Exercise and the Woman with a High-Risk Pregnancy
by Cheryl Appel

A student calls with unexpected news. She won’t be coming to class tonight—she’s spending the rest of her pregnancy on bed rest. Stunned and concerned about her unborn child, she has begun to make arrangements for child care for her toddler, coverage at work, and help for her husband. Her seemingly uncomplicated pregnancy has suddenly become high-risk. As an active, healthy individual, she has usually felt well and enjoyed her pregnancies. The physical and psychological effects of pregnancy bed rest on her body have not yet entered her mind.

Although research indicates that the effectiveness of bed rest as a treatment for high-risk pregnancy remains uncertain, it is frequently recommended for women with preterm labor, placenta previa, placenta abruptio, dynamic cervix, preterm rupture of membranes, multifetal gestation, hypertensive disorders, placental insufficiency, fetal growth retardation or other conditions that may compromise the health of the mother or baby.

Bed rest can be more physically uncomfortable than many of the high-risk conditions themselves. Muscle spasms and aching and joint stiffness are frequent problems. Within a matter of days, muscles lose strength and tone. Since endurance is reduced, everyday activities, such as walking to another room or showering, can be exhausting rather than rejuvenating. The woman on bed rest is also at increased risk for deep vein thrombosis. Functionally she is more likely to need help caring for herself and her infant(s) during the immediate postpartum period. A woman may also have to cope with side effects of various tocolytic drugs, including headache, dizziness, edema, sweating, palpitations, nausea and vomiting, nervousness, tachycardia, tremulousness, decreased blood pressure, drowsiness, aching muscles and blurred vision.

Additionally, a high-risk pregnancy can result in psychological stress. The woman may grieve the loss of her ideal pregnancy and wrestle with the uncertain outcome of the pregnancy. The potential short and long term effects on the mother and baby and current family, financial and occupational worries all take their toll. Well-meaning friends who say, “I’d love to spend time on bed rest” can increase a woman’s sense of isolation.

Exercise can help ease some of these physical and psychological stresses. It can give the pregnant woman a measure of control in a situation that can feel very out of control. Of course, any exercise program should be performed with the consent and approval of the woman’s health care provider. ACOG (American College of Obstetrics/Gynecology) recommends against exercising for a woman with a high-risk condition because of the paucity of well-controlled research and the potentially serious consequences of minimizing individual circumstances. Therefore, some health care providers are not comfortable with exercise at all in this situation. Others believe that gentle exercise can often be performed without increasing the woman’s risk of worsening her complication. They suggest exercises themselves or refer women to exercise professionals who will determine which exercises are safe. A physical therapist specializing in women’s health can be contacted. (In the US call 703/684-2782 for a referral to a physical therapist in your area.) A nurse or exercise professional with special training in exercise and high-risk pregnancy can sometimes provide help.

The goals of an exercise program for women with high-risk pregnancies are to:

- counteract physiological effects of bed rest
- reduce joint stiffness and muscle atrophy
- stimulate circulation and venous return to prevent deep vein thrombosis
- reduce stress through relaxation techniques
- educate the woman regarding body mechanics, positioning for comfort, bed mobility and self care
- avoid exacerbating her condition by recognizing safe and unsafe exercise practices for high-risk pregnancy
- promote postpartum physical recovery
- maintain enough strength and flexibility so that the woman can care for herself and her infant after birth

Prescribed exercises generally have one common link—they are designed not to increase intraabdominal pressure. An increase in intraabdominal pressure is believed to increase the chance of further bleeding, contractions or leakage of fluid in susceptible women. Blood pressure may also increase. To avoid increasing intraabdominal pressure, prescribed exercises are usually limited to isotonic arm and leg exercises. Range of motion exercises are examples of isotonic exercises since the body part being exercised moves when the muscle tightens or shortens. Isometric exercises are performed by tightening the muscle without actually moving the body part. An example is “making a muscle” with a flexed arm. Isometric exercise can increase blood pressure and encourage breath holding so it is avoided. Abdominal and pelvic floor tightening can also compress the abdominal cavity. Sit-ups are not appropriate and Kegels are usually discouraged because women often use abdominal muscles without realizing it. Since abdominal muscles often also synergistically assist the

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legs with movement, lower extremity exercises are sometimes done with a partner's assistance when women have not yet reached the third trimester or are medically unstable. Each exercise instructor will vary the program according to the individual needs of the woman.

Anyone developing or carrying out a pregnancy exercise program should be aware of the recommendation that exercise in a supine (back lying) position is not recommended since the fetus can compress the inferior vena cava. This reduces venous return to the heart and the amount of oxygenated blood circulated to the woman and her baby. Left side lying provides optimal circulation to the mother and baby. However, since women on bed rest are often restricted to either side lying or back lying only, leg exercises are often performed in supine so that abdominal muscles are not utilized with antigravity exercise. If the woman does exercise on her back, she should do arm exercises or spend some time in left side lying after exercise to reestablish optimal blood flow.

If a woman has hypertension, either pregnancy-induced or chronic, she should exercise only in side lying. Blood pressure should be monitored and rise minimally (if at all) during exercise. A woman with diabetes, either gestational or chronic, can exercise either aerobically or nonaerobically, if she does not have activity restrictions. Generally, an aerobic program that helps with stabilizing blood sugar is best performed at a consistent time each day, coordinated with food intake and insulin administration.

Aching muscles and stiff joints are common in pregnant women, whether the pregnancy is high-risk or not. Musculoskeletal problems occur during pregnancy because of naturally occurring changes in postural alignment and muscle imbalances. The hormone relaxin, present when a woman is pregnant or breastfeeding, softens joints all over the body and makes slippage more likely.

When a woman on bed rest is uncomfortable, musculoskeletal dysfunction is always a possibility. Muscle imbalances that occur naturally in pregnant women can be exaggerated in women on bed rest. For example, many pregnant women are pulled into a rounded shoulder posture, caused by tightening of the pectoral muscles. This typical effect of pregnancy is worsened by spending long periods of time in side lying position and/or holding a book or a phone. The rounded shoulder posture can result in muscle spasms of the posterior neck and upper back musculature, causing neck or back pain and headaches. Exercise, massage, heat or cold packs and improved postural alignment can partially or fully relieve most problems. While on bed rest, a positioning program using pillows to support the fetus and keep the spine and legs in good alignment relieves some of the muscle aching. A variety of products such as body pillows or cushions placed under the uterus are available. If a woman is experiencing problems prior to birth, good postural alignment will be critical for comfort when she is caring for an infant. When sitting to feed an infant, for example, a woman often assumes a flexed posture. She is likely to experience neck or back pain if she does not consciously sit up straight or use a cushion to support her back or the baby. Giving herself stretch breaks when she is holding or nursing the infant can also prevent more serious problems.

Childbirth educators advise and counsel women on options they have during the childbearing year. Women with high-risk pregnancies depend on childbirth educators to help maintain a wellness perspective. Exercise, when performed safely, is an appealing option to many women interested in optimal health during a time that can be simultaneously frightening and exciting.

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References


