

Issue No. X April, 2011

Nurture

Pakistan's Pioneer Publication on Early Childhood Development



**Nurturing your child
before birth**

Nurture

Issue No. X April, 2011

Pakistan's Pioneer Publication on Early Childhood Development

Write to us:

Nurture Magazine



Sindh Education Foundation
Plot 9, Block 7, Kehkashan, Clifton 5,
Karachi - 75600, Pakistan.

E-mail: nurture@ecd pak.com

Website: www.ecd pak.com

Write for us:

We invite you to send us your stories, anecdotes and experiences related to children's growth and development at the above address.

For more information on ECD practices, issues, programs and tools log on to www.ecd pak.com

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sJayz

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All children deserve a good start to life. In order to ensure that we simply cannot ignore the time that human life begins. The current issue of 'Nurture' has picked up an important theme 'Nurturing before Birth'. The contents highlight aspects of maternal wellbeing, importance of prenatal and antenatal care and the factors that influence it; steps to a healthy pregnancy; the role of caregivers; and much more.

Maintaining healthier habits and wiser choices can be a challenge unless parents are empowered. As you will read through the stages of baby development, effects of pregnancy on relationships and mental health, the content will educate the soon-to-be parents in dealing better with the pressures of pregnancy and empowering them to take charge.

The Fifth Millennium Development Goal (MDG) target for maternal survival is to reduce maternal mortality by two-thirds by 2015. Addressing current gaps for care at birth is critical to achieving MDG 5. Several writers have expanded on mother's health and nutritional status and the quality of care required during pregnancy. Stimulation techniques are also discussed that will help expectant mothers and fathers to connect with their baby. Indeed a great beginning starts before birth. Prenatal care and the need for focused attention to address the challenges of maternal and child health in Pakistan have been highlighted in detail through a feature article. Information on birth defects in children; causes for abnormalities and strategies for intervention to prevent complications have also been presented to underline the importance of prenatal care as a key determinant of a newborn's survival and healthy start in life.

Our sections on recommended readings and online resources continue to be extremely popular. Suggested readings are rich in content on the subject matter covering the various stages from planning a pregnancy and choosing a practitioner to post delivery care, healthier ways to live that are beneficial to mother and baby, superstitions and myths surrounding pregnancy, role of expectant fathers and more.

For this issue, we have interviewed Dr. Habiba Hasan, an acknowledged expert in the field of medicine and child and women health care expert, on aspects of maternal and child health. Her recommendations suggest maternal health to be addressed through integrated maternal, neonatal and child health programs. Such programs must focus on risk factors across the entire continuum of life cycle from adolescence through pregnancy and childbirth and across the various segments of society. The challenges to safe pregnancy, nutritional requirements, screening protocols, risk factors and coping strategies for a healthy pregnancy were the main topics in our second interview with gynecologist Dr. Mussarat Zahoor.

We are personally grateful to Dr. Habiba Hasan, who provided valuable suggestions and guidance on the subject throughout the development of the magazine. Special thanks also to Dr. Sher Shah Syed for his contribution particularly on the status of expectant mothers in Pakistan.

Readers' feedback on the previous issue has been very encouraging and we are happy that the information provided useful insights on the threats to the well-being of young children and recommendations for creating a better world for our future generations.

We hope that you will enjoy reading the current issue and find its contents valuable for raising healthy children.

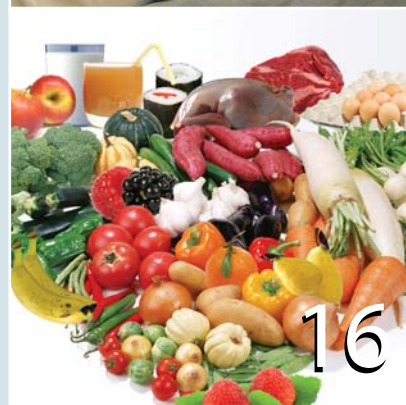
We look forward to receiving your comments and feedback.

Nurture

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plus those that were featured previously
in Nurture on www.ecdpak.com

Letters to the EDITOR



Nurture is Pakistan's pioneer magazine on Early Childhood Development. The magazine is published bi-annually and captures different themes on Early Childhood Development.

If you have a message, suggestion or any comment contact us directly by sending an e-mail at:
info@ecd pak.com



I am associated with a local NGO that works to promote the well being of working children in the country. I will specifically refer to the article, 'Why is Child Labour Detrimental for Children?' and endorse Ms. Cassandra Fernandes's observations on the detrimental effects that a lot of working environments have on the development of children. Such advocacy is needed to enhance awareness, protect and advocate for the rights of children. It is good that your magazine is also published in the local language as well so that knowledge of children's rights also reaches relevant audiences at the grassroots.


Abdul Rafay
Islamabad

I am a deputy principal of a local school and had no idea on how to develop an understanding of environmental and social issues in our students. Equipping teachers on these themes was also challenging. The latest Nurture pack provided extremely useful resources such as the magazine as well as stories carrying important messages for children, interactive exercises and well-illustrated posters. We have used the resources for various school projects in classrooms and understanding of children has improved greatly on the subject.

Ashiq Chaudhary
Sukkur

The recent issue of your magazine carries information that caters to a wide range of stakeholders including architects, psychologists, social workers, environment educationists and caregivers, who contribute in their own way towards the upbringing of children. As a psychologist, I work with disaster victims and face a lot of stressful situations. Please also publish more information on what can be done professionally to help children recover quickly from post-traumatic stress.

Asifa Manzoor
Gilgit



Early years being the most significant part of life, it is important for developmental agencies to address high risk issues for improving young children's growth and development. Nurture magazine has highlighted critical issues that face children today. I work with various ECD programmes and found the articles very helpful for sensitizing both adults and children towards playing an active role in creating a safer world for children.

Shelina Bhamani
Karachi

Nurture magazine's 9th issue was a real treat for everyone at home. I especially liked the posters and the newsletters for children on themes of climate change, safety measures in disasters and caring for the environment. We have done the activities together at home and I tell you that the storytelling has been effective and concepts of disaster planning, conservation, eco-friendly actions etc. have been well received by the children.

Asifa Manzoor
Gilgit

Health and safety during construction is an important aspect often ignored during planning and development work. I am working with a construction firm and I often find reluctance from within to take on an added responsibility for ensuring safety while designing facilities. I have personally gained insight from articles in this issue as well as an earlier one on the safety of built environment. Work being done by the Aga Khan Planning and Building Service in Pakistan is noteworthy and studying their models in greater details will definitely assist us in considering the many aspects in construction that impact the health and growth of a young child.

Faiz Rasool
Tando Allahyar

A Pregnancy Orientation

Things that are good to know the first time around



The nine months of pregnancy and the unbelievable miraculous experience of giving birth is a process that the parents' mind needs to relive over and over and over again before it is resolved and stored away in their memories. For some time after becoming new parents, you will think back over the period of pregnancy and birth for many reasons and tie the experience together with the little person you now hold in your arms and see and know.

Given below are stages in pregnancy of what expecting mothers may experience over the nine months and the various needs during and after pregnancy.

Fetal development

From the moment of conception, amazing changes are taking place inside the mother's body – week by week; the baby is slowly developing into a recognizable human being. The nine months of pregnancy can be roughly divided into three trimesters of around 12 weeks each. The first trimester is when the baby's major organs develop, the second is when the rapid growth takes place and, during the third - the baby prepares for birth.

Physical changes during pregnancy

Pregnancy, labor and giving birth make great demands on the mother's body, so it's important to keep fit during pregnancy. Exercise as suggested by the doctor helps to ease many common aches and pains of pregnancy and also helps to prepare the mother-to-be's body for the hard work of giving birth. It also helps the mother recover more quickly after delivering the baby.

Emotional needs of a mother-to-be

Every life change brings doubts and worries as well as hopes and joys, and pregnancy is no exception. For most women, pregnancy – especially the first one – is an emotional roller coaster. She may feel thrilled and elated one moment, worried as to how she will cope and/or whether her baby will be healthy the next. She may look forward to motherhood or wonder if it will mean loss of freedom. However she feels, there will be lots of adjustments to make as she comes to terms with the fact that she will soon be a mother. These kinds of fluctuating

emotions can be confusing, but they are normal and will probably lessen as pregnancy progresses.

Dietary needs while expecting

When a woman is pregnant, it's important for her to eat healthily. As the to-be-born baby depends on the mother's body to provide everything it needs to grow and develop, so a well-nourished mother is more likely to produce a healthy baby than a malnourished one. Eating well is



important for the mother's own health, too. The baby is very efficient at taking what is needed from the mother's body, so she needs to make sure that she has sufficient essential nutrients for both the mother and the baby. If she doesn't, her own health could be affected.

Need for relaxation

Relaxation is important in anyone's life, but during pregnancy, when the mother is combining work with thinking about the future, or is already a mother, settling down can be hard. However, making time to relax will help make the pregnancy less stressful. Relaxation can also help in labor, as calming techniques can ease labor pains, particularly in the early stages.

Antenatal care

Whether a pregnant woman opts to give birth in hospital or decides to have a home birth, most of the antenatal care will be provided by midwives, with support from a

doctor and other specialists. Whoever provides the antenatal care will perform all of the important routine check-ups that take place throughout the pregnancy. Arrangements for antenatal care vary around the country – how much choice the mother-to-be has depends on where she lives.

The most important part of antenatal care is the clinical check-ups. A patient has to visit the doctor at least three times during pregnancy to be labelled as a booked case. Ideally a patient should have at least 7 clinical check-ups for low-risk cases and 12 visits in case of a high-risk pregnancy.

Antenatal tests are used for a number of purposes – to find out, for example, whether the placenta is in the right position, whether the baby is growing normally or even if the baby has a chromosomal disorder.

The most important part of antenatal care are the check-ups that begin at around 12 weeks. In most cases, these will confirm whether or not the pregnancy is progressing normally. If any problems do develop, the check-ups often pick them up at an early stage so that immediate treatment can be arranged.

Experiencing labor

The experience of giving birth differs greatly for everyone and the sort of labor the pregnant woman will have is determined largely by the size and position of the baby and the shape of the pelvis. Research shows that the more information a woman has about the process of giving birth and the more she feels she has a say in what happens during labor and delivery, the better she is able to cope.



About the Writer:

Ms. Sana Irtiza holds an MBA degree in Human Resources from the Institute of Business Management (IoBM). She is currently working as an Advocacy and Publications Associate at the Sindh Education Foundation, Government of Sindh.

References:

- The Baby Book by Sharon Maxwell Magnus and Dr. Mark Porter
- http://www.dy-dee.com/html/experiences_of_pregnancy.html

While one cannot predict exactly when labor will begin, how long it will last and whether it will progress exactly the way it should, one ought to look out for certain signs to recognize labor when it has started. If the baby moves less (less than 10 movements in 24 hours), contractions are coming 5 minutes apart or closer, if waters break or there is bleeding then it is probably time to make a move for the clinic / hospital or the mid-wife who will deliver the baby.

After the birth

For many women, holding their newborn baby in their arms seems to erase the pain of labor instantly. But other women find that they are so exhausted they just want



someone else to take care of the baby until they recover. Relief, joy, exhaustion and numbness are all natural reactions and during the first few days after birth, a mother's emotions remain in flux but she should try to take one day at a time.

Breastfeeding

Good technique is the key to successful breastfeeding and, as with most things, practice makes perfect. Breastfeeding doesn't come as second nature to everyone. One might take to it straight away or it may take three or four weeks for some mothers to get the hang of it. It may look easy, but it takes up a lot of time and energy, and in the early weeks the baby may feed up to 12 times a day. One of the great things about breastfeeding is that you do not need any equipment – all it takes is a mother and a baby.

Giving birth is truly exhausting but exhilarating and like so many life experiences, largely outside of our control. But being an informed mother/parent can assist the expecting couple and caregivers in facilitating and increasing the likelihood of a healthy birth experience.



Great Beginnings Start before Birth

The period from conception to birth is a vital period for the physical, emotional and the mental development of every baby. It is the period when the intimate relationship between a parent and a child is given form and quality, with long lasting outcomes.

The importance of the pre-natal period (the time between conception and birth) cannot be over-emphasized. It is a period of physical and mental growth of the fetus. Take the brain as an example. The brain grows very fast in the fetus. At around eight weeks from conception, it weighs about 2.5 grams, while at birth it is about 38 grams, which is 14% of the total body weight. This compares strikingly with the adult brain, which is about 2% of body's weight. According to Dr Thomas R. Verny – world's leading expert on the effects of prenatal and early postnatal environment on personality development, the brain cells are pathways to assist communication and the relevant organs develop during the prenatal time to build foundations of the future potential. The more you stimulate a child's skin, or the auditory nerves, the more pathways for the sensory organ will develop and become stronger. Hence, it can be safely inferred that stimulation provided during this time remains intact for the years to come and negligence during this time will affect a much greater span of the child's life.

The 9 months long pregnancy experience brings forth many alterations for the mother, not the least of which are the emotional changes she goes through during the period. Pregnancy can leave the mother feeling excited, euphoric, depressed, worried, anxious, angry, proud, upbeat all at once or one after another. These feelings are perfectly normal as she gets caught up in the excitement of bringing a new life into the world, and the stress of practical matters such as money, work and lifestyle issues that must be addressed when a baby is born. A major factor that contributes to the wide range of emotions expectant mothers feel during their pregnancies is hormones. It is a scientific fact that the chemicals in our bodies influence our emotions, and during pregnancy an incredible amount of chemical processes are taking place in the body of the expectant mother. It is important however that the mother strives to maintain her emotional stability for the healthy development of her baby.

In traditional societies, long before research provided proof, the pregnant woman's behavior was believed to affect the unborn baby, so expectant mothers were to refrain from bad thoughts, and were to be protected from any trauma or shock. In traditions of ancient subcontinent for instance as well as in other cultures around the world, pregnant women were surrounded with beautiful things and fine clothing. They were taught the arts of music and painting, and fed exquisite foods blessed by the sages. They were surrounded by beauty, music and were to think of goodness. This was believed to bring the unborn child talent and beauty.

Research further reveals how the mother's emotional state and surroundings affect the unborn child's health and development. Any stress or strong emotion in the mother creates a reaction in the growing baby, while a soothing activity such as singing to the baby has the effect of calming the mother, and in turn the baby. The brain architecture and premise for the baby's personality is set in the womb of the mother. The conditional exposure and experience in the womb are imprinted in the sub-conscious mind of the baby and are often repeated by him while growing up. Mothers who experience depression during pregnancy are more likely to have babies with lower emotional stability and low self-esteem.

Pregnant women need peaceful and comfortable surroundings and special care from their family members to reduce their levels of stress as far as possible. While a mother is going through pregnancy, she needs encouragement and companionship. Not surprisingly a woman's body works best when she is confident, secure, emotionally supported and on her own ground. If the mother does not learn to treat herself well and make good use of the time at this point, she might also fail to condition herself for the mental preparations needed for the arrival of a baby. The mother can prepare herself with the help of the support system around her, formed by her family members to care for the unborn baby throughout the pregnancy.

A healthy diet and regular physical activity level can help both the mother and fetus during pregnancy. For this reason, many health care providers suggest that women

Connecting with Your Unborn Child

Talk to your unborn baby

Talk to your baby as if it is already with you. Your baby can hear the sounds and will get used to your voice. You could sing or hum to your baby as well. The pleasant sounds provide joy to the baby.

Think about your baby

Think about the time you will hold the baby in your arms. The baby will sense your loving thoughts that will provide him/her with a sense of love, comfort and stability. This intensifies the bond between the baby and the mother.

Use daily experiences to prepare your baby for life after birth

Doing what you do everyday exposes the baby to the world he would be coming in to. Share your lifestyle with the unborn child. This could be a good time to change the habits that you might not want your baby to have the affiliation with when s(he) comes in to the world.

Establish physical contact with the baby

Touch, rub or pat your tummy. This is a good way to reach out and communicate with the baby. You could make it a frequent exercise while showering, rubbing an anti-stretch mark cream or patting while listening to music.

Keep stress under control

The baby depends on the mother for the emotional and psychological content. The mother should be careful about the environment she creates for the baby as maternal stress has a direct and negative impact on the personality of the baby.

who are thinking about getting pregnant take steps to improve or maintain their own level of health before they get pregnant. A healthy diet helps to ensure that the fetus has all the nutrients it needs to grow and develop normally. The developing fetus receives its nutrition from the mother's blood. Therefore high fat diets and some vegetarian diets are discouraged during pregnancy because they may not provide all the nutrition needed for the developing fetus. Weight reduction diets are avoided during pregnancy. Maintaining a healthy weight, both before and during pregnancy, can help to reduce stress on the mother's body and lower the risk of certain disorders of pregnancy. Being active before and during pregnancy, if approved by a health care provider, can help women maintain their healthy weight and can improve the development of the baby.

Just as important is keeping potentially dangerous things out of the mother's body. For instance, medications used to treat various diseases and conditions can affect the growth and development of the fetus. Certain herbal supplements and high amounts of vitamins can also make it harder for a woman to get pregnant, and can impact the fetus' health during pregnancy. Even being around certain materials, such as paint and pesticides can put the health of the fetus at risk. Some changes in medication or supplement use, or changes in environment may be recommended to prevent problems during pregnancy.

The affects of ill-habits such as substance abuse (ghutka, drugs) give rise to physical and mental disabilities. A research indicated that the children of mothers that indulge in substance abuse during the pregnancy are more prone to additives.

Pregnancy is also an initial bonding period with the baby. The bond between the mother and her baby strengthens as pregnancy progresses. The developing fetus hears the mother's heartbeat and her voice and may respond to her touch. It is reported that by the seventh month of pregnancy, two out of every three women may acknowledge a strong maternal bond. At that time fatherliness also comes alive since fathers have been found to experience the attachment in the later months of the pregnancy. There has been evidence that the fathers indulge in the process of thinking about the baby and spending more time with the mother to care for the mother and the baby. The bond between the child and the father develops as a consequence of the time he had spent with the mother and the connection between the father and the mother during the period of pregnancy.

The prenatal period is of critical importance in the healthy development of the baby and parents should do their utmost to pay heed and provide the best care possible. A good pregnancy leads to a well-nurtured baby which will prove to be a blessing to the parents as well as the society around them.

About the Writer:

Dr. Shahida Mohiuddin is a senior faculty at ITREB-Pakistan and a visiting faculty member at the Institute of Professional Psychology. She has backgrounds in Psychology, Education and Early Childhood Development. Her work also deals with indigenous child rearing practices in Pakistan. Her research has been presented at various national and international conferences.

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- The Woman's Comfort Book, The Couple's Comfort Book, The Pregnant Woman's Comfort Book, The Woman's Retreat Book, and The Comfort Queen's Guide to Life. You can visit her popular website at comfortqueen.com
- <http://www.birthpsychology.com/lifebefore/early4.html>

Steps to a Safer Pregnancy



For a safe, trouble free pregnancy, antenatal care ideally should start even before conception.

A newly married couple came to my clinic for a prenatal checkup a few days back. And as it turned out, the resident on call did not have a clue as to what to do with them.

A lot of people including doctors seem to think that pregnancy consultation with a medical professional should be 6 to 7 months into a pregnancy. This actually is a big misconception. During this time, major changes have taken place and the baby has matured. Therefore not much can be done at this stage to help the baby or the mother in case a complication has arisen. To take the best possible care of a pregnancy, the couple should visit the clinic at the time they start to plan for a baby.



At a pre-pregnancy stage the health of the couple is assessed. The family and medical history is appraised carefully and habits such as smoking, alcohol, drugs use if present, are strongly discouraged. The woman's complete blood count is done to check her hemoglobin and platelet levels. Her blood sugar and blood pressure is also controlled if not at optimum levels. Her rubella immunity is checked, and if negative she is given a rubella vaccine and advised to avoid pregnancy for 3 months, due to theoretical risk of abnormalities in the fetus. She can also be vaccinated for Hepatitis-B during this period although it can be safely

done during pregnancy as well. General health, hygiene and lifestyle advice is given which includes a healthy diet plan and an exercise regime. Exercise is not contraindicated before or during pregnancy but care should be taken that it is not overdone.

When a woman suspects pregnancy she can confirm her status by utilizing a home pregnancy test. After confirmation of pregnancy an early ultrasound is important for the viability of the fetus. It confirms the exact date of pregnancy (especially valid in our community as women are not sure of dates), and viability, which is the cardiac activity of the fetus. It usually is visible by 6 weeks of pregnancy and is reassuring for both the mother and the obstetrician. An early ultrasound is also important to establish whether it is a twin or singleton and also an intrauterine or ectopic pregnancy. In case a cardiac flicker is not present then a serial beta HCG (blood test) is advised to confirm the well being of pregnancy.

Once pregnancy is confirmed and its viability established, a complete evaluation at a clinic is mandatory. This includes checking up on the history especially in the case of marriage of cousins, congenital abnormalities in the family, history of thalassemia, diabetes, blood pressure, epilepsy, thyroid disease, asthma etc.

If the patient is on medication such as antidepressants, antihypertensives or antiallergics, sometimes these medications cannot be withdrawn. However the dosage may be tapered or alternatives can be suggested which are safer in pregnancy. Luckily pregnancy occurs at the prime of age when one is young and healthy therefore most of these problems are not very frequent.

The workup in addition to history requires examination and investigations. These include blood group/Rh factor, complete blood picture, urine detail report and culture/sensitivity, hepatitis B and C and rubella. The blood sugar test is done at 20 weeks.

In routine, low risk pregnancies (80 percent of the cases), the usual follow up for pregnant female are the monthly visits till 30 weeks, fortnightly visits till 36 weeks and then weekly visits till delivery. On these routine visits the

mother's BP and weight are checked; a physical checkup is carried out to see the growth of fetus by measuring the height of fundus (distended womb), fetal heat and movements are checked and maternal well being is established.

The mother is usually advised routine activity and told to avoid exertion. Supplements such as iron/calcium are advised and foods rich in iron are encouraged. These include spinach, dates, apples, red meat and liver. The concept of garam/thanda doesn't exist in medical science so from a medical viewpoint she can eat whatever she likes. Fish, cheese, nuts, milk and yogurt are encouraged as well. Only in case of diabetes or in morbidly obese patients is the diet restricted.

The mother-to-be is advised to continue her routine job/work. Minor aches and pains are to be expected during pregnancy and they can be corrected by posture, rest, occupational therapy (being busy) with the last option being pain killers. Light relaxing massage on the back and legs helps especially in the third trimester when blood circulation in the legs is stagnant because of mechanical pressure of the womb.

Another important test which is carried out mid pregnancy (20 weeks) is the detailed anomaly scan, which is a comprehensive visualization of the 4 chambers of the heart, lungs, stomach, bowels, bladder, kidneys and liver of the fetus. The skeletal normality is also established on this scan. This, however, has to be done from a tertiary



center.

In families where the index of suspicion for abnormalities is high or the maternal age is above 35 years, other sophisticated hi-tech tests such as amniocentesis are advised at 16-17 weeks. These are invasive and will have the slight risk of miscarriage.

The tetanus toxoid shot is advised at the 28th and 32nd week, 2 doses only. In women who have completed their 5 shots, the additional dosage in pregnancy is not recommended. Growth scans are advised in the third

The Miracle of Multiples

Eating properly, getting enough rest, and making regular trips to the doctor are critical measures for any expectant mother to stay healthy. And a woman with a multiple pregnancy might be scheduled for more frequent appointments with her obstetrician / gynecologist (OB-GYN) than a woman who is pregnant with a single fetus.

The need for frequent, intensive prenatal care is of the utmost importance in a multiple pregnancy. Because multiple pregnancies are automatically termed high-risk, the need for specialized health care is vital to ensuring that you and your babies receive the best care available.

Several factors contribute to the development of a multiple pregnancy:

- ❑ Heredity: A history of multiple births on a woman's side of the family increases her chances of having a multiple pregnancy.
- ❑ Number of prior pregnancies: Having more than one previous pregnancy, especially a multiple pregnancy, increases the chance of having a multiple pregnancy.
- ❑ Delayed childbearing: Older women who get pregnant are more likely to have multiples.
- ❑ Infertility treatment: Fertility drugs, which stimulate the ovaries to release multiple eggs, or assisted reproductive technology (ART), which transfers multiple embryos into the womb (such as in vitro fertilization, or IVF), greatly increase a woman's chance of having a multiple pregnancy.

Source: www.kidshealth.org

trimester to monitor the growth of the fetus, these can be serial or just one depending on the need. Hemoglobin checks can be repeated in every trimester.

This is the basic pattern of antenatal care. The laboratory work up, medicines and supplements are at their most effective when they are tailored specifically according to the needs of the patient. The plan can be simplified according to the means of the patient, the setting and the availability of facilities. For example in under developed communities, it is the midwife who can conduct visits to the mother and monitor whether the mother is in a high risk situation and requires hospital delivery. The important thing is to always remember that the best prenatal care happens even before conception. Getting in touch with medical professionals from the very beginning ensures a safe and trouble free pregnancy for you and your baby.

About the Writer:

Dr. Nighat Shah is a consulting gynecologist at Aga Khan Hospital and one of the leading activists working for the health and rights of women. She is also currently serving as the Secretary of the Society of Obstetricians and Gynecologists, Pakistan.



Prenatal Parenting

Bonding with Your Unborn Baby

Babies do not come into the world as “Tabula Rasa” – (Blank slate) as was believed in the past. Researchers have found that infants are naturally programmed to reach out for warmth and closeness, be affected by the pleasures and discomfort the mother feels, hear what the mother listens to and be imprinted by the disposition of the mother during pregnancy. Hence, the state of being in the womb becomes an enduring part of the fetus’ personality. It is crucial to understand that within the womb, it is not just a zygote developing into a complex structure of flesh and bones, but an individual is being framed within. This creature’s first exposure to the world does not occur after it is born; rather it is through the mother that the fetus makes its first contact with the world outside the womb.

Beside the physiological needs, a pre-born seeks maternal attachment and bonding. There are scientific studies substantiating that maternal mood correlates to the later socio-emotional development of the fetus. One research observed that maternal mental health is positively correlated with the maternal-fetal attachment style and bonding (Mikulincer, 1999). Test results confirmed that mothers who had positive physical and mental health and a high sense of security illustrated stronger attachment to their pre-born. “Avoidant and Anxious” mothers showed weak attachment with their fetus arising because of poor mental health. The maternal-fetal relationship constructed during the gestation period then forms the basis of the attachment between the mother and the newborn.

The unborn child develops physically, cognitively and emotionally in the womb as an impression of the mother’s frame of mind. A research carried out by William Fifer (Associate Professor of Developmental Psychobiology at Columbia University, USA), proved that when the newborns are presented with their mother’s voice (as it would have sounded in the womb), they responded positively to the stimulation, signifying that they were capable of distinguishing their mother’s voice from other random voices. The value of the prenatal care provided by the spouse and the support system around the mother are therefore key determinants of the fetus’ development and later outcomes. To initiate a positive and strong association between the unborn and the mother, stimuli such as



auditory contact (music, mother’s voice etc) and exposure to pressure, vibrations and light are used to communicate with the developing baby prior to birth. This enables the fetus to learn to recognize and respond to different stimuli, which augment the physical, mental and sensory development.

Prenatal stimulation

Various stimulation techniques are used to help the fetus grow cognitively and emotionally along with the physical development. There are several things expecting mothers and fathers can consciously do to begin to connect with their baby.

Talking and reading to the baby in the womb

Experts believe that babies begin learning the foundations of language while they are in the womb. Because of such recognition, reading to babies at this stage carries many benefits. Fetuses that do experience such stimulation are found to better recognize and relate to the melody and rhythm of their mothers’ voices and other introduced stimuli and build their foundations of vocabulary and language while they are still in the womb.

Reading to the baby while in the womb also creates a bonding experience for the mother and family members who participate in the reading activity. It allows everyone involved in the exercise to feel an emotional connection to the baby.

Music for baby in-utero

The fetuses develop auditory abilities around the fifth month of pregnancy and start becoming aware of the sonic stimuli outside the womb. Many believe that exposure of a fetus to music results in enhanced intellectual development and interest in music and sounds. Prenatal stimulation through music while in the womb might provide some babies with a sense of confidence and relaxation after they are born.

Research findings suggest that newborn babies recognize the music played to them in the womb and tend to move and breathe in time with the music they enjoy. There have been evidence for an 'increased level of cognitive development' resulting from in-utero exposure to music. It is advised that mothers choose soft and gentle music over rock or heavy metal for that matter, as the unborn might get over stimulated or feel the discomfort of the thumping and pounding of the music.

Belly massage

Massaging the belly or responding with talk or touch when the baby moves or kicks, introduces the baby to human touch, and it might also be the closest thing to "conversation" with the baby while it is in the womb. Studies have shown that by seven months, not only are babies capable of responding, but it's also likely that their response is meaningful and intentional.

Research in prenatal stimulation has shown that stimulated babies tend to exhibit accelerated visual, linguistic, and motor development. Besides higher intelligence and creativity in stimulated infants, prenatal stimulation is beneficial for building healthy and loving parent-child relationships.

Did You Know?

- ❑ From at least six months of pregnancy onward the preborn baby is aware of and influenced by what's going on in the outside world.
- ❑ A preborn baby's hearing is developed enough to enable him to respond to outside noise.
- ❑ Babies seem agitated by rock music, kicking violently when they hear it and are calmed by classical music. Even the five-month-old fetus has been found to have discriminating musical ears.
- ❑ A six-month-old fetus can move his body to the rhythm of his mother's speech.
- ❑ A preborn baby can react to sound and can perceive different tastes and sights.
- ❑ From six months on a preborn baby can share mother's emotions via the hormones associated with them.
- ❑ Involvement in activities such as meditation, yoga, listening to mild music, gentle body massages, etc. is a constructive stress management tool.
- ❑ Exercising promotes improved mental and physical health. Substance abuse might serve as emotional crutches.

Source: <http://www.askdrsears.com/html/1/T010608.asp>

About the Writer:

Ms. Sanobar Nadeem is working as an Instructor in Aga Khan University - Human Development Programme and has been associated with the field of Clinical Psychology. She has keen interest in child development and maternal and child mental health.

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Food for Thought

Eating for the Baby & You

Pregnancy is a wonderful opportunity for a mother to take charge of her health. Knowing that she is nurturing not only herself but also the unborn, gives her the motivation to eat right, sleep well, exercise and abandon unhealthy habits. Healthy diet becomes very important because a pregnant woman's food choices influence her baby's weight, health, and overall development. While a complex interplay of genetics, environmental factors and maternal health contribute to pregnancy outcomes, the significance of proper nutrition for healthy pregnancies, healthy mothers and hence healthy babies cannot be ignored. Conversely, lack of key nutrients could lead to petite babies, incidence of birth defects in babies and even miscarriages. The idea of taking proper nutrition three months before conception is ideally advocated to prepare the mother's body adequately for the demands of pregnancy.

Pregnant women are recommended 300 extra calories a day. Mother-to-be should emphasize on improving the overall quality of the diet by selecting lean cuts of meat, choosing fresh fruit over canned fruits, and opting for whole grains instead of refined carbohydrates. In this way the calories consumed will be acquired in the form of proteins, complex carbohydrates and good fats which will benefit the baby and the mother instead of merely adding to the mother's weight, with all its concomitant ill effects on health.

A well balanced diet

A well balanced daily diet includes portions of protein from lean meat, fish, poultry, eggs, grains or beans for brain/tissue development, iron, servings of cooked and raw vegetables and fresh fruits for fibre, vitamins and minerals; grains such as rice, bread, pasta, and chapatti for energy; and dairy products such as milk, cheese and yogurt to provide for calcium and vitamins required by the body. Eating a variety of foods from each of the three important food groups – carbohydrates, fruits and vegetables, and protein – will help ensure that you and your baby get all the nutrients you need.

The best way a pregnant woman can receive all the protein, carbohydrates, fats, fiber, vitamins and minerals her body needs is to eat a variety of healthy foods and drink plenty

of fluids. Many doctors prescribe prenatal vitamin supplements as well, but these supplements are only meant to complement a well-balanced diet rather than substitute for one.

Special requirement

Pregnant women require extra folic acid, iron, calcium, and vitamin C while expecting.

Folic acid

Folic acid (also known as vitamin B9 or folate in its natural form) plays a crucial role in the healthy development of



the baby's nervous system. Not only is it essential for making red blood cells and for proper production, functioning and repair of DNA, it also serves to prevent neural tube defects in babies. Good sources of folic acids include grains, beans, spinach, okra, oranges, bananas, as well as fortified cereals.

Iron

Typically, the volume of blood in a pregnant woman's body goes up by almost 50 %, hence increasing the need for iron in its role as transporter of oxygen through the blood. Iron is also necessary for the baby's growth at later stages of the pregnancy. Good sources for iron include red meat, dark green vegetables such as spinach and broccoli, egg yolks, dried fruit, and apricots (meat and eggs should

always be well cooked). Iron is quite difficult for the body to absorb; to aid absorption, iron-rich food should be eaten with foods that are rich in Vitamin C, such as oranges, strawberries and peppers. Intake of tea or coffee is to be avoided within half an hour of eating an iron-rich meal as they reduce the amount of iron absorbed.

Vitamin Supplements

One should be cautious about taking supplements (other than a folic acid supplement) during pregnancy as large



doses of some vitamins could harm the mother and the baby. Eating a healthy diet is the best way to get the nutrients the mother needs. However, there are some supplements formulated for pregnant women. If the mother-to-be likes to take one, she must discuss with the doctor first.

Calcium

Calcium is a nutrient needed in the body to build strong teeth and bones (most of the calcium in the body is found in the bones). Calcium also allows blood to clot normally, muscles and nerves to function properly, and regulate the heart beat. Pregnant women require 1000 mg of calcium daily during pregnancy and while they breastfeed the



baby. If the mother fails to consume enough calcium to meet the need for proper development of the baby, the mother's body starts using its own reserves of calcium, hence decreasing bone mass of the mother. This puts the mother at risk for osteoporosis (brittle-bone disease) later in her life. Good sources of calcium include dairy products such as milk, yogurt and cheese as well as green leafy

vegetables and seafood (recommended to be used only in restricted quantities). Vitamin D helps in the absorption of calcium: the best source is sunlight, but it is also found in oily fish and margarine.

Foods to be cautious with

While the benefit of eating seafood (expressly fish) is always advocated, increasing contamination of seafood with mercury concentrations due to the dumping of industrial waste in the seas, poses a serious health hazard. The harmful effects extend even to babies in the uterus by disturbing brain and the nervous system development in the maturing fetus. The conventional wisdom in Pakistan is to opt for deep-sea fish and to avoid buying catches near the coast.

In addition, liver is traditionally considered a healthy and tasty delicacy in Pakistan – it is also one of the first 'health-boosting' foods offered by families to children and pregnant women due to the iron content that it offers. However, many doctors advise otherwise. The poultry-rearing



practices have resulted in poultry-liver contamination with antibiotics. Liver and other organ meats may have high concentrations of vitamin A, which should be avoided by pregnant women because excess vitamin A can hurt the baby. Being fat-soluble, vitamin A is stored to a variable degree in the body, making it more likely to cause toxicity when taken in excess amounts.

Caffeine – present in tea, coffee and many fizzy drinks – is best restricted to a minimum during pregnancy because of its effects on the baby. It inhibits the absorption of iron and calcium, disturbing the apt fetus development. Although green tea is extolled as a health drink, pregnant women should be aware that it contains both caffeine as well as tannic acid.

Finally, traditional attempts to produce desired attributes in babies often involve taking herbal remedies, increasing the consumption of certain items such as coconut water for colored eyes of the baby etc. Such practices should be avoided altogether since a baby's gender, eye color; skin tone etc. cannot be affected by consuming any particular food or medicine. The features of a baby are a result of genetic transcription that cannot be altered or affected by outside means. Following such a regimen can actually compromise the health and safety of the mother, as well as the child.

About the Writer:

Ms. Cassandra Fernandes Faria is currently working as an instructor and a team member of Citizenship Rights and Responsibilities Project (CRRP) Team at Aga Khan University - Institute for Educational Development. She writes on social issues for various publications.

Working Out

Exercise during pregnancy



Aching, back pain, constipation and swelling; all the symptoms of being pregnant. Now the only means that might minimize the aches and pain and unpleasant side effects of pregnancy is EXERCISE! There are a whole lot of good reasons for keeping fit while pregnant. Besides helping to ease many of the common aches and pains of pregnancy, it produces feel-good chemicals that give expectant mothers a natural high and also helps prepare their bodies for the strenuous job of labor. Exercise also makes after birth recovery quicker.

Why exercise while pregnant?

Regular exercise can be beneficial for pregnant mothers in the following ways:

- **Sleep.** Staying up for hours and finding it difficult to fall asleep is what many pregnant women often go through. However those who exercise consistently

Exercising Smart

- ☐ Have a drink before you exercise to avoid dehydration.
- ☐ Have pre and post workout snacks for keeping up the energy level.
- ☐ Stay in a surrounding with cool temperature.
- ☐ Dress for exercise success. Wear loose, breathable and stretchable clothes.
- ☐ Choose the right workout shoes to minimize the injury chances of your feet.
- ☐ Select a wooden or a carpeted surface, instead of tile or concrete for workouts.
- ☐ Stay on the level and avoid heights.
- ☐ Don't exercise flat on your back.
- ☐ Avoid risky moves such as jumping, bouncing, or other jerky motions.

sleep better and wake up feeling more fresh and rested.

- **Health.** A growing issue among pregnant women is that they fall prey to gestational diabetes. This problem could be prevented through exercise.

- **Stamina.** Resting during pregnancy is the most common advice that could come to you from your surroundings. And absurd as it may sound, but sometimes getting too much rest can actually make you feel tired and lazy. Exercising for a while could give a boost to your energy level it requires.
- **Mood.** Exercise causes your brain to release feel-good chemicals known as endorphins that give you a natural high, hence perking up your mood, ebbing stress and anxiety.
- **Back.** Having a strong set of abs could avert back pain, which often plagues many pregnant women. However, even the exercise that is not directly targeting the tummy can also relieve back pain and pressure.
- **Muscles.** Stretching does well for your tensed muscles, especially of a pregnant body which is more prone to muscle cramps in the legs and elsewhere. It could also uncover those little pockets of tension, warding off sore muscles. And the best part – you can do it anywhere, anytime, while sitting and you don't even have to break a sweat.
- **Labor.** Neither could exercise during pregnancy be termed as a benchmark for smooth labor, nor does it guarantee that you'll race through childbirth. It can, however make shorter labors, and even avoid the need for labor and delivery interventions (C-sections).

Exercise is good for healthy pregnant women who are receiving prenatal care. Moderate exercise/activity is safe for most pregnant women. But it's always a good idea to talk to the doctor before starting an exercise program.

- **Postpartum recovery.** Last, but not all the least, the more fit you stay during pregnancy, the faster you'll recover physically after childbirth.
- **More fit.** Babies of moms who exercise during pregnancy are found to be born at healthier weights, are better able to withstand labor and delivery, and recover from the stresses of birth more quickly.
- **Smarter.** This is unbelievably true. Research shows

Active MOMS-To-Be



Source: <http://www.activemums.com/images/>

that babies of moms who workout regularly throughout pregnancy score higher, on average, on general intelligence tests by age 5. This happens because while you are exercising, you are boosting both your muscle power and your baby's brain power.

- **Easier.** Babies of pregnant exercisers are more likely to sleep through the night sooner, are less prone to colic, and are better able to soothe themselves.

Exercising right!

One has to be careful while choosing the right pregnancy exercise.

Breathing: It is actually deep breathing, instead of shallow chest breaths (that most people intake) that relaxes you, improves your body awareness, and allows for better oxygen intake. Concentrate on your breathing by counting: Count to 4 while inhaling, and count to 6 while you exhale. Try devoting sometime daily to focus on breathing deeply.

Walking: You couldn't find a much easier exercise to fit into your busy timetable than walking. A pair of comfortable shoes and breathable clothes is all that is

needed. Ill-habitual expectant moms can start a regimen by going slowly. Experienced runners can stay on track and continue jogging, but should abstain from over-doing as it can make one more prone to injury.

Shoulder and leg stretches: To curb the tension in your shoulders, try this simple move: Stand with your feet-shoulders width apart and knees slightly bent. Now bring the left arm out to chest height, place the right elbow on it and gently pull the elbow towards the left shoulder. Hold the stretch for 5-10 seconds, then switch sides.

You can give your legs a much-needed break with this easy stretch: Stand and hold any sturdy object for support. Bend the left knee with your left hand toward your buttocks while extending your thigh backward from the hip joint. Keep your back straight and hold the stretch for 10-30 seconds. Repeat with the right leg.

Neck relaxer: This exercise will provide relief to your neck. Sit up straight in a supportive chair. Gently tilt your head to one side and let it drop toward your shoulder (don't forget to breathe deeply

in the process). Neither should you force the head down, nor should you raise your shoulder to meet your head. Hold on for 3-6 seconds, then switch sides.

Pelvic tilts: This routine workout can help improve your posture, strengthen your abs, reduce back pain, and can also ease pain in the early stages of labor. Stand with your back against a wall and relax your spine. As you inhale, squeeze your tummy and buttock muscles tight and tilt your pelvis back and forth. Exhale; then repeat several times.

Leg lifts: Leg lifts uses your body weight to tone your thigh muscles. Lie on your left side with your shoulders, hips, and knees lined up straight. You can support yourself by holding your head with your left arm and placing on the floor in front of you. Now slowly lift your right leg as high as you comfortably can. Repeat the stretch 10 times, and then switch sides.

Exercising during pregnancy can certainly do the average pregnant body good, if not wonders to it. But remember that before you continue your old exercise routine or begin a new one, you should talk to your doctor about exercising during pregnancy.

About the Writer:

Mr. Muhammad Sameed Hussain has worked at the Sindh Education Foundation during 2010. He is currently studying Accounting and Finance from the London School of Economics and Political Sciences (External System) and is a CFA level 1 candidate.

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Prenatal Examinations in Pregnancy

No woman should die giving life.

That at least is how it would be in a perfect world. Sadly, despite today's medical marvels and discoveries, that is far from the case. Though motherhood should be a positive and rewarding experience, it is associated by far too many women with suffering, ill-health and even death. Every year, approximately 600,000 women die of pregnancy-related causes, and 98% of these deaths occur in developing countries. Speaking of the risk factor, 1 in 3600 women has a risk of dying due to pregnancy linked causes in the developed world. In the developing countries that ratio is 1 in 40. (Source: *International Journal of Gynecology & Obstetrics Volume 70, Issue 1, 2000*)

In Pakistan an estimated 30,000 women die each year due to pregnancy related causes, placing it as a country with one of the highest maternal mortality rates. WHO & UNICEF approximate it around 270 deaths per 100,000 live births but that figure may be significantly higher due to under registration and absence of cause of death information.

The main reasons for the high rates of maternal mortality is lack of prenatal care, dearth of properly trained birth attendants and medical facilities, as well as a rural culture where there is no concept of antenatal visits. Most people do not visit a hospital until they feel it is a life or death situation. Almost 80 percent of births in the country take place at home.

To ensure a safe and healthy pregnancy, antenatal care with medical professionals cannot be stressed enough. A woman should have at least 3 visits to a medical facility to be labeled as a booked case. In a low-risk pregnancy 7 visits are considered ideal and in a high-risk case the required number can go up to 9-12 visits. Even though the number of visits maybe reduced due to unavoidable reasons, there are critical junctures during a pregnancy that a visit is vital and should not be missed. The first crucial stage in a pregnancy is during 5-9 weeks where an ultra sound is taken to ensure it is an intrauterine pregnancy and a cardiac flicker is done as well. The next essential period is 20-24 weeks where ultra sound is used to monitor for congenital malformation, if any, in the baby. Between 32-36 weeks the third visit is used to check placenta localization.

The table here provides details of the medical examination carried out at various stages of the pregnancy.

	1	2	3	4	5	6	7	8	9
0-4 weeks									
5-9 weeks									
10-14 weeks									
15-19 weeks									
20-24 weeks									

- ☐ Confirmation of pregnancy
- ☐ Medical history and previous obstetrical history, if one
- ☐ A general physical exam
- ☐ Blood tests: hemoglobin and hematocrit, blood typing, rubella titer, hepatitis B screen
- ☐ Possible blood test for genetic diseases if history warrants
- ☐ Urinalysis to test for infection, sugar, and protein
- ☐ Weight and blood pressure check
- ☐ Counseling on proper nutrition and avoiding environmental hazards
- ☐ An opportunity to discuss other relevant concerns

- ☐ Check-up for intra uterine pregnancy and cardiac flicker
- ☐ Ultrasound
- ☐ Nutritional counseling
- ☐ Weight and blood pressure check
- ☐ An opportunity to discuss other relevant concerns

- ☐ Examination of abdomen to feel the top of the uterus
- ☐ Examination of the size and height of uterus
- ☐ Weight and blood pressure check
- ☐ Discussion of tests if needed: ultrasound, chorionic villus sampling, amniocentesis, and prenatal screening for genetic problems
- ☐ An opportunity to discuss other relevant concerns

- ☐ Examination of the size and height of uterus
- ☐ Examination for swelling varicose veins, and rashes
- ☐ An opportunity to hear baby's heartbeat
- ☐ An Opportunity to possibly see the baby move and all the organs that are now developed on ultrasound, if indicated
- ☐ Weight and blood pressure check (expect a more rapid weight gain over the next three months)
- ☐ Urinalysis to test for infection, sugar, and protein
- ☐ An opportunity to discuss feeling baby move
- ☐ An opportunity to discuss other relevant concerns

- ☐ Check-up for congenital malfunction
- ☐ Examination for the size and height of uterus
- ☐ An abdominal exam
- ☐ Examination of breasts and skin
- ☐ Examination for swelling of hands, legs, and enlargement of veins
- ☐ Weight and blood pressure
- ☐ Urinalysis to test for infection, sugar, and protein
- ☐ An opportunity to hear baby's heartbeat
- ☐ An opportunity to see baby on ultrasound, if indicated
- ☐ An assessment of fetal activity
- ☐ An opportunity to discuss other relevant concerns

	1	2	3	4	5	6	7	8	9
25-28 weeks									

- ☐ Examination of the size and height of uterus
- ☐ Weight and blood pressure check
- ☐ Urinalysis to test for infection, sugar, and protein
- ☐ Oral glucose tolerance test, screening for gestational glucose intolerance, if indicated
- ☐ Vaginal culture, screening test for beta strep infection, if indicated
- ☐ An opportunity to hear the baby's heart beat
- ☐ An opportunity to see the baby growing on ultrasound, if indicated
- ☐ An opportunity to discuss other relevant concerns

	1	2	3	4	5	6	7	8	9
28-32 weeks									

- ☐ Examination of the size and height of uterus
- ☐ Examination of your skin for rashes, enlarging veins, and swelling
- ☐ Weight and blood pressure check
- ☐ Urinalysis to test for infection, sugar, and protein
- ☐ Hemoglobin and hematocrit, if indicated
- ☐ Review of diet, an opportunity to discuss mother's weight, if necessary.
- ☐ An opportunity to hear baby's heartbeat
- ☐ An opportunity to see on ultrasound how baby has grown (if indicated)
- ☐ An opportunity to discuss other relevant concerns

During the seventh and eighth month of pregnancy, healthcare provider may call the mother twice a month for check up.

	1	2	3	4	5	6	7	8	9
32-36 weeks									

Check-up for placental localization

- ☐ Examination of the size and height of uterus
- ☐ Examination of your skin for rashes, enlarging veins, and swelling
- ☐ Weight and blood pressure check
- ☐ Urinalysis to test for infection, sugar, and protein
- ☐ Hemoglobin and hematocrit, if indicated
- ☐ Review of your diet, an opportunity to discuss mother's weight, if necessary
- ☐ An opportunity to hear baby's heartbeat
- ☐ An opportunity to see on ultrasound how baby has grown (if indicated)
- ☐ An opportunity to discuss other relevant concerns

During the seventh and eighth month of pregnancy, the healthcare provider may call the mother twice in a month for check up.

	1	2	3	4	5	6	7	8	9
36-40 weeks									

- ☐ Examination of the size and height of uterus
- ☐ Palpation of your uterus to determine position of baby
- ☐ An internal exam, if indicated
- ☐ Weight and blood pressure check
- ☐ An ultrasound exam if needed to determine the size and position of your baby
- ☐ Urinalysis to test for infection, sugar, and protein,
- ☐ An opportunity to discuss when to call your practitioner if labor begins
- ☐ An opportunity to discuss the difference between Braxton-Hicks contractions and the "real" ones
- ☐ An opportunity to discuss signs that labor has begun
- ☐ An opportunity to discuss when to go to the hospital or birth center
- ☐ An opportunity to discuss your birth plan, including labor assistants, avoiding episiotomy, or special birth requests
- ☐ An opportunity to discuss other concerns

During this month, your healthcare provider may check you weekly. If the weekly or twice-weekly visits drag any further, your healthcare provider may discuss what to do when you are "overdue". You may have weekly ultrasound examinations to assess the volume of the amniotic fluid, a biophysical profile, or discussion of possible induction of labor at some point. If you are overdue, your healthcare provider will counsel you on worrisome signs to watch for. Frequency and content of healthcare provider visits during the final month depends greatly on your particular obstetrical situation.



Two to Tango: A Father's Survival Guide to Pregnancy

In pregnancy, since the mother is left holding the proverbial ball she has to be all geared up and be ready for what is to come. When she gets pregnant, instinctively, the first thing the mother-to-be does is rush out and get access to all available information she can find. This involves getting hold of any available books, information flyers, doctors or elders in the family. The more she seeks the more she gets. The expecting mother is inundated at time with advice from the obvious 'relax and just don't take any stress!' to the questionable such as 'listening to classical music during pregnancy will turn her unborn baby into a genius rivaling Einstein'.

She will also have her experienced fellow mother hens who take her hand gently and guide her on that shiny, glorious path to a well informed pregnancy. They will give her the low down and the nitty-gritty on everything baby related from what to eat to how a soothing a light caramel color for the baby's room will be.

But have you given thought to that person sitting in the corner, trying to look awfully brave while gulping down food? That is the man. The husband. The father to be. And though he might be trying to look tough and in control while munching away, he has not a clue on what is going on and more importantly what is to come. And make no mistake, he is intimidated. This is as new to him as it is to the mother. He may not have the starring role, but he is going to play as essential supporting cast. A fancier way of saying that though he does not have to face the herculean task that a woman has to go through; nevertheless he needs to be prepared to back up his partner in the crucial months to come.

Not that he's going to make things any easier for himself.

Fact: Men do not have the guidance of their fellow experienced peers to guide them through the nuances of this journey

Men on the whole do not have deep meaningful conversations between themselves. A typical conversation between friends goes something like this.

Man: Hey! We're going to have a baby!

Best Friend: Wow! That's great buddy! Congrats!

Man: Thanks!

Best Friend: So did you see that knock Shahid Afridi played?

Man: Yea! It was brilliant!

As is shown, men's conversation usually revolves on the casual which range from cricket to politics to light entertainment. So as far as what to expect during



pregnancy is concerned and how to cope with it, it's every man for himself.

Fact: Men do not instinctively go scouring for information

It just isn't in their genetic code. They have a tendency of taking things as they come when it comes to situations like these, better known as 'winging it' While women will be obsessive with anything baby, the man will be lounging around in the house or hanging out with friends, evading discussions on what is to come.

Not a lot of literature deals with their part in a pregnancy, and even if it does, men would not be the ones actively looking for it. No better example of this can be than the fact that there is a 99 percent chance these words are probably being read right now by a woman rather than a man. So if you are a couple thinking of having a baby or expecting one for the first time, this is the point where you pull your spouse from that bubble and hand this magazine

over to him. Time he gets a little know how as well on the challenges of pregnancy.

Hello there dad!

How you doing?

Afridi really bungled up batting in the last match didn't he?

By the way, Congratulations on being a dad! And since you're already here and reading this, let me tell you something you should know:



Life as you know it has ended

Kidding! I'm sorry, I just could not resist. What I actually meant to say was even though it might seem intimidating right now, you will survive! There might be some tough times ahead but I assure you they will be worth it. Here are a few simple tips to help you through the next few months of your life. My guide to pregnancy survival.

Beware the nesting

For the pregnancy terminology challenged, "nesting" is the powerful maternal instinct to prepare the home (nest) for the baby. Many experts will tell you that the "nesting" phase doesn't kick in until the fifth month, getting stronger through the third trimester.

Many experts are wrong.

Expect intense cleaning, re-cleaning, organizing, reorganizing, decorating, redecorating, and at the most random of times. Expect something resembling the following:

Situation 1

Husband: *"I thought we were going to the bazaar."*

Wife: *"We are, right after I finish organizing dinner, scrubbing the kitchen and cleaning the lounge and painting the room. Twice."*

Situation 2

Wife: *"Did you wash your hands before you started cooking?"*

Husband: *"Yes."*

Wife: *"With soap?"*

Husband: *"Yes."*

Wife: *"Which soap?"*

Husband: *"The soap that is on the sink."*

Wife: *"Which soap that is on the sink, the one that smells good, or the one with bleach?"*

Husband: *"The one that smells good."*

Wife: *"Don't you know I'm pregnant?! Your baby is inside me. Do you want the baby to get germs from me eating the food you touch with your dirty hands! Wash your hands with the soap that has bleach!"*

Nesting, in some form or fashion, seems to happen immediately upon the first signs of pregnancy occur. Just deal with it. Don't get mad, don't get frustrated, just deal with it.

Swing Swing

Everyone you know may have informed you that there will be mood swings during the pregnancy. Everyone who told you so completely understated the truth.

You will likely witness tears of joy, tears of sadness, terms of endearment, terms of endangerment, strokes of love and strokes that will leave bruises all in the span of about a minutes. It's not her fault, and, most importantly, it's not your fault. Usually. The whole hormone thing tampers with the moods of a woman. If you call something like putting your finger in an electric socket tampering!

Again, there's nothing you can do about it, brace yourself, learn to carry tissue or a handkerchief, put on your bulletproof vest, have a compliment at the ready, and enjoy the ride.

The cravings

Picture one of those vampire movies where the said vampire simply cannot resist his craving, even at the cost of damnation of his soul. Now you have a fairly good idea of how intense women's food cravings get during pregnancy. It may be for anything and at anytime. And you better not come between the woman and her food of choice if you know what's good for you!

Wife: *I feel like having Nimco*

Husband: *We're all out of Nimco sweetie*

Wife: *Well you can go out and get me some then?*

Husband: *...its 4 o'clock in the morning*

Wife: *Your point being?*

Husband: *Nothing. Just thinking it's a wonderful time for a drive. I'll be right back with that Nimco you want.*

And to be fair, those 4 o'clock drives aren't really that bad. At least you don't get traffic.

Symptom mania

That's right, more symptoms. Many, many more symptoms above and beyond what you've learned so far. Let's see, where to begin? Of course there's the nausea, morning sickness, fatigue, aches and pains, irritability, frequent toilet trips, a generic, unspecified and omnipresent discomfort, and gastronomical affectations that will literally blow you away.

And that's just in the first trimester. I'm serious.

Helping out during pregnancy

- ❑ Go with your partner to her preconception and prenatal visits.
- ❑ Help plan for the baby. Go shopping for baby things.
- ❑ Encourage her to eat different healthy foods.
- ❑ Quit smoking. It isn't good for your partner or the baby.
- ❑ Help your partner stay away from paint, thinner, solvents and pesticides.
- ❑ Encourage her to exercise. Walking is easy and cheap, and it can be done almost anywhere.
- ❑ You can help by cleaning up, shopping for groceries and making meals.
- ❑ Support your partner's decision to breastfeed

Source: www.marchofdimes.com

Oh, and you could develop what are called "sympathy pains". This is the politically correct term for symptom overlap. Yes, sometimes the symptoms overlap onto you. Or, better still, symptom overload, she is so overloaded with symptoms that you help by experiencing some of the symptoms for her.

Fathers-to-be are known to endure cramps, back pain, mood swings, food cravings, morning sickness, extreme tiredness, depression, irritability, fainting and toothaches according to researchers. Fun times.

Get learned in all things pregnancy

Reading these words of wisdom is a good start. But it is only a start. The truth is there is no such thing as learning enough, especially about pregnancy and raising children. Read everything you can get your hands on, talk to anyone who will listen and share, and go to the doctor with her! I'm not saying you have to do a PhD on it, but you have to learn what to expect

Nothing will melt your heart like an ultrasound. And even though, objectively speaking, the child may look more like an alien from planet mars than an earthling, all you will see is your very own flesh and blood, fruit of your loins, seed of thy flesh, you get the idea.

Ask the doctor questions, ask your dad questions, ask the neighbor with the 7 kids questions. Yea, the neighbor with the 7 kids would be a better choice than even the doctor come to think of it.

Labor day

Finally after all the trials and tribulations comes that day of days. The day of arrival. Labor Day.

About the Writer:

Raza Azmat holds an MBA degree in Marketing from the Institute of Business Administration (IoBM). He has had 3 years of experience working in advertising.

References:

- ❑ <http://hubpages.com/hub/A-Dads-Guide-to-Surviving-a-Pregnancy>

This is your time to stand up and be counted. To be at your woman's side and assure her that you are right there with her. Labor at times can cause some women to feel like they are losing control and may make them panic. A husband can say and do a number of supportive things while his wife is experiencing labor:



- Say 'You are doing fine - the baby is fine'
- Hold her hand to show her support
- Say 'Don't worry, I'm here with you'
- Say 'Everything will be alright'

There are things that are frowned upon as well and the husband should do well to refrain:

- Scream louder than she is. Even when her nails dig into your bone while holding your hand
- Say 'Ewwwww.' Yeah seriously, don't say that at all!
- Faint

A journey worth making

It may be difficult to believe after that crash course, but the good far outweighs the bad. No amount of grumpiness, grouchiness or gassiness can ever compare to the giddiness. Which is great because you both will be giddy far more than anything else, and rightfully so.



A child is one of life's greatest blessings, and so is the pregnancy. It's an experience meant to be shared. The sometimes bumpy journey of a pregnancy is merely an opportunity to bring the travelers (baby included) closer together. You've just been handed a brief guide on what to expect on this trip. It's time for you to navigate yourself to the destination of being the World's Greatest Dad.

Mothers' Mood Matters



An emotionally stable mother is far more conducive to the optimal growth of the fetus than an anxious one. When a soon-to-be mother feels stressed out, the affect extends over to the emotional and mental health of the unborn. The mother's depressive or stressed state during pregnancy may become the child's first adverse life event, influencing the child's emotional well-being in the long term.

Strong links have been found between mothers' depressive mood during pregnancy and child's later mental health. A research concluded that children whose mothers underwent stressful pregnancies (reasons may vary) gave birth to children who showed disturbed behavior, insomnia, low adaptability, poor social functioning, unsatisfactory performance at schools, and were more likely to develop anxiety and depression later in life. Several studies conducted in Pakistan revealed high prevalence of anxiety and depression in women during antenatal period and/or later (Oberlander T, Mak WC, Mumford DB 1996, 1997 & 2000, Ali BS et al 2000 and 2002). The effects reflect in the ever-increasing number of children with behavioral instability exhibited at schools and other social setups.

The cause for mood swings and depression during pregnancy could be attributed to a number of factors. One prominent factor is the hormonal change. An expectant mother's mood is related to the chemical changes that take place within her body. The hormones and the neurotransmitters go through the bloodstream and across the placenta to the growing brain of the fetus. This explains the science of mother's emotional stability transferring to the fetus. If the mother feels elated and joyous, the developing brain experiences chemical secretions that are found to promote life-long sense of well-being. Causes of stress might also be related to pregnancy itself. The incidence of unplanned pregnancy, fear of or indication of complication by the doctor during child birth, ill health of the mother are all factors that can contribute to the increased level of anxiety in the mother. Other factors such as moving to a new house or career or job changes for

one or both parents may also add to stress levels.

Depressive situations are difficult to avoid as anyone can experience them in every day life. A mother and her spouse should learn to deal with such situations in a more tactful way so as to minimize the possible harm depressive state can have on the fetus. Depression in pregnancy can have a negative impact on the provision of good prenatal care, particularly in the areas of nutrition, sleeping habits, exercising and following the instructions given by the doctor. One major psychological effect depression has on women is the feeling of disassociation with the baby.

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Remember that emotions, positive or negative, are more intense during pregnancy. While ideally an expectant mother ought to take reasonable measures to rid the life of tension, this is easier said than done. What every parent must strive to ascertain is that the baby gets the best emotional start. Taking time to rest and revel in positive emotions; resolving stresses quickly, in a positive fashion; seeking professional help if necessary; talking to and singing and sharing affectionate thoughts with the baby are all ways that can provide a healthy emotional experience for the baby while still in the womb. And if nothing else, it can at least make pregnancy nicer for the mother-to-be.

About the Writer:

Ms. Sanobar Nadeem is working as an Instructor in Aga Khan University - Human Development Programme and has been associated with the field of Clinical Psychology. She has keen interest in child development and maternal and child mental health.



Breast Feeding: An Overview

A lot of women in Pakistan are not well prepared for birth as the time for delivery approaches. They do not have access to proper prenatal care that is essential at the time of pregnancy and are bereft of knowledge required in ensuring a safe and healthy pregnancy. Nursing and breastfeeding the infant, a matter of great importance, also remains a neglected topic. Prenatal time is the best time for mothers to discover the merits of breastfeeding. Mothers can utilize this time to prepare themselves mentally and physically for the forthcoming experience by taking diet that encourages lactation.

Mother's milk is the ideal and the most natural source of infant nutrition; it is uniquely superior to all other substitute-feeding options. Mother's milk is easy to digest because its balance of proteins, fats, carbohydrates, vitamins and minerals is very well suited to the digestive ability and nutritional needs of an infant. Exclusive breastfeeding is encouraged in order to fulfill an infant's dietary needs for the first six months. At the age of six months complementary foods should be added along with breast feeds, and may be continued until two years of age.

Nutrients in breast milk

On demand, exclusive feeding results in sufficient milk production to meet an infant's nutritional needs. Furthermore, the composition of breast milk continues to change according to the child's specific nutritional requirements. Also, the temperature of the mother's milk is at the most suited level for the child. Milk produced by the mother for her nursing toddler contains much higher levels of fats and energy compared to a mother nursing a younger child. Beyond the first year, breast milk maintains the major nutrients in appropriate amounts and also continues to supply the nursing child with huge amount of immunological factors, anti-inflammatory agents, and growth factors needed by the young body. Milk produced by the mother of a premature or low birth weight infant is especially constituted to meet the unique nutritional needs of the child.

Importance of starting feeds early

Ideally, breast-feeding has to be initiated within an hour of birth. Delayed feeding will diminish milk supply. Majority of newborns can be at the breasts within minutes of birth.

Even in cases of caesarean births, early initiation is possible and beneficial. In case of premature babies, this may even be more important than for a normal newborn. In the first few days of nursing, a mother produces thick, yellow fluid called colostrums. Although the amount of colostrums produced by the body is small, its importance is immense. It is a natural laxative that helps clean the newborns stomach. It has a high content of protein and antibodies that protects the newborn from harmful bacteria and viruses. The concentration of immune factors in colostrums is much higher than in the mature, creamy, bluish milk that the mother later produces. Pre-lacteal feeds like ghutti, honey, glucose, or any other should be abstained. The baby does not need these and may harm the child as the digestive system is not prepared to take food supplies other than breast milk.

Guidelines for successful breast feeding

Initiation of breastfeeding may seem daunting but with proper guidance and practice, every mother can comfortably breastfeed her child successfully. Unfortunately, sometimes it happens that new mothers have poor information and advice regarding breastfeeding, which leads them to avoid breast-feeding or adopt improper feeding practices.

Frequent breastfeeding causes increased milk production. It is advisable to initially feed the baby on demand as often and for as long as s/he wants, both during the day and night. Newborns should be nursed approximately 8 to 12 times every 24 hours. Later when a routine develops, the baby should be fed 2 to 3 hours apart. In the early weeks after birth, non-demanding babies should be aroused to feed if 4 hours have elapsed since the last nursing. Each feed should last between 15- 20 minutes. Child should be fed from both breasts at each feeding. Feeding should be started on alternate breast at each session. Milk flow is enhanced if the mother is rested and relaxed and takes proper, healthy diet. A comfortable position and stress-free mind are helpful in successful feeding. Drinking a glass of fluid at the start of a feeding session improves milk flow. The process of feeding increases the body's requirement of water so the mother should raise her intake of fluids. The mother must make sure that the baby burps after every feed as the undigested milk can choke the breathing tract of the baby which could be dangerous..

Breastfeeding Queries

Can anyone breastfeed? In general, yes. The size of your breasts makes no difference. The only women who shouldn't breastfeed are those who have been advised against it because of health problems, such as HIV.

What can I eat and drink? You can eat whatever you like (although if there is asthma or eczema in the family, avoid peanuts). You will need more calcium than usual – dairy products and canned fish are good sources – and you may feel thirstier, so drink plenty of water. Talk to your doctor before taking medication. Foods like onions, citrus fruits, coffee and chocolate may cause reaction in few babies.

When should I stop? You can continue to breastfeed for as long as you want – breastfeeding for at least four months helps ensure your baby receives the special health benefits of breast milk. When you do stop, give your milk production system to wind down gradually. Replace one feed with a bottle or cup, then wait for three or four days before replacing another.

What about mixed feeding? Mixing breast and bottle isn't recommended for the first few weeks when you need to feed frequently to stimulate milk production. After this, many women give their baby an occasional bottle of formula. However, if you give regular bottles, your milk supply will be affected. As a result, if you want to return to full-time breastfeeding, you will need to breastfeed more frequently and for longer to increase your milk supply.

Source: The Baby Book by Sharon Maxwell Magnus and Dr. Mark Porter

Judging adequacy of feeds

An infant who is being adequately breastfed will pass urine six to seven times in 24 hours. Adequacy of feeds can be assessed by monitoring the weight gain of the infant. An exclusively breast-fed infant will gain about ½ to 1 kg weight per month. The child will be content and will sleep well. Crying of a baby is not always an indication of inadequate milk supply; babies cry for various reasons, e.g. sleep, wet nappies, uncomfortable position or colic. A mother should try to find the reason and address it.

The case of working mothers

Working mothers too can breastfeed successfully. If the mother is going to be away from her baby for several hours, she can express her milk and store it in a clean, covered container. A responsible adult may feed the infant with a spoon and a cup when needed. Milk can also be expressed manually or with the help of a breast pump. At room temperature, breast milk remains safe for six hours. If refrigerated (temperature 39°F or 4°C), breast milk can be used for 5 days. Refrigerated milk should be warmed to room temperature by putting the milk container in warm water. Stove or microwave must not be used for warming the milk.

Benefits of breast feeding

To the baby:

Breastfeeding provides several advantages with regard to general health, growth, and development, while significantly decreasing risk for a large number of acute and chronic diseases to the baby. These benefits range from improving the survival rates of premature babies, to protection against a multitude of diseases, to enhanced mental development. There is no doubt that nature knows the best. There is strong evidence that human milk feeding decreases the incidence and/or severity of childhood infections like diarrhoea, respiratory infections, ear infections and allergies. Breastfeeding has also been related

to possible enhancement of sensory and cognitive development. Breastfed infants are found to have a protective effect against diabetes, high blood pressure, high cholesterol, as well as overweight, and obesity.

To the mother:

Breast feeding contributes immensely to the health and well-being of mothers. Breastfeeding results in less postpartum bleeding thus reducing the risk of anemia. In the early months of breast feeding, there are decreased chances of next pregnancy. However, the couple should use a suitable 'child spacing' method as advised by the health care provider. Child spacing is important for the health of the mother as well as the child. Spacing ensures that a mother can continue to breastfeed for the first two years of the baby's life. Spacing is also important because it gives the mother's body some time to recover from the last delivery and renew nutritional stores before the next pregnancy. Stimulation from nursing causes the uterus to contract and return to its original shape quickly. Feeding mothers return to their pre-pregnancy weight faster and more easily than those who choose bottle-feeding. Moreover, the risk of ovarian cancer and breast cancer are reduced in women who breastfeed.

Social and Economical:

In addition to health benefits for the infant and mother, breastfeeding provides significant social and economic benefits to the nation, including reduced health care costs and reduced employee absenteeism for care attributable to child illness. The significantly lower incidence of illness in the breastfed infant allows the parents more time for attention to other kids and family duties. The direct economic benefits to the family are also significant. During the first 6-week lactation period, maternal caloric intake is no greater for the breastfeeding mother than for the non-lactating mother. After that period, food and fluid intakes are greater, but the cost of this increased caloric intake is much lower than the cost of purchasing formula milk.

Above all these sound reasons for breast-feeding lies the bond fostered between the breastfeeding pair. There is so much more to breastfeeding than nutrition - the resulting special relationship between the mother and child is priceless and non-measurable in material terms.

Comparison of mother's milk with complementary feeds

Water:

Breast milk contains 87 per cent water. A breastfed infant does not need extra water. Water should be avoided for



the first six months as it fills the infant's stomach leaving little place for milk. At the start of suckling foremilk is produced which is mainly water, a thirsty infant will stop after satisfying his thirst with foremilk. A hungry infant will continue to suckle and hind milk will start to flow. Hind milk is high in energy and nutrients. Using a bottle for water feeds or formula along with breast feeds will cause nipple confusion. An infant has to make more effort for suckling at the breast compared to a bottle. An easier flow and different suckling technique from the bottle may discourage breastfeeding. Nipples and bottles are difficult to keep clean and using unclean water or bottle may cause diarrhoea or other infections.

Supplemental Milk Feeds:

Sometimes a healthy mother may develop a misconception that her milk will be insufficient in quantity or quality for her baby. This fear may be self induced or be instilled in her by those around her. As a result, she may discontinue breastfeeds, and switch to animal milk, formula feeds or use these in addition to supplement breastfeeds. These practices should be discouraged, as it is not in the best interest of the child. The mother should be assured that her milk is best for her baby and that exclusive breast-feeding provides total nutrition to the infant.

Formula Feeds:

In recent years, the market has been flooded with different types of infant formula milks. However, mothers and other caregivers need to realize that breast milk is far more superior to any of these and no infant formula can duplicate human milk. Mother's milk is an incredibly complex substance, filled with living compounds that will be difficult, if not impossible to simulate in formula milk. Human milk

contains living cells, hormones, active enzymes, immunoglobulin and compounds with unique structures that cannot be replicated in infant formula. Formulas increase the chances of waterborne diseases that arise from mixing powdered formula with unsafe water. Malnutrition may result from over-diluting a formula to 'stretch' supplies.

Alternate Feeds:

Even if the mother is not able to nurse her infant, she should be encouraged to express her milk while a responsible adult may feed the infant with a spoon and cup. If due to unavoidable reasons a mother cannot give her feeds, the first alternative of preference should be "wet nursing" that is: breast-feeding by another nursing mother. Only in case when no other alternative is available, should animal milk or any formula milk be used. A human baby

Mother's milk is the ideal and the most natural source of infant nutrition; it is uniquely superior to all other substitute-feeding options. Mother's milk is easy to digest because its balance of proteins, fats, carbohydrates, vitamins and minerals is very well suited to the digestive ability and nutritional needs of an infant.

under six months of age ought not to give animal milk unless it has been properly modified. Boiling any animal milk before use for a baby is essential because the protein of animal milk is difficult to digest.

A baby better digests cow or goat milk than sheep or buffalo milk. Every 100 ml of cow or goat milk should be diluted with 50 ml boiled water and 10 grams (2 teaspoons) sugar should be added before use.

Sheep and buffalo milk has more fat energy than cow's milk so needs to be diluted more. Every 100 ml of sheep and buffalo milk should be diluted with 100 ml boiled water and 5 grams (1 teaspoon) sugar should be added before use.

Dietary needs of lactating mothers

A lactating mother produces about 23 to 27 ounces of milk every day. The mother should increase her food intake to provide extra energy/calories for this process. Normally, about 500 calories above her usual intake are enough to provide for lactation needs. Increased caloric intake should be maintained throughout the period of lactation. The volume or quality of breast milk is not affected by under nutrition of the mother. Nonetheless, maternal under nutrition has an effect on the health and nutritional stores of the mother. Deficiencies may not manifest themselves immediately but the affect on her teeth, bones and general health may be seen later in life.

A lactating mother may increase her calorie intake in

different ways by increasing the quantity of her present meals, like adding an extra chapatti, a piece of meat, daal portion or an extra fruit to her usual meals. It may work out better for another mother if she adds extra small snacks to her regular meal pattern. One or two snacks over the day, comprising of protein foods along with bread or chapatti, fruit or milk are healthy additions. Another way of providing extra calories is by making foods calorie dense. This may be done by adding calories to the usual food by adding milk, a bit of oil and/or changing the cooking method from boiling to frying. Though excessive use of fatty and oily foods is not good unless the mother is undernourished and is losing a lot of body weight at a fast pace. A lactating mother should take some rest during the day. Avoiding activities which over tire her is a good idea in the lactation period.

Protein:

A mother should specially increase her intake of Protein-rich foods during the lactation period. Protein-rich foods are: meat, chicken, fish, lentils and beans. Increased use of these food items even in small quantities above the present consumption will meet the nutritional requirement of lactation. It is important to have milk or its products at least twice a day during lactation to increase protein and calcium intake for this stage of life.

Vitamin D:

Daily exposure to sunlight is necessary for the mother and her baby. UV rays of the sun produces vitamin D in the body and increases vitamin D content of breast milk. A good provision of Vitamin D and calcium are important for healthy bones and teeth of the mother and child. A mother and her baby should spend a little time in sunlight every day.

Dietary Deficiency:

If a mother's diet is deficient in calories and nutrients it will not harm the quality or quantity of her milk supply. Under nutrition of a mother will deplete nutritional stores of her own body, which will make her weak and unhealthy. She will not be able to take care for the baby and her family adequately. Therefore, the mother's nutrition is of utmost importance for the health of the entire family.

Dietary Misconceptions:

Different cultures consider different foods good or bad for feeding mothers. Some people have cultural beliefs that certain foods irritate the baby, cause colic or influence milk supply if taken by the mother during the lactation period. There is no scientific evidence to back these claims. If a baby is especially disturbed on a certain day, the mother may be encouraged to remember the foods eaten in the past 24 hours. The suspect food may be eliminated from the diet for a while and then tried again later to see if similar symptoms reoccur in the baby.

Composition of breast milk

Constituents	Level present in breast milk
Total solid %	12.50
Energy: Kilocalories	70
Kilojoules	291
Protein %	1.03
Lipid %	4.38
Carbohydrate %	6.89
Ash %	0.20
Calcium (mg)	32
Iron (mg)	0.03
Magnesium (mg)	3
Phosphorous (mg)	14
Potassium (mg)	51
Sodium (mg)	17
Zinc (mg)	0.17
Ascorbic acid (mg)	5
Thiamine (mg)	20
Riboflavin (mg)	0.036
Niacin (mg)	0.177
Pantothenic acid	0.223
Vitamin B6 (mg)	10
Folacin (mg)	5
Vitamin B12 (mg)	0.045
Vitamin A (mg)	58
Vitamin D (mg)	0.04
Vitamin E (mg)	0.34
Vitamin C (mg)	4

When to avoid breast feeding?

Despite the benefits of breastfeeding, there are certain medical situations in which a mother should not breastfeed her infant. Example a mother who has untreated active tuberculosis should not feed her baby. A mother infected with hepatitis virus B or C should not breastfeed if she has cracked or bleeding nipples. Instead, milk should be expressed and discarded till it heals. After healing, breast feeds can be resumed. Nicotine from tobacco and narcotic drugs are passed in breast milk and can harm the baby. A mother who has been infected with the human immunodeficiency virus (HIV) should not breastfeed if alternate feeding option is affordable, acceptable, safe and sustainable. Although most medications are safe for the breastfed infant, yet there are a few medications that may make it necessary to discontinue breastfeeding temporarily. A mother should always check with her health care provider before using any allopathic or other medication.

About the Writer:

Ms. Ayesha Zahid Khan is a Nutritionist and is working as a Senior Research Officer at the Human Development Programme of Aga Khan University. She has been associated with Hospital Dietetics since 1987 and with Community Based Nutrition Education and Research since 2002.

Common Breastfeeding Misconceptions

Such as it is with everything, there are always old wives tales / misconceived notions attached to a certain act which come to be passed down through the ages. Through time they become commonly held views, the credibility of which is very rarely questioned. Similarly there are various misconceptions about the act of breast feeding. Below we discuss a few of them and question the validity of each, evaluating how much truth they really hold.

Frequent nursing leads to poor milk production, a weak let-down response and ultimately unsuccessful nursing.

Fact: Milk supply is optimized when a healthy baby is allowed to nurse as often as s(he) indicates the need. So feed the baby on cue.

Babies get all the milk they need in the first five to ten minutes of nursing.

Fact: While many older babies can take in the majority of their milk in the first five to ten minutes, this cannot be generalized to all babies. Newborns, who are learning to nurse and are not always efficient at sucking, often need much longer to feed.

A breastfeeding mother should space her feedings so that her breasts will have time to refill.

Fact: The emptier the breast, the faster the body makes milk to replace it; the fuller the breast, the more production of milk slows down. If a mother consistently waits until her breasts "fill up" before she nurses, her body may get the message that it is making too much and may reduce total production.

It is the amount of milk that a baby takes in (quantitative), not whether it is human milk or formula (qualitative) that determines how long a baby can go between feedings.

Fact: Breastfed babies have faster gastric emptying times than formula-fed babies--approximately 1.5 hours versus up to 4 hours--due to the smaller size of the protein molecules in human milk. While intake quantity is one factor in determining feeding frequency, the type of milk is equally important.

Never wake a sleeping baby.

Fact: While most babies will indicate when they need to eat, babies in the newborn period may not wake often enough on their own and should be awakened if necessary to eat at least eight times a day.

Breastfeeding mothers must always use both breasts at each feeding.

Fact: It is more important to let baby finish the first breast first. Some babies, if switched prematurely to the second breast, may fill up on the lower-calorie foremilk from both breasts rather than obtaining the normal balance of foremilk and hind-milk, resulting in infant dissatisfaction and poor weight gain.

If a baby isn't gaining well, it may be due to the low quality of the mother's milk.

Fact: Studies have shown that even malnourished women

are able to produce milk of sufficient quality and quantity to support a growing infant. In most cases low weight gain is related to insufficient milk intake or an underlying health problem in the baby.

Poor milk supply is usually caused by stress, fatigue and/or inadequate fluids and food intake.

Fact: The most common causes of milk supply problems are infrequent feedings and/or poor latch-on and positioning; both are usually due to inadequate information provided to the breastfeeding mother. Suckling problems on the infant's part can also impact milk supply negatively.

A mother must drink milk to make milk.

Fact: A healthy diet of vegetables, fruits, grains and proteins is all that a mother needs to provide the proper nutrients to produce milk. Calcium can be obtained from a variety of nondairy foods such as dark green vegetables, seeds, nuts and fish.

Frequent nursing can lead to postpartum depression.

Fact: Postpartum depression is believed to be caused by fluctuating hormones after birth and may be exacerbated by fatigue and lack of social support, though it mostly occurs in women who have a history of problems prior to pregnancy.

Mothers who hold their babies too much will spoil them.

Fact: Babies who are held often cry fewer hours a day and exhibit more security as they mature.

It is important that other family members get to feed baby so that they can bond, too.

Fact: Feeding is not the only method by which other family members can bond with the baby; holding, cuddling, bathing and playing with the infant are all important to her/his growth, development and attachment to others.

Some babies are allergic to their mother's milk.

Fact: Human milk is the most natural and physiologic substance that baby can ingest. If a baby shows sensitivities related to feeding, it is usually a foreign protein that has piggybacked into mother's milk, and not the milk itself. This is easily handled by removing the offending food from mother's diet for a time.

Frequent nursing causes a child to be obese later in life.

Fact: Studies show that breastfed babies who control their own feeding patterns and intake tend to take just the right amount of milk for them. Formula feeding and early introduction of solids, not breastfeeding on demand, have been implicated in risk of obesity later in life.

Reference:
<http://www.llli.org/nb/lvaprmay98p21nb.html>

Pregnancy Myths: BUSTED



Myths or creation stories or old wives' tales, call them whatever you like to, are centuries' old beliefs passed arduously from mother to daughter; the majority of which revolve around the idea of the relationship between dietary intake and physical features of the child to be born, and hardly have any logic in them. Nevertheless if we consider the tones they are delivered in, many especially the first time mothers-to-be are bound to believe them. In our society where talk on the subject of pregnancy and reproductive health are considered taboo, such myths and misconceptions tend to create unnecessary stress for the mother and hence the baby.

Pregnancy myths may vary from generation to generation and from region to region. Described here are a few of the most common.

'Don't exercise, it will adversely affect your baby'

Like most myths, this one has some basis in fact. It is meant to protect the newly pregnant women from injury as some are more prone to injury than others. Light exercises such as walking, yoga and stretching could be chosen. While activities involving physical labor like weight lifting, moves causing jerks to the body etc., ought to be strictly avoided. Remember to always consult your care provider or midwife prior to starting any regimen.

'Eat as much as you like, your food is supporting two people now'

You will surely hear this advice during pregnancy. In reality you should eat as much as you like and whatever you feel



like having. Eating for two will only result in poor health for you and do nothing for the well being of the baby. Moreover, eating the right food at the right time is better than over-eating.

'Eating ghee will help during child birth!'

Science hasn't yet proved that there exists a connection between the digestion canal and the delivery canal. A natural lubricant in the birth canal does the job of slipping the baby out easily. A mother-to-be must go for healthier food plans rather than consuming foods that merely increase body fat.

'Sleeping on your back can hurt the unborn baby'

It is believed that sleeping on your back during pregnancy can cause harm to the unborn baby. Hypertension, severe water retention, maternal kidney malfunction or fetal compromise is suspected, hence resting on the left side is mostly recommended. A normal pregnant woman however may assume the most comfortable position to sleep during pregnancy.

'Morning sickness is a sign that a foetus is healthy'

Morning sickness has nothing to do with the health (or gender) of a foetus. The increased nausea and vomiting are associated with higher levels of hormones produced during pregnancy.

'Having coconut water will make your baby fair'

Yet another myth believed very much. The complexion of a baby has got more to do with the parent's genes than with having coconut water! Can we explain the dark complexion of the people in Africa who have an abundant coconut plantation and yet they all have a dark complexion.

'Don't take any medicine'

One should not be taking any medicine without the doctor's permission. The medicines taken by one pregnant woman might not be suitable for the other pregnant woman therefore one must not go for taking such risks of having word-of-mouth medication. Some medicines can be harmful for expectant mothers so it is advised to always consult the doctor first.

'Don't raise your arms above your head, you can tangle the umbilical cord by doing so'

This myth have often been heard from grandmothers who ask the mothers-to-be not to raise their hands as this would

cause the umbilical cord to go around the baby's neck and strangle her/him. Nevertheless, some pregnant women may find it beneficial to abstain to cause less stress, hence more rest and possibly a healthier baby.

'The shape and fullness of your face during pregnancy can indicate your baby's sex'

Every woman gains weight differently during pregnancy, and every woman experiences different skin changes. If people tell you that because your face is round and rosy you're having a girl, they might be right — but it's just as likely that they're wrong! In fact there has been, till date no other method found for determining the sex of the baby you are carrying, except for an ultrasound and even that could be mistaken.

'Fetal heart rate can indicate your baby's sex'

There have been no studies that conclusively show that heart rate is a predictor for a baby's gender. People take it as an indicator only because a woman's heart beats faster than that of a man, and had it been the case with unborn babies, all girls would be born as females and then try to turn into boys! In fact a baby's heart beat, whether a boy or a girl, is double than that of an adult human being.

'Pregnant women should not take baths'

This is false. Baths are very good for pregnant women and the baby is not in danger of getting germs from bathing.

But hot baths are to be avoided which can cause the body temperature of the mother to rise, and cause problems for a developing baby.

'Sea food is harmful during pregnancy'

There's a lot of confusion regarding seafood and pregnancy, causing many women to simply say no to fish for all nine months. While it is true that you should avoid certain fish that are loaded with mercury -- tilefish, swordfish, shark, and king mackerel -- it's actually smart to eat seafood for your baby's health.

'Natural birth is better than a Caesarean section'

Most mothers would probably like to have a natural birth but if this is not possible, Caesarean should not be viewed as a failure. While recovery after an operation is much slower, the best way of birth is the safest way for the baby and mother.

'Breastfeeding helps you to lose weight'

Contrary to popular belief, breastfeeding doesn't necessarily help new mothers to shed weight any faster.

These and many more myths have been around for centuries. After you have heard them all, for medical advice pertaining to pregnancy you should always consult your doctor first.

About the Writer:

Mr. Muhammad Sameed Hussain has worked at the Sindh Education Foundation during 2010. He is currently studying Accounting and Finance from the London School of Economics and Political Sciences (External System) and is a CFA level 1 candidate.

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Best sleep position during pregnancy

Sleeping on your side is best while you're pregnant. In particular, sleeping on your left side may benefit your baby by improving blood flow – and therefore nutrients – to the placenta. It also helps your kidneys efficiently eliminate waste products and fluids from your body, which in turn reduces swelling in your ankles, feet, and hands.

It's a good idea to start training yourself early in pregnancy to sleep on your left side whenever you can. Of course, staying in one position all night isn't likely to be comfortable, so turning from side to side while favoring your left side is probably the best strategy.

As for sleeping on your back, avoid that position throughout pregnancy, especially in the later months. Here's why:

When you're sleeping on your back, the weight of your uterus lies on the spine, back muscles, intestines, and major blood vessels. This can lead to muscle aches and pains, hemorrhoids, and impaired circulation, which is uncomfortable for you and can reduce circulation to your baby.

Back sleeping can make blood pressure drop, causing some expectant moms to experience dizziness. On the other hand, in some moms-to-be it can make blood pressure go up.

Finally, back sleeping can cause snoring and, with increased weight, could lead to sleep disorders.

Source: www.babycenter.com

Birth Defects in Children



Having a healthy baby is a joyful event for every couple and their families; however this happiness turns into feelings of guilt, stress and disappointment when the baby is born with some abnormality.

Birth defects are abnormality of structure, function or metabolism present at birth that results in physical or mental disabilities or death. Thousands of birth defects have been identified so far that lead to major health problems. About 5 percent of children worldwide are born with birth defects that are also often responsible for a considerable number of child deaths at the time of pregnancy, birth and during the first month of life. 30 percent of children born with birth defects are expected to die during infancy and another 30 percent are more likely to suffer from severe disability. A majority (about 75%) of these birth defects can be prevented, treated or rehabilitated for schooling, working and marriage, but often the treatment is lifelong and may be expensive.

The famous adage 'Prevention is better than cure' is so very true for birth defects. Luckily there are tests for both husband and wife, called Carrier tests, conducted before pregnancy to identify the carrier status for possibility of birth defects. Other tests, the prenatal tests are carried out during the three trimesters of pregnancy for detection of major abnormalities that might occur while baby is in the womb. These tests provide an opportunity to decide whether the couple wishes to conceive, continue or terminate the pregnancy on medical grounds.

Categories of birth defects

Birth defects are mainly caused by genetic and environmental factors, or a combination of both; however, the causes of about 70 percent of birth defects are still unknown. Following are the most common categories of birth defects:

A. Chromosomal Anomalies

Abnormalities in the number or structure of chromosomes can cause many birth defects. These are usually caused by an error that occurs during the development of the fetus. Because of the error, a baby can be born with too many or too few chromosomes or with one or more chromosomes that are broken or rearranged. Some common types of chromosomal anomalies are:

- **Trisomy Disorder:** This type of birth defect is caused by an alteration in the number or genetic structure of chromosomes. The most common type of Trisomy is

Down's syndrome, with an extra copy of chromosome. Affected children have varying degrees of intellectual disabilities, characteristic facial features and, often, heart defects and other health problems. The risk of having a child with Down syndrome increases with increased maternal age from 1 in 600 births for mothers under the age of 30 years to 1 in 50 births for mothers over 40 years.

- **Sex Chromosome Abnormalities:** Missing or extra copies of the sex chromosomes, X and/or Y affect sexual development and may cause infertility, growth abnormalities and behavioral and learning problems. However, most affected individuals live fairly normal lives. Examples include Turner syndrome (in which a girl is missing all or part of an X chromosome) and Klinefelter syndrome (in which a boy has one or more extra X chromosomes).



B. Single Gene Disorders

This type of abnormalities involves mutation or change in a single gene of human chromosomes. Common examples include:



- **Thalassaemia** – An abnormality in the production of hemoglobin
- **Hemophilia** – A blood-clotting disorder
- **Sickle-cell anemia** – Sickle shaped red blood cells gets infected with abnormal hemoglobin
- **Glucose-6-phosphate dehydrogenase (G6PD) deficiency** – The body doesn't have enough of the enzyme G6PD which helps red blood cells function normally
- **Achondroplasia** – A form of dwarfism
- **Tay Sachs disease** – A fatal nervous system disorder
- **Cystic Fibrosis** – A serious disorder of lungs and other organs
- **Duchenne muscular dystrophy** – Progressive muscle weakness

C. Multifactorial Birth Defects

Some birth defects are caused by a combination of genes and environmental exposures; and are known to have multifactorial inheritance. In some cases, an individual may inherit one or more genes that make him or her more likely to have a birth defect if he/she is directly or indirectly exposed to certain environmental substances, such as cigarette smoke. These individuals have a genetic predisposition to a birth defect. But if the individual is not exposed to the environmental substance before birth, they probably will not develop birth defect, in the first place. Examples of multifactorial birth defects include:

- Cleft lip/palate – Opening in the lip and/or roof of the mouth)
- Neural tube defects (NTDs) – Serious birth defects of the brain and spinal cord, including spina bifida and anencephaly
- Heart defects – The most common type of birth defect and usually associated with majority of birth defect related deaths.

Factors associated with birth defects

- Advanced Maternal Age
- Advanced Paternal Age
- Maternal Malnutrition
- Consanguineous Marriages
- Maternal infections such as Rubella and Toxoplasmosis
- Poorly controlled maternal diabetes mellitus
- Unsupervised intake of medicines during pregnancy
- Folk remedies for abortions
- Inadequate dietary intake of foliate, vitamins, iron and iodine before and during pregnancy
- Smoking, alcohol and drug addiction
- Exposure to X-rays and other mutagens

Strategies for prevention

Some genetic birth defects can be prevented from arising in the first place by targeting at their cause (primary prevention). Other defects can be avoided by early detection, appropriate management, identifying individuals and couples at risk, and by providing genetic counseling. The following interventions can be applied both before and during pregnancy:

I. Preconception Checkups

- Certain health conditions that are likely to pose a risk in pregnancy can be identified during preconception visits and treated. Such visit is especially crucial for women with chronic health conditions, like diabetes,

Myths about Birth Defects

- ❑ Birth defects are rare.
- ❑ Birth defects are contagious.
- ❑ Birth defects are punishments from God for the sins of parents.
- ❑ Birth defects are mainly due to mothers.
- ❑ Birth defects are only caused due to marriages with blood relations.
- ❑ Birth defects cannot be prevented or cured.

high blood pressure and epilepsy. For example, women with diabetes who have poor blood-sugar control are several times more likely to have a baby with a serious birth defect than women without diabetes. However, if their blood sugar levels are well controlled before pregnancy, women are likely to have a healthy baby.

- In the presence of a hereditary disorder, taking a good family history helps in detecting pregnancy risks. Carrier testing, genetic counseling and referral to specialized centers is offered to the couple.
- Reducing birth defects related to advanced parental age such as Down syndrome can be treated as part of the family planning services.
- Congenital rubella syndrome can be prevented by immunizing against rubella infection.
- Information regarding the deleterious effects on the developing embryo of smoking, alcohol intake, unsupervised medication, exposure to X-rays and certain mutagens / tetragons at the workplace should be made available to women prior to pregnancy.

II. Use of Prenatal Diagnosis for Early Detection of Birth Defects

Some birth defects can be diagnosed during pregnancy by prenatal tests. The following 3 tests are commonly available at all leading tertiary care hospitals of Pakistan:

- Ultrasound can help diagnose structural birth defects, such as spina bifida, heart defects and some urinary tract defects.
- CVS is usually performed during the first trimester of pregnancy to diagnose or rule out chromosomal abnormalities, such as Down syndrome and many other genetic birth defects.
- Amniocentesis is usually done from 16 weeks onwards to detect Down syndrome and other chromosomal abnormalities, structural defects such as spina bifida and anencephaly and inherited metabolic disorders.

About the Writer:

Ms. Seema Lasi is affiliated with The Aga Khan University – Human Development Programme as a Senior Instructor. She has an academic background of Masters in Epidemiology & Biostatistics and Masters in Genetics. Her research interests are Early Childhood Growth, Promotion & Development and Childhood Injuries and Disabilities.

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Midwife

The role of a savior



Since the dawn of time, when there were no doctors or hospitals, it was the midwife who took care of female health problems, assisted in secure childbirth and helped families grow. A midwife is named so because she assists the expecting mother and her child during labor and delivery. The profession of midwifery is an art as a midwife understands the needs of the expectant mother and encourages her efforts during delivery; midwifery is also a science with a midwife's ability to exhibit expertise and decisive decision making.

If a prospective mother is asked as to why she would prefer a midwife, she would surely tell you that a midwife is well informed, humble, and tolerant and values the traditions of service towards humanity. A midwife's task requires a great sense of responsibility which she performs through a high degree of proficiency and knowledge.

Responsibilities of a midwife

- To provide basic information and suggestions regarding family planning.
- To examine and invigilate whether a pregnancy is normal.
- To identify the possible risk factors and prescribe the necessary laboratory tests.
- To provide a guideline to the parents about their future responsibilities and about the diet and health of the newborn.
- To assist the mother during delivery and to examine the status of the fetus through appropriate medical instruments and methods.
- To assist spontaneous deliveries, episiotomy (where necessary) and breech deliveries in case of emergency.
- To identify the signs of abnormality in a mother or child after delivery and refer to the doctor and to take emergency measures in the absence of the doctor.
- Detailed examination of the newborn, to take care of him/her and to take possible measures in restoring breath.
- To take care of the mother's health after delivery and providing information regarding her child's health.
- To continue the treatment prescribed by the doctor.
- To compile important records and keep them safe.

But why would midwives be required when there are doctors and hospitals present in this day and age? Why is a midwife still used the world over as a health worker when there are alternatives present which are regarded as more professional? There are several reasons to be considered.

Importance of midwives as health workers

- Midwives are confident that they could help the mother and the child during labor and delivery through a safe method.
- Midwives usually live in the same communities where they serve; therefore the families of that vicinity trust them.
- They can devote more time to the mothers under their observation as compared to professional doctors and nurses. Thus they are quicker in sensing the risk factors and addressing their health issues.
- Pregnant women are comfortable in sharing their problems with midwives.
- Midwives charge lesser fees as compared to doctors and hospitals, they believe in service rather than money or authority.
- In marginalized communities which lack health facilities, midwives are the only available health workers for the inhabitants.

Due to above mentioned factors, midwives are the first and in some cases only option who can be contacted during pregnancy or for any other women health issues. But not everything is a simple as one would like. Midwives today have to face some very difficult and at times nearly insurmountable challenges.

Challenges faced by midwives

The biggest challenge for midwives, as with all health workers, is to fight diseases and death of women and children. Every year thousands of women are injured, become handicapped or die during delivery and labor. The victims of these cases are usually the poor women

Three Delayed Decisions - Danger Zone for the Mother

The death toll of mothers in Pakistan during labor and delivery has three reasons. A midwife should be well aware of these causes and should prepare the husband and family to deal with them.

□ Delayed decision making

If a complication arises during pregnancy or labor then it is an emergency situation for the pregnant mother and requires spontaneous decision making in shifting the mother to the hospital. A delay in taking this decision endangers the mother's life. A midwife should help the family in taking timely and correct decisions.

□ Delay in shifting to the hospital

It is the duty of the midwife to advise the family to arrange ambulance or any other vehicle before hand. Under construction roads and traffic blockage due to processions and rallies must be taken into account.

□ Delayed treatment

A midwife should take all possible measures in case of delayed treatment after reaching the hospital emergency. A policy could be formulated in consultation with the hospital management, doctors and town counselors to avoid delays and ensuring safety of the mother and the child.

The bottom line for planning and adopting precautionary measures is for the safety of the lives of expecting mothers.

who suffer from insufficient diet, insecure living conditions and inadequate health facilities.

Mostly midwives belong to the deprived communities, thus they live hand to mouth all their lives. They often provide their vital services with next to little to no pay which makes it extremely difficult for their basic survival.

Besides meager remuneration, the services of midwives are usually ignored by the doctors and other segments, and this in turn reduces their level of commitment. If a midwife is restrained from accompanying her patient in the hospital, it excludes her from the health profession.

Traditional Birth Attendants (TBA) is the term used for midwives who are believed to be among the population migrating from the villages to the cities. Such midwives are believed to be incompetent and unqualified by professional midwives and health workers. However TBAs at times are well informed in alternative medicine such as herbs and massage techniques and are proficient in safe and secure childbirth methods. They usually render their services in exchange of either ordinary or no remuneration at all since they want to serve the women of their communities selflessly.

Midwifery status in Pakistan

During the past sixty years, very little progress has been made in the health sector resulting in fewer health centers and maternity care in low income communities. Pakistan is in dire need of trained midwives to take care of mothers and children especially during the labor and delivery period.

However, there is an acute shortage of licensed practicing midwives in spite of the fact that thousands graduate every year. That in part is contributed by the fact that midwifery is not regarded as a distinct profession, independent of nursing. And those that are trained and licensed are not being used effectively as there are no policies or plans to utilize them properly.

Also there are no opportunities for advancement in midwifery in the country due to a lack of a career structure for midwives. The midwife starts at the lowest rung of the pay scale and retires in the same grade.

Midwives also do not enjoy the same or even similar status that other professionals related to the field of health care do. Midwifery as a profession is not understood in Pakistan. A professional midwife is equated with a daai (the illiterate woman who delivers 80 per cent of babies in Pakistan). And because of this ignorance, midwives in Pakistan do not enjoy the prestige awarded to them in the developed countries like Europe where the babies are delivered by professional midwives.



To improve the situation, the local government needs to invest in appropriate training and surgical instruments as the poor women who lack access to health facilities depend heavily upon the midwives' services. A lot needs to be done to create awareness about the role and functions of a midwife at very high levels. Only then will the career prospects and reputation of this profession gain a respectable status in Pakistan. The art and the science of midwifery needs to be invested in and reinvigorated on a national scale for the betterment of women and children and the nation on the whole.

Compiled from:

- Aasan Midwifery' published by Pakistan National Forum on Women's Health
- 'Darsi Kitab Baraey Midwife' published by Pakistan National Forum on Women's Health



Antenatal care in Pakistan

Although, the traditional concept of “Early Childhood Development” largely focuses on ages 0 – 8 years, some researchers and scientists have started to include the prenatal development as part of ECD. A recent meeting of the “Society for the Study of Reproduction” proposed that mother’s health at the time of conception influenced significant epigenetic (inherited) changes in developing fetus that could later manifest as birth defects, obesity, insulin resistance, hypertension and cardiovascular disease to name a few.

Growing research in this direction has resulted in many health professionals to practice and promote prenatal care as essential for pregnant women. ‘Improving Maternal Health’ is an avenue of focus internationally as well and is ranked as goal # 5 in the United Nations Millennium Development Goals. The Government of Pakistan, too, has tried to address issues related to maternal/prenatal health by extending support through developing rural community health centers, training lady health workers and dissemination of health related material for pregnant women. However, despite this movement, there are wide gaps in the population regarding who has access to services and who actually utilizes them.

Factors influencing utilization of antenatal care

Mother’s health, nutritional status and the quality of care she receives during pregnancy are the key determinants of a newborn’s survival and healthy start in life. Pakistan has one of the highest infant mortality rates in Asia because women largely do not receive timely and proper antenatal care. Not to mention the high prevalence of anemia and unassisted deliveries at home which add to high infant mortality and morbidity associated with pregnancy-related condition.

A number of factors that influence utilization of prenatal care are summarized as follows:

Poor Provision of Services

In Pakistan, one of the major reasons cited for high maternal mortality rate has been attributed to service delivery, with only 28 percent of the population having access to prenatal care. A survey conducted in 2006-2007 indicated that 39 percent of births were assisted by skilled birth attendant (SBA), while 68 percent of births were reported to occur in the rural areas where women had lower (by 31

percentage points than their urban counterparts) access to skilled care delivery. This limited access could be another reason why the same survey showed that 34 percent births took place in health facility, highlighting majority of births taking place at home.

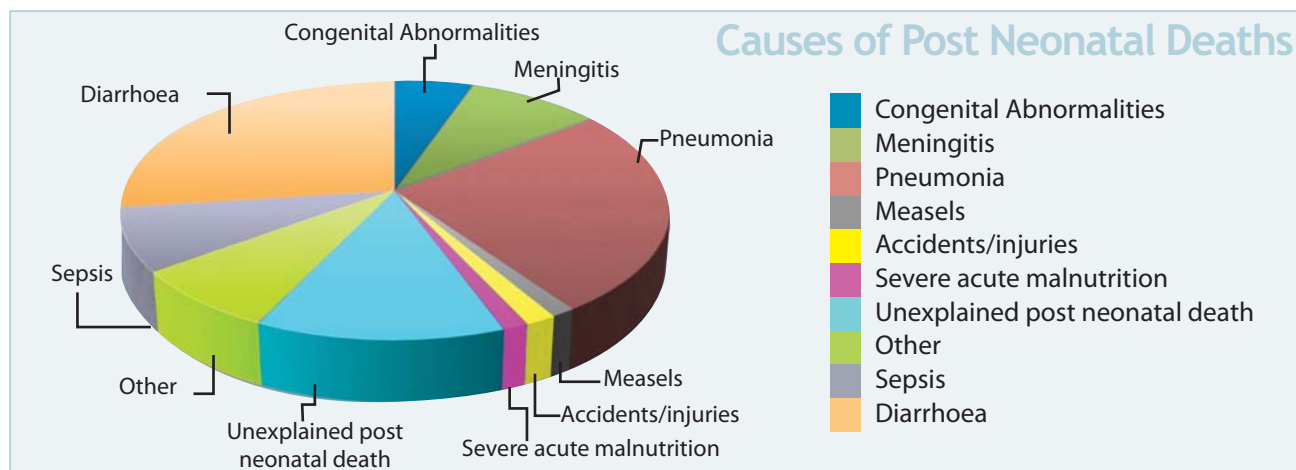
Many countries like Malaysia, Thailand, Sri Lanka, Jamaica and Tunisia reduced maternal mortality by half in a decade by improving access to emergency obstetric care; family planning services and skilled birth attendants i.e. midwives, nurses and doctors. (Source: USAID Report) The same report proposed a two-pronged strategy to address the existing condition in Pakistan by strengthening health systems and providing continuum care to pregnant women.

Socio-Economic Conditions

It is no secret that a large percentage of pregnant women in Pakistan cannot afford care, resulting in severely limited access to prenatal care. As a result prenatal health is largely characterized by poor hygiene, lack of water, limited knowledge and limited access to health services. According to a survey conducted in 2006-07, women’s wealth status was found to be one of the determinants of receiving skilled care. Women at the poorest situation had approximately 5 times less access to skilled care compared to their richest counterparts and 38 percent responded that costing was the barrier in accessing health facility. Caesarean section is one life saving emergency obstetric care when complications occur during pregnancy and childbirth. According to the WHO survey a large gap in accessing Caesarean section was reported among different income groups.

Women in the poorest socioeconomic group had 11 times less access to caesarean section than their richest counterparts.

Nutrition, an important factor during prenatal child development, is poor as well and many mothers are malnourished during the length of their pregnancy. Studies prove the importance of maternal nutrition in preventing pre-term and low birth weight babies and thus further improving the nutrition of children. Anaemia is one of the important factors that hampers the daily activities in almost every woman and multiple pregnancies even makes it worse. Low maternal hemoglobin levels are associated with increased risk of pre-term delivery, low birth weight babies, and fetal death.



Lack of Education

Since female education is a challenge in Pakistan, most women have fewer years of formal education, which sparks a large domino effect of consequences related to prenatal care. A lack of formal education results in less knowledge about pregnancy and appropriate prenatal healthcare as a whole.

In areas where antenatal clinics are accessible, advice to mothers focuses on provision of iron and folic acid supplements, care of newborn, breastfeeding, nutrition of child and family planning. However, there is little discussion or counseling provided on change of state from woman to a mother, the importance of her keeping healthy, and the decision to become pregnant. Antenatal visits can prove to be a platform for advising women on the physical, physiological and psychological changes during pregnancy; nutrition and immunization of the newborn and mothers; proper birth spacing; and prevention of malnutrition. Postpartum depression is also one of the major morbidity affecting maternal health, which could be, addressed in the prenatal period.

Lack of Trust and Comfort with Healthcare Industry

Having limited experience with the healthcare industry, people generally have a lower level of trust with physicians, nurses, and the entire healthcare regimen. Many women who are distrustful of biomedicine will decline certain prenatal tests, citing their own bodily knowledge as more trustworthy than their doctor's high-tech interpretations. In addition to this, Pakistan's socio-cultural framework and patriarchal set up does not provide the space where women can exercise choice of utilizing existing services. Male members or "elder" women in the family play the role of decision makers and it becomes difficult to challenge their positions of authority. Therefore, some women may opt to avoid the distress and discomfort of the medical industry and refuse prenatal care entirely. According to

the WHO survey 2006-07, of those women who did not deliver their most recent birth in a health facility, 57 percent responded that institutional delivery was not necessary.

Steps to improve antenatal care

Given these challenges and issues, some steps have been taken by the Government of Pakistan and international development organizations to improve antenatal/prenatal services. For example in December 2007, USAID/Pakistan embarked on a project called the Strengthening Health Systems project, (TACMIL Health Project). The main purpose of this two year activity was to improve technical assistance to the public and private health sector and strengthen health systems for improving service delivery with a focus on maternal and child health. The program has been implemented in all provinces of Pakistan. The impact of the program has not been disseminated.

While there are many challenges existing in a developing country like Pakistan, prenatal health can no longer be marginalized and needs to reprioritize. There is an increasing need for dedicated programs to ensure universal access to reproductive health care and family planning services across the country and provision of affordable maternity care by skilled personnel. Areas in Pakistan where poverty, conflict, distances and overloaded health systems obstruct access to adequate healthcare demand special attention. Moreover, community mobilization and awareness can become key tools for involving men in wider reproductive health and for encouraging health counseling for adolescents as well as for highlighting ill-effects of child marriages and domestic violence.

Collective efforts at societal and government levels will help ensure the health of our future generations.

About the Writer:

Ms. Mahira Chishty holds a Masters degree in Social Work from Columbia University, New York and has an experience of working in the development sector. She is currently working as a Senior Coordinator in the Program Support and Development Unit at the Sindh Education Foundation.

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Ensuring Safe Motherhood in Pakistan



Nature has shouldered the responsibility of the multiplication of mankind upon a woman and fulfilling this responsibility is an honor as well as a trial for her. If pregnancy and delivery remain normal, all steps remain unproblematic. But if any complication arises at any time from conception to delivery, then the life of the mother or the child is at risk. Ensuring the health and safety of the mother and the child during delivery is a social responsibility. However during the time starting from conception up to delivery, it is the responsibility of the midwife to take care of the mother and her child.

Pakistan is included among those countries where the highest percentage of maternal deaths occurs during pregnancy and delivery. The developed western countries

sector while the proportion of medical expenditure is much higher in India, Indonesia and even in an underprivileged country like Bhutan.

Statistics for 2009 indicate there was 1 doctor for every 1128 people, 1 nurse for every 2452 people, 1 midwife for every 6480 people and 1 lady health worker for every 15,836 people.

Countries providing trainings to qualified midwives are experiencing tremendous decline in maternal death and disability rates during pregnancy and delivery. In Pakistan, neither are such effective training programs organized nor are our community midwives qualified enough to deal with pregnancy and delivery complications. There are

Country	Pakistan	India	Afghanistan	Indonesia	Malaysia	Egypt	Bhutan
Percentage of total GDP allotted to health sector	2.7	4.1	7.6	2.2	4.4	6.3	4.1

Statistics according to the World Health Organization

have a maternal death rate of 14 occurring during childbirth, which is considered to be on the lesser side. In certain Asian countries like Malaysia and Indonesia, this rate is 41, whereas in Pakistan, this rate ranges from 350 to 400 and is considered to be the worst. (The Maternal Mortality Ratio is the ratio of the number of maternal deaths per 100,000 live births.)

Similar pattern could be observed in the neonatal mortality rate. More than 65 out of 1000 live births die during the process of delivery whereas more than 95 out of 1000 live births die before the age of 5. (Source: Pakistan Economic Survey 2009-10, UNDP Human Development Report 2010, World Health Organization 2010).

Inadequate facilities during pregnancy and delivery become the cause of maternal or neonatal deaths which is very distressing, especially in today's advanced era when the provision of basic medical facilities are possible for the poorest of countries.

According to Pakistan Economic Survey 2009-10, only 0.54 percent of the country's total GDP is allocated to the health

around 144 midwifery training schools in Pakistan but it is distressing to see that the available teachers are not well educated or trained. There is an absence of effective clinical trainings as well. A research study by UNICEF has stated that 90 percent of the certified midwives from these schools have never facilitated a single delivery.

Therefore neither are such qualified midwives playing any role in achieving the Millennium Development Goals (MDGs) nor can they bring down the maternal death rate during pregnancy and delivery. Training schools are not readily available for girls willing to be trained as midwives and those who are successful in getting trained are unable to gain respect and adequate compensation. This occupation requires continued education and training programs to make midwifery a prestigious profession and a career progression structure must be developed for the women choosing midwifery as their line of work. The health of the mother and the child and their life security during pregnancy and delivery requires adequate expenditures in the health sector and provision of basic health facilities on an urgent basis. Proper training of midwives and health workers should also be prioritized.

According to an estimate, there is a need of 100,000 trained midwives in Pakistan so that maternal and neonatal death rates could be brought down. We have examples of Malaysia, Indonesia and Sri Lanka where the governments have succeeded in doing so in a few years and their



maternal death rate is now much lower from before at 41 percent.

There are around 144 midwifery training schools in Pakistan but to achieve a total of 100,000 midwives, there is a dire need to increase the number of schools. Not only that, Midwifery training also faces two other critical issues: The need for qualified and trained teachers and provision of text books and training material in Urdu as well as regional languages.

The Pakistan National Forum on Women's Health, a non government organization, is working for the betterment of women's health. The forum has published 11 books based on the subjects of women's health, midwifery and training of health workers in the past 9 years, some of

these books are being taught in various midwifery and nursing schools. In order to fulfill the need of midwifery teachers, a training program for midwifery and nursing tutors has also been commenced through which more than 100 female teachers have been trained in the last 3 years.

It is not possible for an NGO or a private organization to fulfill the nationwide requirements; it is the responsibility of the government to provide health and education facilities to the people. There is urgent need to strengthen the health sector by preparing skilled midwives who are capable of functioning as specialists in normal obstetrics. A few steps that could be taken are:

- Preparation and employment of competent midwifery teachers.
- Strengthening the examination boards to enable them to improve the midwifery examination system.
- Finalization of a legal framework for midwifery practice to protect the midwife and the community she serves.
- Sensitizing the community and the medical profession about the pivotal role of the midwife in lowering maternal mortality.
- Improving midwifery education using available evidence of the existing weakness.
- Strengthening the health facilities to provide backup support to the midwife.
- Designing an educational system which provides opportunities for professional advancement to the midwife.
- Acknowledging midwifery as a profession and developing a career structure for its members.
- Designing a system to deploy and supervise the community midwife.

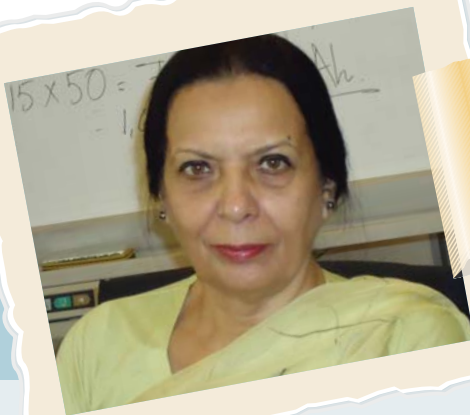
The government has the required resources and therefore has the capacity to make possible interventions to meet the nation's requirements. We hope to see some affirmative action taken to aid in the cause of the midwife which in turn will help the country in the reduction of the maternal mortality rate.

About the Writer:

Dr. Sher Shah Syed is a renowned gynecologist, educationist and an activist of women's health and rights. He is the head of the women diseases department and the President of Pakistan National Forum on Women's Health. He has also served as the President of Pakistan Medical Association and Society of Obstetricians and Gynecologists, Pakistan.

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Interview with

Dr. Habiba Hassan

Women's rights Activist / Pediatrician

Dr. Habiba Hasan, a pediatrician by profession, is one of the most respected educationist and human rights activist. Currently, a senior member of the faculty at Jinnah Medical and Dental College Karachi she has devoted more than forty years of her life to her professional work as a doctor as well as to improve the lives of children and women in Pakistan and Sindh. She has pioneered many projects and has been the first Pakistani to head Amnesty International representing it at various global forums including United Nations. She has been on various boards of governmental and non-governmental organizations pursuing and fighting for the rights and justice for women and children.

What kinds of disparities in maternal health are found between people in different social classes within our society?

Pakistan human development indicators such as health and education are marked by high levels of disparities. There is wide variation of population, income distribution patterns and access to basic needs such as health care and education. Multiple factors that include the pre-conception education level, health status, the social class and financial standing especially of the mother-to-be impact maternal health directly as also the decisions concerning pregnancy and antenatal care across the society. The poor and vulnerable segments of society face the brunt of the situation. A huge number of women lack access to any health facility let alone to pre-natal and antenatal care. Low awareness and lack of acknowledgement of the basic rights for women compound the situation. Maternal health, pregnancy, child birth and antenatal care are largely neglected and treated mostly by traditional means and thought of with regional attitudes. For example I have observed in my practice that decisions concerning pregnancy and birth are usually not made by the expecting parents and remain the prerogative of the elders in the

family or community. Many of these women rarely undergo any check-up during pregnancy; whereas ideally they should see a doctor, 3 times or at least twice in the later stages of pregnancy, if not in the earlier months. Also intake of required nutrients is neglected and females are often deficient in calcium and iron which results in anemia, retarded fetal growth, and other complications. A large section of society relies on child delivery undertaken by untrained mid-wives. Moreover, intake of drugs without prescription during pregnancy is a common practice, affecting the to-be-born baby adversely. Lack of spacing due to cultural and social factors adversely affects the health of the mother as well.

While many of the poorer communities suffer from deficiencies or malnutrition, a general lack of awareness exists amongst the more affluent households. The ignorance about the dietary and physical requirements of females before, during and after pregnancy at times results in unhealthy diets and hence poor maternal health.

What commonly found health conditions should women be careful of before and during pregnancy?

Health conditions such as diabetes, high blood pressure, rubella (German measles) all need extra care during pregnancy. Rubella if contracted by a pregnant mother can be problematic because it can retard the mental and physical development of the fetus as well as cause birth defects. It is best to receive a Rubella vaccine a minimum of one month before trying to become pregnant or the

baby will be born with Rubella syndrome. So women who are planning on getting pregnant should get a medical examination done to specially detect whether they have any sub-clinical disease like diabetes, hypothyroidism etc. If they have not had rubella vaccination previously, they should have one taken now.

Diabetes is a matter of concern also. It can result from a

family history, being over-weight or induced by other health problems. The first 3 months of conception are most critical as the embryo and other organs form during this period and uncontrolled diabetes at this time can lead to birth defects and a higher risk of miscarriage. Insulin is preferred over oral drugs to reduce blood sugar because oral drugs can be damaging to the fetus. High blood

pressure can also be dangerous for both the mother and the fetus. Taking steps to control it before and during pregnancy and getting regular prenatal care is important to lessen or avoid related problems. Also women with chronic hepatitis B infection can transmit the virus to their babies at birth. Therefore, pregnant women should test for hepatitis B infection and receive vaccination accordingly.

How does abuse affect pregnant women and the newborns?

There is a wide prevalence of both physical and substance abuse particularly in the lower income segments of our society. What makes the situation worse is the general lack of awareness that a fetus is highly sensitive to maternal emotions as well as to drugs or other physical traumas the mother endures. There can be disastrous effects on the unborn baby of prenatal exposure to such direct abuse.

Violence during pregnancy for instance, creates feelings of anxiety, increased heartbeat or frightened speech in the mother and these are instantly communicated to the fetus. When the mother is tense or anxious, the hormonal factor comes into play and the baby kicks and starts to stumble in the womb. When the mother is under such stress the baby is seen on the ultrasound screen frowning in the womb. These experiences may contribute to pervasive feelings of insecurity and vulnerability as children grow up.

There are many other types of abusive behavior which hurt just as much or more than physical abuse. For example psychologically abusive situations within households emanating from issues such as unwanted pregnancy, gender of the baby or poverty are not uncommon. The resulting tensions with spouse or in-laws affect the baby both during and after birth. Simply being an eyewitness to such abuse can cause significant behavioral and/or emotional problems in children and may result in relationship difficulties later on.

Drug abuse also carries the double danger of harming the mother's own health as well as impairing prenatal development during pregnancy. An abusive substance such as heroine, tobacco, etc. and even certain medical drugs must be avoided from the time a female first plans to conceive or learns that she is pregnant. During the first ten weeks of pregnancy most of the body organs and systems of the baby-to-be are formed and substance abuse at this stage can cause malformations of the heart, limbs or facial features. During the later stages of pregnancy, certain drugs may damage organs or even increase the risk of spontaneous abortion, premature delivery or growth retardation. Talking of specific examples, smoking by the mother during pregnancy hinders fetal growth and raises the risk of miscarriage and preterm delivery. Women who are addicts of heroin, LSD, glue, amphetamines and/or alcohol run the risk of chromosomal and congenital abnormalities, and all the same effects as of smoking. After the delivery, babies born to addicted mothers begin to experience withdrawal symptoms which can even at times

be life threatening. In addition, continued usage of such drugs or their abrupt withdrawal induces mood swings,



irritability, exhaustion and anger in the mother which often results in her lashing out on children.

Recreational drugs such as chalia (betel nut), paan (betel leaves), tobacco, shisha, gutka, etc. are also popular mostly in the lower income groups and cause serious health issues. These drugs are cheap and readily available and do not have the social stigma attached as smoking does. So women consume them openly which not only affects their

health but also increases the risk of having premature and low birth weight babies. What is worse is that since the mothers continue consumption post-delivery, the effects of intoxicants found in the drugs keep reaching the infants while they are on the mothers feed. The money they waste on these could be spent on healthy nutritive food.

As part of my profession I continue to educate women that any drug they take passes through the placenta into the bloodstream of the fetus. Even drugs which have been prescribed by a doctor could be harmful to a developing baby. Therefore no drugs or even medication of any kind should be taken without physician approval.

Multiple factors including the pre-conception education level, health status, the social class and financial standing especially of the mother-to-be impact maternal health directly as also the decisions concerning pregnancy and antenatal care across the society.

What are the ways to cope with, reduce and prevent situations of abuse and stress?

We all need to realize that a happy mother will give birth to happy babies. There is nothing denying that worries and stresses are a part of life but unless situations are managed properly anxiety can reach intolerable levels and lead to increased incidence of premature births, miscarriage or lower birth weights in babies. I feel managing abusive and stressful situations is the collective responsibility of expectant mother and her support network i.e. spouse, family members, caregivers, health care providers and the society at large.

Handling drug/substance abuse is tricky in expectant mothers. Abrupt withdrawal can put the mother and the fetus through unnecessary stress. A good strategy to help

Qualified practitioners should encourage the mother-to-be as well as her immediate network i.e. husband, in-laws and parents to attend consultation visits and get counseling/ advice.

drug abusing pregnant women, their unborn children, and their families is through proper diagnosis, intervening in their addiction, and coordinating prenatal care with appropriate substance abuse treatment. Females reporting with drug addiction need a sympathetic psychiatric management and gradual reduction in dose over the course of pregnancy. Newborns need to be observed carefully as well for any evidence of withdrawal symptoms. Community support can reinforce such treatments by motivating mothers to get clean and sober so that babies are born healthier and receive proper parenting.

Family counseling is also very useful for coping with or

preventing physical abuse. Qualified practitioners should encourage the mother-to-be as well as her immediate network i.e. husband, in-laws and parents to attend consultation visits and get counseling/ advice. The sessions can provide a good opportunity to educate people about harmful effects to the mother and child of abuse and ways to handle the pregnancy better. Couples can also be introduced to the advantages of child spacing and usage of contraception and its healthy impact on future pregnancies and health of children.

The doctors, the community elders, local organizations, in fact every educated individual must step forward and facilitate in raising awareness about the detrimental effects of violence and abuse and the right of women to a healthy life and safer pregnancy and delivery. A successful strategy would be to work both with the victims and perpetrators and simultaneously educate the communities. Particularly empowering females through awareness can help them realize that abusive situations result in persistent maternal stress and have implications on the pregnancy and they should consult a qualified practitioner and report the matter to concerned authorities in order to ensure their own and their children's well-being.

A lot of times sharing pregnancy experiences with elders/friends can be emotionally relaxing as well. As they say happiness doubles and stress becomes half by sharing. I always encourage mothers-to-be to ventilate the problems out to people they trust such as the doctor, adults in the family or close friends, in order to relieve the pressure inside. Besides, simple exercise such as walking can help soothe nerves and give that extra boost of energy to the expecting mother feeling stressed.

As part of your work with women and children in prison, what challenges do you feel pose a major threat to maternal and fetal health?

Majority of women (90%) living in jails across Pakistan are under trial. No woman, especially the pregnant ones should be in jail unless they are proven guilty because health facilities are almost non-existent in female prisons. In a country which already has a dismal infant and maternal mortality rate, imprisonment jeopardizes maternal and fetal health further by deterring women from seeking prenatal care.

I have been working in the Karachi central prison since the 1980s in trying to provide access to antenatal care to mothers and health care access to their children. Even though we have succeeded in extending health coverage, drug counseling and programs to help women deal with a past of abuse and violence, there are many aspects of prison life we have no control over and which are highly detrimental to maternal health. Women in jail continuously



face anxiety and stress due to over-crowdedness; ill-treatment by fellow inmates; harassment by staff; lack of privacy and separation from families. Imagine a baby coming into the world surrounded by frustrated women who could be murderers, robbers or prostitutes. The confining environment, use of obnoxious language, and

Millennium Development Goals on maternal and child health

Millennium Development Goal 4: Reduce child mortality

Targets

4.A: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate

Indicators

- 4.1 Under-five mortality rate
- 4.2 Infant mortality rate
- 4.3 Proportion of 1-year-old children immunized against measles

Millennium Development Goal 5: Improve maternal health*

Targets

5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

5.B: Achieve, by 2015, universal access to reproductive health

Indicators

- 5.1 Maternal mortality ratio
- 5.2 Proportion of births attended by skilled health personnel
- 5.3 Contraceptive prevalence rate
- 5.4 Adolescent birth rate
- 5.5 Antenatal care coverage (at least one visit and at least four visits)
- 5.6 Unmet need for family planning

*The revised Millennium Development Goals framework agreed by the United Nations General Assembly at the 2005 World Summit, with the new official list of indicators effective as of 15 January 2008, has added a new target (5.B) and four new indicators for monitoring Millennium Development Goal 5.

Source: United Nations, Millennium Development Goals Indicators

abusive attitudes expose children to the worst possible upbringing. It may even result in children becoming criminals not being afraid of going to jail which they consider home. An alternate for children could be to stay with grandparents or relatives while their mothers are in jail. However, in an extremely poor society like ours, relatives make up all possible reasons they could to evade the responsibility. For instance, one of the reasons any

grandmother could give for her actions is that "she would not raise a convict's baby by herself". In her selfishness and prejudice, she forgets about the innocence of her grandchild. It is an alarming situation and in order to improve the care of children in prison various humanitarian, health and child care organizations should work in coordination to extend assistance to mothers in caring for their children while in prison.

What characteristics do you think ought to be present in a good health care professional?

The welfare of the patient (beneficence) is central to all considerations in the patient-doctor relationship. Included in this relationship is the obligation of medical practitioners to respect the rights of patients, colleagues, and other health professionals.

Doctors and paramedics should deal honestly with patients. This includes not misrepresenting themselves through any form of communication that is untruthful, misleading, or deceptive. Furthermore, it is obligatory that a practicing doctor maintains medical competence through study, application, and enhancement of medical knowledge and skills.

Doctors also have a continuing responsibility to society and should support and participate in activities that enhance the community. As a member of society, the doctor must respect the laws of that society and be considerate of societal norms and beliefs.

Lastly, the doctors should idealize right principles, should learn to earn respect instead of building up their bank

balances and should have the professional courtesy as well as empathy and compassion for the patients.



Interview with

Dr. Musarrat Zahoor

Gynecologist



Dr. Musarrat Zahoor is a gynecologist currently working at the Burhani Hospital, which is a charitable institution. She graduated with an MBBS degree from Dow University of Health Sciences and did her post-graduation (MCPS) in Gynecology and Obstetrics from College of Physician and Surgeons of Pakistan (CPSP). She has over 13 years of work experience as a civilian gynecologist, in both clinical and surgical fields. Her interests include attending various national and international conferences related to her field, attending gynecology and obstetrics workshops and keeping herself up to date with the latest research.

What factors impact maternal health in our society? How can these be addressed to ensure safe motherhood?

Women's health care in our society is hardly a priority, even in the minds of women themselves. Social and cultural issues and lack of accessible health care result in overall poor physical well being of women. It is generally observed at the household level, that there exists a large disparity where spending on nutrition for females is concerned. Added to that is the onus of child bearing especially in cases where women bear children one after another. Most of the time, in these cases, miscarriages, low birth weight, and premature births are likely to happen affecting mother's health owing to high demands and pressures of raising a second child when the first one is also in infancy..Then there are also those instances where consistent miscarriages or the pressure to produce a male child are common and result in maternal stress and psychological problems like depression. Unsafe abortions or unhygienic child birth practices quite often lead to maternal deaths and poverty and lack of awareness worsen the situation manifold.

Having said this, ignorance I feel is by far the biggest of all challenges in our country. It also paves way for many myths and doubts. For example there is a general misconception that taking polio drops or mineral water will result in birth control. You can only counter uncertainty through education and awareness at a mass level. There is also no concept of pre-pregnancy check-ups and taboos are associated with discussing a medical condition with doctors, friends, family or acquaintances. This can be very harmful for example in instances where both the partners are Thalassemia Minor (which is not harmful to any one), the child can develop a more severe form of illness by

inheriting the bad gene from both parents. So pre-pregnancy testing is important to rule out any complications.

In the developed world, pregnancies are pre-planned – so a female's health is taken care of before she even gets pregnant. There are pre-conception medical examinations and tests such as diabetic profiling, thyroid profiling, and venereal disease profiling, etc. that a female is required to clear in order to ensure safe and healthy pregnancy and child birth. Such practice should be enforced in Pakistan as well and couples should be encouraged to visit the doctor as soon as they start to plan a baby. Intensive awareness campaigns are needed and it may take years of consistent counseling and advocacy to spread the message and bring about a behavioral change.

In addition, minimum services required to abate risk of maternal death or disability include not only the ante-natal services but also minimally skilled assistance for proper delivery arrangement (both traditional birth attendants and midwives), and available and accessible facilities for post-partum care for the assessment of mother and child health. Medical practitioners should extend counseling to patients during these critical stages of motherhood. Other services such as family planning can be integrated as well. People have been spacing childbirths for thousands of years through natural methods such as withdrawal, abstinence, and breastfeeding. Preferably, injections are given for spacing rather than pills, besides other methods. At least a two year period of spacing is recommended between children. Birth spacing ensures health and well being of both the mother and child.

What economical food choices are available to meet the nutritional requirements of females during pregnancy?

The food in a woman's diet is the main source of energy for the baby. Expectant mothers are often unable to meet the nourishment requirements during pregnancy. This can only be partially linked to affordability since many a times unhealthy eating habits and wrong food choices lead to deficiencies.

A number of readily available food items can fulfill the nutrition requirements of a pregnant mother and not all are expensive options. For instance it is not necessary to buy expensive fruits like strawberries and leeches to meet the vitamin and mineral requirements of the body during pregnancy. More affordable options such as bananas, apricots, etc. can be consumed. A lot of affordable supplements are also widely available. Pulses are a very good source of protein and can be used as replacement for eggs or meat if affordability is an issue. Similarly, carbohydrates can be obtained from flour which is a staple food in our households generally. As for calcium, two cups of milk is a standard bodily requirement during pregnancy and other dairy products such as butter and yogurt should be frequently consumed. For affordability, calcium

supplements prescribed by doctors can also meet the requirements of the mother and the growing fetus. Any leafy vegetable can be taken for a healthy intake of iron as iron plays a major role in the growth and development of cells, as well as tissue formation. Overcooking of vegetables must be avoided as it burns all the nutrients.

I have also observed that anemia (iron deficiency) is quite common in pregnant women, not because of eating less but mostly because of ill eating habits like overcooking of food, not eating the right food and/or at the right time, etc. Iron supplements, as digestible by the patient, such as folic acid are also advised by doctors. It is important to note that there has to be a gap of at least 3-4 hours between the intake of calcium and iron as the absorption of iron would be affected by the combined consumption. It is better that iron supplement is taken at night after meals because it helps in avoiding heartburn. Pregnant mother or the unborn child do not require Vitamin D and therefore it is only prescribed in case of proven deficiency or while breastfeeding.

Can the extra nutritional needs of pregnant mothers be met through supplements alone?

Expectant mothers have a higher need for some vitamins and minerals. However supplements cannot replace a healthy diet. While taking a prenatal vitamin and mineral supplement ensures that both the mother and the baby get enough vital nutrients like folic acid and iron, taking extra can be harmful. It is important therefore to consult the doctor. A healthy diet needs to be maintained throughout pregnancy comprising foods that have

vitamins and minerals that the body needs. A typical plan may include 3 servings of proteins, 4 servings of dairy products, 4-5 servings of vegetables, and 4-5 servings of carbohydrates. It is important to mention here that during pregnancy 300 extra calories are required while during breastfeeding the requirement is 500 calories so the care doesn't end at child birth.

What are the basic types of prenatal tests that every expectant mother should undergo? Does it help us to know or worry about what is coming?

Prenatal tests are meant to determine if a mother is healthy and that the baby is developing normally. A combination of fetal ultrasound and maternal blood testing help determine the risk of the fetus having certain birth defects. During the first trimester a mother is usually tested for blood group (in case transfusion is needed at the time of giving birth); the RH factor (complications arise if the mother is RH negative and the baby RH positive); HIV status; and Hepatitis B & C testing so that vaccine treatments are offered to the mother and the baby after birth. Complete Blood Count (CBC) is also done to check any symptoms such as weakness, fatigue, or bruising a mother-to-be may have as well as for diagnosing conditions such as anemia, infection, and many other disorders. Hemoglobin type (CVS) is assessed in expectant mothers as well and if Thelisia (severe anemia) is detected, the mother is prescribed high iron doses to avoid miscarriages or fetal death.

Expectant mothers of older age group (35 years plus) are often tested for Down syndrome (amniocentesis) during the second trimester to check for any genetic disease that could result in congenital abnormalities. During the third trimester ultrasound is done as well to study fetal heart rate and biophysical profiling (if it is suspected that the to-be-born child is suffering from restricted growth); accordingly induction or cesarean section may be advised. Mothers may also be tested for glucose tolerance to check for any fetal abnormalities.

These tests are vital in prenatal care because the results provide the doctor with necessary information to ensure that the pregnancy is healthy. Maternal anxiety around testing is not surprising but what is important is to understand that undetected conditions can result in greater complications for the mother and the child both.

The trend of mid-wives delivering babies at home is incessant in our culture. Although it is unrealistic to expect a turn-around in the norm, what are some of the precautions that mid-wives must take to ensure a healthy delivery for the baby as well as the mother?

Across Pakistan, about two-thirds of women deliver children outside of a hospital or clinic with community mid-wives playing an important role in pre-natal care and child birth. It is extremely important that mid-wives are properly trained and provided necessary equipments. Various organizations are providing training as well as delivery kits that include sterilized equipment, baby bath, baby gown, baby sheet, hand-washing material, etc. at the cheapest possible rates. It is important that local mid-wives are encouraged to acquire these and the community made aware to demand the use of sterile equipment at the time of delivery.

Mid-wives learn from experience the complications that may arise during home births. It is important that they refer the case to a doctor before complications become too grave. Most of the maternal deaths occur because mid-wives deal with the complicated pregnancy cases with delaying tactics and refer to the doctor at a very later stage or may not refer at all. Midwives can't perform C-sections and some can't administer drugs or anesthesia. Timely referrals can ensure the patient gets secondary/tertiary care and the baby be saved before the case complications increase beyond repair.

Saving Begum Jaan: Tale of a Social Outcast

Begum Jaan from Muzaffarabad was swamped by cameras; never in her life had she faced this many photographers. She found herself the center of attention at a ceremony arranged in a five star hotel, filled to capacity by an applauding audience. Truly a day that would not be soon forgotten by her or her family!

When the devastating floods hit the north-east areas of Pakistan on 18th October 2005, Begum Jaan was undergoing labor at her home. She was left buried under the rubble of her house for ten long hours and tragically gave birth to a deceased child. A local midwife helped in her delivery but due to complications, Begum Jaan ended up losing the ability to control her urine excretion after the incident. She had become a victim of Urine Incontinence (UI) – involuntary loss of urine. Also called Fistula, this disease is caused by obstructed labor and results in damage to the bladder or large intestine. She was now forced to live a life of intense physical and mental anguish owing to her inability to control her excretions, leaving her clothes and body wet and smelling bad perpetually. This development gravely jeopardized her relationships and made her a near social outcast.

Fortunately, The Secretary General of Pakistan Medical Association and the Head of Pakistan National Forum on Women's Health, Dr. Shershah Syed was on an adjunctive visit to Muzaffarabad. When he found out about Begum Jaan, he shifted her to Karachi with the support of Edhi Trust. Dr. Aziz Abdullah, Dr. Shershah and his team conducted 3 operations in December 2005 and January 2006 at Atia General Hospital, Karachi that helped cure her of this dreaded affliction.

Begum Jaan attended the inauguration ceremony of Fistula Repair Project on 28th January 2006 at a local hotel with her husband Alam Deen and their 10 year old daughter. Dr. Nafees Sadiq presented to her a new dress which was representative of the fact that she was now free of the disease and her clothes would remain dry and clean. Begum Jaan is one of the few women to be treated with corrective surgery. According to UNFPA statistics, at least 150,000 women in Pakistan suffer from obstetric fistula and six thousand more develop this condition every year. This leaflet provides useful information on the causes and symptoms of the disease. Information on free of charge fistula treatment centers in Pakistan is also provided.

Fistula: Causes and symptoms

Inadequate care and treatment during pregnancy and delivery become the cause of various diseases including disability. The

most grievous is the disease fistula which not only causes physical excruciation but also has several psychological and social effects as well.

The fistula usually develops when a prolonged labor presses the unborn child so tightly in the birth canal that blood flow is cut off to the surrounding tissues, which necrotize and eventually rot away. More rarely, the injury can be caused by female genital cutting, poorly performed abortions, or pelvic fractures.

Obstetric Fistula is a severe medical condition in which a fistula (hole) develops between either the rectum or vagina or between the bladder and vagina after severe or failed childbirth, when adequate medical care is not available. Due to loss of control over urine, it keeps flowing involuntarily.

Sometimes the fistula develops between the rectum and the vagina causing feces to escape through the vagina. This medical condition is called Rectovaginal fistula. Fistula is not repaired after childbirth and the involuntary urine flow continues for which the woman has to use a sanitary napkin all the time.

Fistula of any type causes intense physical and mental torture for a suffering woman as she is always stinky due to involuntary urine and feces excretion. Mostly, the husband divorces his wife and forces her out of the house and commonly people believe such a woman to be 'contaminant' and therefore prefer to stay away from her.

Fistula victim

Forced marriage of young girls lead to weakening of their bodies and bones and if they give birth to a child in this case, they can become the victims of fistula. Older women who have given birth to multiple children can become weak and are also prone to this disease. In both cases, it is difficult to push the child during labor. If immediate medical treatment is not given to the victim, she may end up facing painful situations in her daily life.

Fistula can be cured

Our society sadly devalues women and their problems. Fistula has affected many women but this disease can be treated and 95 percent of the victims can be cured through operation/surgery. By helping the fistula victim in your family or neighborhood, you can give her a chance to lead a normal life and take care of her children and family.

Source: Pakistan National Forum on Women's Health

Recommended Readings

What to Expect When You Are Expecting

Author: Heidi Murkoff

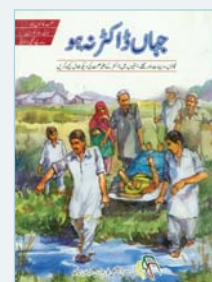
Being pregnant is such an exciting, but confusing time. Getting all the information and answers to hundreds of questions and worries expectant parents may have will help prepare expectant parents for the new little one about to enter their lives. This book is an extensive guide to pregnancy and childbirth. The information is presented in a month-by-month format covering the various stages from planning a pregnancy and choosing a practitioner to post delivery care. Dedicated chapters feature a complete nutrition plan, support for the expectant dads, and extensive information about dealing with minor illnesses, chronic conditions, and pregnancy complications. Overflowing with tips and helpful hints this is a must read especially for first-time parents.



Where Women have no Doctor

Publisher: Pakistan National Forum on Women's Health

Where Women have no Doctor deals with female health issues as well as the negative impact of poverty and talks about the attitudes and traditions that affect women. The book provides information on issues such as the elements affecting women's health, women's rights, delivery and labour, infertility and abortion just to name a few. It not only outlines the life and health issues of women but also aims to provide solutions that are applicable in real life situations.



The Expectant Father: Facts, Tips and Advice for Dads-to-Be

Author: Armin Broth and Jennifer Ash

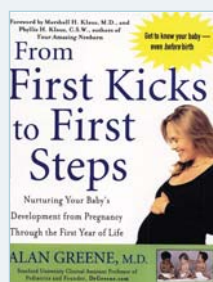
A complete, month-by-month guide to what a father-to-be may experience during his partner's pregnancy, this book will help the men provide support to their partners as well as prepare them for the wealth of emotions they may experience during and immediately after the birth of the child.



From First Kicks to First Steps

Author: Dr. Alan Greene

This comprehensive book written by an expert pediatrician, clinical professor and a father, provides an absolute guide for soon-to-be parents unfolding the maze of questions that all couples encounter while expecting a baby. Description of the transformations the baby undergoes during the 9 month period as well as practical advices included in the book, gives readers both scientific aspects of child rearing as well as an authoritative reference to the author's expertise that celebrates the growth of a baby. Creatively built themes in the book covering even the miniscule details of the prenatal period and the first year of the baby in the world provides an absolute guide for soon-to-be parents to proceed with poise for the imminent experience. The book is also available online at: <http://books.google.com.pk/books?id=pT0RiAbpWwkC&lpg>.



A Woman's Guide to Health

Publisher: Pakistan National Forum on Women's Health

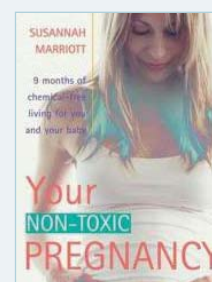
A very informative book which offers guidance on becoming a mother and nurturing children especially on issues relating to pregnancy, family planning, infertility and its treatment and assistance in case of diseases arising as a result of complications during pregnancy and delivery. The latest edition includes nurturing of newborns, topics regarding kids' health and diseases, confidence and character building, and the importance of playing games. The book has been published in Urdu, Sindhi, Pushto and Balochi.



Your Non-toxic Pregnancy

Author: Susannah Marriott; Carrol & Brown

The book offers an insight into the exposure of expectant mothers to potentially dangerous chemicals in everyday life. With a view to reducing the risk of fetal abnormality, the information highlights healthier ways to live that are beneficial to both mother and baby. Alternatives to regular household products such as cleaners and cosmetics are presented along with suggestions for which foods to avoid and which to enjoy. Categories range from the importance of a fresh air environment to coping with the changes which pregnancy brings. Sections are clearly illustrated with Q&A boxes throughout to address specific questions or concerns related to the topics.



Feature Websites



Pregnancy Guide

www.pregnancyguideonline.com

The website carries rich content covering the preconception stage, pregnancy, childbirth and beyond. Fetal changes and maternal developments during each of the forty weeks of pregnancy are explained in detail as well as information about baby's

development; role of expectant fathers; and inspirational thoughts and suggested reading on parenting and more.



Baby Center

www.babycenter.com

This well-designed, interactive website brings reliable advice and answers to everything anxious parents and parents-to-be may need. The content on the site is free and open and users are offered boards for posting, chat rooms for talking, and Birth Clubs to find other

parents in the exact same place of child development as themselves. Various interactive tools include predicting the child's adult height; ovulation charts for the still-trying crowd and suggestions for baby names.



Baby Names

www.baby-Names-and-Stuff.com

Search 45,000 baby names and meanings by gender, popularity, origin and religion.



Kids Growth

www.kidsgrowth.com

A worthwhile resource for parents to explore content related to parenting, child development, growth milestones and growth charts. Furnished with parenting tips, book reviews and interactive quizzes also form the substance of the website, thus supplying readers with further information.



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Children's Newsletter is published in Sindhi and Urdu languages and is a useful resource aimed at improving the quality of teaching/learning in early years.

The newsletter is available online at www.ecdpak.com & www.sef.org.pk

The Newsletter is developed by the Sindh Education Foundation as part of the Releasing Confidence & Creativity: An Early Childhood Development Programme which is sponsored & supported by the Aga Khan Foundation (Pakistan) & the Embassy of the Kingdom of the Netherlands.



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