

# Prematurity -

## Is it preventable?

Prematurity is the single most important problem with multiple births, occurring ten times more often than with singletons. About half of all twins and three-quarters of triplets are born before the thirty-seventh week of pregnancy. Each week of pregnancy improves a fetus's chance of survival outside the womb. Babies born prematurely are 120 times more likely to die than those carried to full term, according to Roberto Romero, head of the Perinatology Research Branch of the National Institute of Child Health and Human Development. Twin pregnancies have a higher rate of premature delivery than singleton pregnancies and a substantially higher perinatal mortality. Perinatal refers to the period after the 28th week of pregnancy through 28 days following the birth.

In our recent age of advanced technology we have become much better at saving the lives of premature babies, however, at an increasing financial, emotional, and physical price, but do not yet have a handle on preventing their birth. This begs the question why this is so. Some obstetricians have succeeded in prolonging pregnancies to term, even against great odds, not because they perform miracles but because they empower and educate their patients to become "smart." Is preterm labor preventable in pregnancies with multiples? In many cases it is if the patient is in tune with her body and is educated on preventative measures such as good nutrition (see Maternal Nutrition in Multiple Pregnancy), identifying signs and symptoms that contractions are occurring and what to do about them.

Being pregnant with multiples automatically classifies you as being high risk. As a patient you must learn to think high risk, being keenly aware of your body and babies in order to detect any threatening changes, and most importantly, trusting in your intuition. If you can detect preterm labor in its early phases, before the cervix has undergone significant changes and before the membranes have ruptured, it can many times be stopped with rest and increased fluid intake. An appropriate analogy would be a runner who drinks frequently to prevent muscle cramps. Hydration must be adequate in a multiples pregnancy to prevent falling blood volume and thus the onset of premature labor contractions.

The term "preterm labor" is misleading. When we think of labor we think of pain and discomfort. Preterm labor is more subtle than that, and the contractions are most often painless. In a multiples pregnancy especially, it is harder to pick up or feel contractions due to the taut or over distended uterine muscle. Because of the often subtle signs and symptoms preterm labor is often difficult to diagnose for patients and physicians alike. Even those patients who have given birth before and are familiar with the labor process are still unaware of preterm labor because with a multiples pregnancy it often occurs earlier and doesn't feel like labor. It is important that you know and be able to recognize the seven warning signs and symptoms of preterm labor. Table 1 lists these signs.

### Table 1 (Warning Signs and Symptoms of Preterm Labor)

- Dull low backache
- Menstrual- like cramps
- Pelvic pressure (feels like the babies are going to fall out when you stand up)
- Abdominal cramping with or without diarrhea
- Increase or change in vaginal discharge
- Possible contractions
- "Feeling bad or something's not quite right"

Around 20 weeks gestation you should twice daily, usually in the morning and evening, lie down on your side, place your hands on your abdomen, (one hand on either side of your naval or belly button) and feel for any tightening of the uterus for one hour. If one side of your abdomen is hard

and the other is still indentable then it is not a contraction but one of the babies you are feeling. Both sides of the uterus will be hard if there is a contraction, even if it lasts for only 20 seconds. It is normal to have a contraction upon rising from a sitting or laying position to a standing position and if you let your bladder get too full. They should, however, go away.

If you are having more than four contractions in an hour your first step is to get two (10-12oz.) glasses of water or juice and drink them as quickly as you can. Using a straw will help get the water or juice down quicker. Lay down on your side to increase the blood flow to the uterus. It usually takes 20 to 30 minutes for the water to be absorbed and reach the circulatory system to become effective. If after waiting for one hour the contractions have still not slowed down, continue drinking one more 10-12oz. glass of water and fill your bathtub with warm water and soak for as long as you feel comfortable. The warm water will help relax you while still hydrating the uterus.

Call your physician if the contractions have not slowed down by this time. You will probably be sent to the hospital for additional monitoring and possibly administered tocolytic drugs to help stop the contractions. By being conditioned to regularly feel for contractions you will know what "normal" activity is for you and be able to pick up any changes that may signal the onset of labor.

Electronic home monitoring for multiples may be of some benefit to help pick up contractions for a mother who is currently experiencing preterm labor contractions. It is unrealistic to think that a woman pregnant with multiples will not experience any contractions during her pregnancy. With a large, over distended uterus you will have contractions from time to time. The difference between Braxton-Hicks contractions, which are normal contractions that appear from time to time, and real preterm labor contractions is not in the type of contraction, for they are both the same, but in the frequency, or consistency of the contractions. If they are occurring on an hourly basis consistently, these type of contractions can thin and dilate the cervix.

Many authors suggest that there is a strong link between preterm labor and inadequate weight gain during pregnancy.<sup>1</sup> Abrams reported a 60 percent increased risk of spontaneous preterm birth in women with a low rate of weight gain (<0.6 lb/wk), compared with those with an average rate (0.6-1.15 lb/wk). Women with a low rate of gain were more than twice as likely to deliver prematurely as those with a high rate of gain of 1.15 lb/wk.<sup>2</sup>

In twin gestations, higher maternal weight gain is significantly associated with higher birthweight and longer length of gestation. Luke demonstrated that, regardless of maternal pregravid weight (which is the weight before pregnancy), total weight gain of 40 to 45 lb. and a rate of gain of 1.25 lb./wk were associated with a lower incidence of low birthweight and prematurity in twin gestations.<sup>3</sup> This information suggests that we do have some control over preterm labor contractions simply by strengthening the "terrain," both physically and mentally. In other words, eating an appropriate diet full of vitamins, minerals, protein and calories. Table 2 illustrates some of the factors related to prematurity and nutrition.

## **Table 2 (Nutrition-related factors associated with prematurity)**

### **Anthropometric Factors (body measurements)**

- Low weight before conception
- Low body fat
- Low total gestational weight gain
- Low rate of gestational weight gain
- Inadequate late weight gain (after 24 weeks)

### **Dietary**

- Fasting/starvation
- Chronic malnutrition/undernutrition
- Inadequate vitamin A
- Inadequate folate
- Inadequate iron
- Inadequate magnesium
- Inadequate calcium
- Inadequate zinc
- Inadequate essential fatty acids (primarily comes from eating fish)
- Inadequate essential amino acids (protein)

### **Lifestyle**

- Smoking
- Alcohol use

Other measures that your physician may use in a high risk pregnancy to help prevent complications leading to preterm labor is the use of baby aspirin daily (60-150 mg/d). In several studies, this has been found to be effective in reducing the incidence of preterm deliveries due to preeclampsia or fetal growth retardation.<sup>4</sup> Another method of prevention is that of screening for bacterial vaginosis. This is a condition where bacteria normally present in the vagina are replaced by more virulent species during pregnancy. Treatment is usually with a normal course of antibiotics. Other infections that are normally screened for are, sexually transmitted diseases and Group Beta Strep. Consult your obstetrician for more information specific to your case.

By working with your obstetrician as a team, you can drastically reduce the odds of a preterm birth. Education about adequate nutrition, knowing the warning signs and symptoms of preterm labor, regular exams with your obstetrician and discussing with him what the plan of care will be if you do start contracting. Remember, prevention is always better than treatment after the fact.

Make your family a vital part of your pregnancy by including them in menu planning, educating them about your pregnancy, and soliciting their help around the house so you can rest. Your pregnancy with multiples can and should be an exciting and thrilling part of your life - afterall, you're baby building.