

Society for Maternal-Fetal Medicine (SMFM) with the assistance of Christina Davidson, MD, Division of Maternal Fetal Medicine, Baylor College of Medicine, Houston, Texas.

What is restriction of activity in pregnancy?

Restriction of activity, sometimes called “bed rest” or “modified bed rest,” is sometimes suggested for a number of potential pregnancy complications. These complications include, but are not limited to, preterm (before 37 weeks’ gestation) contractions, a dilated cervix from preterm labor, a short cervix, preterm premature rupture of membranes (when the bag of water ruptures before 37 weeks’ gestation and before the onset of labor), elevated blood pressure, preeclampsia (a pregnancy-specific disorder in which women develop elevated blood pressure and protein in the urine), inadequate growth of the baby, placenta previa (a placenta that covers the opening of the cervix), risk of miscarriage, and multiple gestations (for example, twin pregnancies).

The terms “bed rest” and “activity restriction” are often used interchangeably, but in reality, can differ to a great extent. Most women admitted to the hospital for complications of pregnancy are subjected to some degree of “bed rest,” with the ability to use the bathroom and bathe. For women at home, “bed rest” or “activity restriction” can have different meanings and different degrees of limitations.

How common is it for obstetric providers to recommend activity restriction or bed rest in pregnancy?

Surveys have shown that both ob/gyns and maternal-fetal medicine specialists prescribe activity restriction and bed rest, even though most of the physicians surveyed do not expect that doing so will actually improve pregnancy outcomes.

Are there risks associated with activity restriction in pregnancy?

Extended periods of activity restriction can result in

muscle and bone loss. This is true for pregnant and nonpregnant individuals and is called “deconditioning.” These changes can occur after only a few days of immobility. There is not a lot of information about the full impact of these changes in pregnant women.

Pregnancy is associated with an increased risk of developing blood clots in the legs (deep venous thrombosis, or DVT) and movement of clots to the lungs (pulmonary embolism, or PE). Some studies have described an additional increased risk of DVT and PE among pregnant women placed on bed rest compared to pregnant women who were not placed on bed rest. There appears to be an increased risk of blood clots in patients placed on activity restriction.

Some studies suggest that restriction of activity is associated with a higher rate of developing diabetes in pregnancy in women admitted to the hospital for other pregnancy-related complications. More studies are necessary in this area, but elevated levels of blood sugar commonly occur in nonpregnant patients placed on activity restriction.

Along with the potential negative maternal physical effects associated with activity restriction, there is also an increased risk of maternal anxiety and depression, adverse psychological effects on the family, loss of income, and lower birth weights.

What are the benefits associated with activity restriction in pregnancy for prevention of preterm birth?

Based on information from a few well-designed studies, bed rest did not reduce the chance of preterm delivery in women either at risk of or already experiencing preterm labor. One study found that preterm birth was more common in women already at risk of preterm birth when they were placed on any type of work or non-work-related activity restriction, both at home and in the hospital.

There are no studies to date that have been able to

identify any improvements in newborn outcomes in women at risk of preterm birth who have their activity restricted. Studies have shown higher rates of newborn complications including lower birth weight, earlier gestational age at delivery, and a higher risk of developing motion sickness and allergies later in life in women whose activity was restricted during the pregnancy.

Are there other pregnancy conditions that may potentially benefit from activity restriction?

There are no data indicating that activity restriction is of benefit for any obstetric condition. Disorders of pregnancy associated with elevated blood pressure, preterm premature rupture of membranes, multiple gestation, and inadequate growth of the baby are among the most common reasons for hospital admissions during pregnancy and often trigger a recommendation of activity restriction.

With regard to blood pressure disorders, some studies have suggested a benefit from modest restriction of activity (4-6 hours per day of rest), but there is not enough proof of benefit to recommend this practice. With regard to preterm premature rupture of membranes, there are no studies that have examined the impact, if any, that activity restriction or bed rest has on pregnancy outcomes.

Women with multiple gestations are at an increased risk of preterm birth. Hospital bed rest was once offered routinely to such patients in the middle to late pregnancy in an effort to prevent preterm birth but studies have not shown that it improves infant outcomes. In contrast, studies have demonstrated that maternal stress, side effects, and depressive symptoms may increase, and weight gain may be suboptimal in patients placed on hospital bed rest.

Inadequate growth of the baby is often attributed to problems with blood flow to the placenta, and activity restriction and/or bed rest is often prescribed in an effort to improve placental blood flow. Again, studies have failed to show a benefit to this practice.

What are the current recommendations from professional societies regarding activity restriction in pregnancy?

The American College of Obstetricians and Gynecologists states that bed rest has not been shown to be effective for the prevention of preterm birth and should not be routinely recommended. The Society of Obstetricians and Gynaecologists of Canada states that increased rest at home in the third trimester or reduction of workload and stress may be useful for women at risk of developing preeclampsia, although strict bed rest in the hospital for women already diagnosed with preeclampsia is not recommended. The National Collaborating Centre for Women's and Children's Health, in collaboration with the Royal College of Obstetricians and Gynaecologists, states that bed rest has not been shown to be of benefit and should not be offered to women with pregnancy-associated high blood pressure or preeclampsia. No other national recommendations exist about use of bed rest or activity restriction in pregnancy.

Conclusion

The practice of activity restriction or bed rest has very little evidence to support a benefit for the mother or infant, but has well-described negative effects on the mother, newborn, and family. In summary, the Society for Maternal-Fetal Medicine recommends against the routine use of activity restriction or bed rest during pregnancy for any indication.

FROM THE
PAGES OF

Contemporary
OB/GYN
Expert Advice for Today's Ob/Gyn
ContemporaryOBGYN.net