamina, prolong menstruation, loss of temper or extreme irritability especially after exertion, enlarged neck, trouble waking up in the morning, depression, low sex drive, headaches, slow speech, dull facial expression, hoarse voice.

When a goitre (an enlargement of the thyroid gland) or other symptoms lead a physician to suspect a thyroid condition, blood test will be done to measure thyroxine and TSH (Thyroid Stimulating Hormone) levels in the blood. If there is a problem, treatment involves taking thyroid hormone replacement in the form of a tablet that is often taken daily for life. When the thyroid becomes over-active surgery is required to remove most of the thyroid gland through an incision under the neckline.

There is a simple neck check that you can do for yourself at home; to make sure - 'your thyroid is in good shape'. You take a glass of water and a hand-held mirror. Just take a sip of water, tilt your head back and watch carefully between the Adam's apple (the laryngeal prominence formed by the two laminae of the thyroid cartilage) and the base of the throat. If you see any bumps or bulges, or you have any of the symptoms that have mentioned above, it is a good idea to consult a physician or surgeon straight away.

## Why does my child not speak, doctor?

DR ANJAN BHATTACHARYA

At birth, child cannot speak, but they can send a powerful message of their needs by crying. This is a child's first way of communication. This communication is however, largely unidirectional. The child cries, the adult caters!

Vocalisation of a child starts with vowel sounds only; like "ooo", "aaa", "eee". It takes another 6 to 7 months before the child can reach the next milestone of Speech-babbling, which is a combination of vowels and consonants like "Ma", "Ah" "Da" etc. This is called single syllable babble. These are largely meaningless babbles.

Communication nonetheless, continues through various non-verbal methods like head nodding (parents often misinterpreting this as child's refusal), eye expressions, hand holding in out-stretched fashion (communicating "pick me up") etc.

Some children do not utter another word until they are 3 years old! But that is nothing to worry about once reviewed by a specialist expertise in speech, language, communication and medical conditions that can cause speech problems.

Speech and language has two very important pathways. One is

called receptive speech. This involves hearing the speech and understanding it.

It is extremely important that a hearing deficit is detected as early as possible and certainly by 9 months of age, when the phase of meaningful speech is supposed to evolve.

Understanding also progresses through stepwise phases. Understanding from a given situation (e.g. parents' dressing up indicates going out pretty soon, getting cup and plate out means fighting with food will soon begin etc). This is situational understanding. This stage is followed by understanding of gestures (e.g. waving hand means good bye, out-stretched palm means asking to give etc). Then the child learns to identify a single key-word in a sentence (e.g. if you say "go and get the ball", the child may only know what a ball is, the rest he interprets through his situational understanding and gestures. Gradually and through few more stages, the meaning of an entire sentence eventually dawns on him by 3 to 5 years of age!

Expressive speech or verbal language complements receptive speech. Verbal speech develops through stages of learning single words, then to learn to join two words to mean a sentence and



then to start simple sentences. There are a multitude of conditions that can go wrong to stop a child from speaking, not speaking too well or speaking gibberish.

The easiest examples are those with structural problems of speech producing organs - tongue, mouth or voice box. It is also not so difficult to comprehend that a child who cannot hear may not learn to speak!

However, if children can hear

well, their internal language gets going. This is best exemplified in case of cleft palate, where a child is born with a gap in his roof of mouth. It is sometimes accompanied by the birth defect of a gap of the lip. Once the gap is surgically and orthodontically repaired, expressive speech soon returns.

A common misconception is that a tongue-tie is the cause of the child's speech delay. Some parents go to ENT specialist for

throat reviewing.

Speech delay can nonetheless, may be part of a number of other complex medical conditions. Isolated speech delay, speech and language delay, speech/language delay/disorder, communication delay/disorder or global developmental delay to name a few. Difficulty in communication should be closely looked at by a specialist due to the possibility of autism, autistic spectrum disorder, high functioning autism or asperger syndrome. In asperger syndrome, children often start clear speech very early in their life, but their language development remains relatively delayed. This makes their communication disordered.

Various dysmorphisms (medical conditions, often from birth, which makes a child looking odd or different e.g. Down's syndrome, fragile-X syndrome, Golden Haar syndrome etc.) are commonly associated with speech and language difficulties. Other conditions like certain epilepsies (Tourette syndrome), psychiatric conditions (Schizophrenia), other physical/medical conditions (CNS: cerebral palsy/bulbar palsy; Endocrine: Hypothyroidism etc.) can interfere with receptive or expressive pathway of the speech development.

Moreover, a child with speech problem may feel more frustrated than another child as it cannot express itself well enough to be understood. This often makes the child very active.

Hyperactivity is a distinct group of neuro-developmental disorder and should not be labelled against every child who seems to be uncontrollable or misbehaving. A developmental paediatrician has the expertise to suspect, separate, diagnose and manage these complex groups of disorders.

The good news is that most of the children, not speaking before 3 years of age are likely to turn out to be "normal". However, an early visit to the right doctor to get clarification and reassurance is the key to dispel any unnecessary fear. The benefit on the other hand, is that of picking up any problem early so that with early intervention, its potential long-term consequences can be minimised to a great extent.

At birth however, it is wise to request for an Oto-Acoustic Emission [OAE] test done, complemented by Brain-Stem Evoked Response Audiometry [BERA], as necessary.

Anjan Bhattacharya is a Consultant Paediatrician at Apollo Hospitals Dhaka.

## HEALTH ALERT

### Angina may be painless!

DR MD HABIBE MILLAT

Angina is commonly described as a chest pain. Chest pain is a common symptom which can be caused by different conditions. Some causes of chest pain require prompt medical attention, such as angina, heart attack, or tearing of the aorta. Other causes of chest pain can be evaluated electively, such as spasms of the oesophagus, gallbladder attack, or inflammation of the chest wall. Therefore, an

accurate diagnosis is important in providing proper treatment to patients with chest pain.

Angina (angina pectoris) is the chest discomfort that occurs when the blood oxygen supply to an area of the heart muscle does not meet the demand. In most cases, the lack of blood supply is due to a narrowing of the coronary arteries as a result of arteriosclerosis. Angina is usually felt as a squeezing, pressure, heaviness, tightening, or aching across the chest, particularly behind the breast-

bone. This pain often radiates to the neck, jaw, arms, back, or even the teeth. Patients may also complain of indigestion, heartburn, weakness, sweating, nausea, cramping, and shortness of breath. Angina usually occurs during exertion, severe emotional stress, or after a heavy meal. During these periods, the heart muscle demands more blood oxygen than the narrowed coronary arteries can deliver. Angina typically lasts from 1 to 15 minutes and is relieved by rest or by placing a nitroglycerin tablet/spays under the tongue.

The most common cause of angina is coronary artery disease. A less common cause of angina is spasm of the coronary arteries. Coronary arteries supply oxygenated blood to the heart muscle. Coronary artery disease develops as cholesterol is deposited in the artery wall, causing the formation of a hard, thick substance called cholesterol plaque. The accumulation of cholesterol plaque over time causes narrowing of the coronary arteries, a process called arteriosclerosis. Arteriosclerosis can be accelerated by smoking, high blood pressure, elevated cholest-

terol, and diabetes. When coronary arteries become narrowed by more than 50 to 70 percent, they can no longer meet the increased blood oxygen demand by the heart muscle during exercise or stress. Lack of oxygen to the heart muscle causes angina.

The walls of the arteries are surrounded by muscle fibres. Rapid contraction of these muscle fibres causes a sudden narrowing (spasm) of the arteries. A spasm of the coronary arteries reduces blood to the heart muscle and causes angina. Angina as a result of a coronary artery spasm is called "variant" angina or Prinzmetal angina, which typically occurs at rest - usually in the early morning hours. Spasms can occur in normal coronary arteries as well as in those already narrowed by arteriosclerosis.

Angina is usually a warning sign of the presence of significant coronary artery disease. Patients with angina are at risk of developing a heart attack (myocardial infarction).

During angina, the lack of oxygen (ischemia) to the heart muscle is temporary and reversible. The lack of oxygen to the heart muscle resolves and the chest pain disap-

pears when the patient rests. The muscle damage in a heart attack is permanent. The dead muscle turns into scar tissue with healing. A scarred heart cannot pump blood as efficiently as a normal heart, and can lead to heart failure.

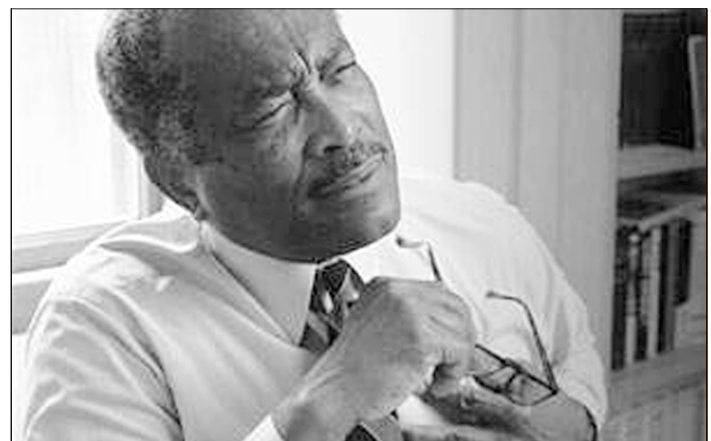
Up to 25 percent of patients with significant coronary artery disease have no symptoms at all, even though they clearly lack adequate blood and oxygen supply to the heart muscle. These patients have "silent" angina. They have the same risk of heart attack as those with symptoms of angina.

EKG, exercise treadmill, stress echocardiography, stress thallium, and cardiac catheterisation are important in the diagnosis of angina. A newly developed computerised x-ray scan (ultra fast CT

scan) is highly accurate in detecting small amounts of calcium in the plaque of coronary arteries. Over the next 5 to 10 years, software and hardware improvements may allow screening of the heart's arteries with magnetic resonance imaging (MRI) testing.

Treatment options include rest, medications (nitroglycerin, beta-blockers, calcium channel blockers), percutaneous transluminal coronary angioplasty (PTCA) and/or stents insertion or coronary artery bypass grafting (CABG) surgery.

Dr Md Habibe Millat MBBS,FRCS(Edin) is a Senior Registrar in the Department of Cardiothoracic Surgery at the Cork University Hospital, Cork, Republic of Ireland.



**Your Doctor**

Send your health related queries to Your Doctor, Star Health, The Daily Star, 19, Karwan Bazar, Dhaka 1215 or e-mail your problem to starhealth@thedailystar.net

## NY mayor to give his own cash to stop world smoking

REUTERS, New York

Billionaire Mayor Michael Bloomberg, an ex-smoker, recently announced plans to donate \$125 million to help the world stop smoking.

Bloomberg - ranked by Forbes magazine as the 40th richest American with an estimated wealth of more than \$5 billion - banned smoking in New York bars and restaurants in 2003 and now wants to take his anti-smoking campaign worldwide.

"Tobacco is the world's leading killer," Bloomberg, first elected mayor in 2001, said in a statement. "Smoking

doesn't just hurt smokers, it also harms and can kill people around them."

The personal donation aims to make the world tobacco-free by improving programs that help smokers stop and preventing children from starting, Bloomberg said. The key partners will be existing organisations, but they are still being finalised.

Bloomberg, 64, who said he quit smoking almost 30 years ago, said he undertook his personal crusade against the habit because he could not stand to see people dying when he knew they could be saved from early death if they stopped smoking.



Billionaire New York City Mayor Michael Bloomberg, an ex-smoker, announced plans to donate \$125 million to help the world stop smoking.