AMERICAN COLLEGE OF RHEUMATOLOGY
EDUCATION • TREATMENT • RESEARCH

Specialists in Arthritis Care & Research

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Pregnancy and Rheumatic Disease

For years, women with potentially serious systemic autoimmune diseases have been advised against getting pregnant. We now know that, with careful medical and obstetric management, most of these women can have successful pregnancies. Successful, however, does not mean uneventful. Doctors and patients must be ready to deal with possible complications for both mother and child. Further, women should not consider getting pregnant until their rheumatic disease is under control.

Fast facts

- Rheumatic diseases often affect women during their childbearing years, when pregnancy is an expected event.
- With careful medical and obstetric management, many women with rheumatic disease can have successful pregnancies if they and their physicians are prepared to handle the possible complications.
- Diseases with the potential to affect the kidneys, especially lupus and antiphospholipid syndrome (APS), are more likely to affect pregnancy outcome than others.

What are the effects of pregnancy on rheumatic disease

The effects of pregnancy on rheumatic diseases vary by condition. Rheumatoid arthritis (RA), systemic lupus erythematosus (SLE) and APS typically are modified by pregnancy. For instance, symptoms of RA often improve in pregnant patients, frequently resulting in a reduced need for medication, but may flare up after delivery.

The relationship between lupus activity and pregnancy is more debated. In general, there is a tendency for mild to moderate flares, especially during the second half of pregnancy and the post-partum period. However, most of these flares do not endanger the mother's or the baby's life, nor do they substantially alter the long term prognosis of lupus. A prolonged period of clinical remission before conception decreases the chance of a flare during pregnancy.

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Antiphospholipid syndrome (APS), increases the risk of clots in veins and arteries as well as obstetric complications such as miscarriage, prematurity or hypertension (high blood pressure) during pregnancy. When combined with kidney disease, the possibility exists for pre-eclampsia. Pre-eclampsia and eclampsia are conditions that may damage the mother's kidneys and liver and also increase the risk of prematurity or death of the fetus. Thus, for women with APS, pregnancy—especially the time around delivery—is a particularly dangerous period and dictates special care.

Pulmonary hypertension, which complicates some rheumatic diseases (SLE, APS, Sjögren's and, particularly, scleroderma), also warrants mention. Because this severe disease frequently is worsened during pregnancy—especially in the post-partum period—pregnancy isconsidered inadvisable.

Other diseases such as scleroderma (in the absence of pulmonary hypertension or lung fibrosis), polymyositis, dermatomyositis and vasculitis do not seem to be particularly influenced by pregnancy. However, it is still recommended that you consider pregnancy only when these diseases are under control and with the care of your rheumatologist.

During pregnancy, the effects of inflammation when rheumatic disease becomes active, and medications used to treat it, can cause problems.

What are the effects of rheumatic disease on pregnancy?

During pregnancy, the effects of inflammation when rheumatic disease becomes active as well as the then necessary anti-inflammatory and/or immunosuppressive drugs can cause problems. Those diseases with the potential to affect the kidney and, especially, APS are more likely to affect pregnancy outcome than others.

Patients who have or have had kidney disease, due to vasculitis, scleroderma or, more frequently, lupus, in general are at increased risk of severe hypertension and pre-eclampsia. If renal function and blood pressure prior to pregnancy are normal and the disease is inactive at the time of conception for a period of at least six months, the outcome is likely to be good. Conversely, women with severely impaired renal

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function, uncontrolled hypertension and/or active kidney involvement usually are advised against getting pregnant.

APS probably has the greatest impact on pregnancy. It is related to both early and late miscarriage, prematurity and low-weight babies, as well as thrombosis and pre-eclampsia. Thus, pregnancy in women with APS should always be considered as high risk, and be the subject of close medical and obstetric monitoring. Therapy is based on low-dose aspirin and heparin.

Finally, a rare condition named congenital heart block can occur in 2% of children born to mothers with anti-Ro antibodies (most frequently seen in patients with LUPUS and Sjögren's syndrome). Anti-Ro antibodies can gain access to the fetal circulation and produce disturbances in the baby's heart, which result in a slow heart rate. These babies may need a permanent pacemaker. Thus, women with anti-Ro antibodies also should be closely monitored including fetal heart scans during pregnancy.

Use of rheumatic drugs during pregnancy and lactation

Information regarding the safety of many drugs in pregnant women is incomplete and difficult to obtain. Recently, however, a group of obstetricians, rheumatologists and internists with experience in the management of pregnancy in women with rheumatic diseases reached consensus on the use of antirheumatic drugs during pregnancy and lactation. A summary of these conclusions is shown in Table 1.

Table 1: Acceptable medications during pregnancy and lactation

	Pregnancy	Lactation
NSAID	Yes (avoid after 32 weeks)	Yes
Sulfasalazine	Yes	Yes
Antimalarials	Yes	Yes
Corticosteroids	Yes	Yes
Cyclosporin	Yes	probably yes
Azathioprine	Yes	probably yes
Mycophenolate	No	No
Methotrexate	No	No
Cyclophosphamide	No	No
Anti-tumor necrosis factor (TNF)	No	No
Rituximab	No	No

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Table 1: Acceptable medications during pregnancy and lactation		
	Pregnancy	**Lactation**
Warfarin	No (with caution, only after first trimester)	Yes
Heparin	Yes	Yes

Ideally, women should take no medication during pregnancy and nursing. However, the consequences of not being on medicine and risking flare up of the rheumatic illness are important considerations and this should be discussed with both the rheumatologist and obstetrician.

Several drugs (particularly methotrexate and cyclophosphamide) have effects on sperm cells. It is recommended that these medications be stopped for 3 months before a man fathers a child.

Management of pregnancy in women with rheumatic diseases

All women with rheumatic disease should undergo counselling before conception for their specific risk. During that discussion with your doctor, you can review specific concerns of pregnancy and possible of pregnancy complications (Table 2).

Table 2: What makes a pregnancy “high risk”?

- Previous pregnancy with complications
- Underlying kidney disease
- Underlying heart disease
- Underlying lung disease (including pulmonary hypertension)
- Flare of rheumatic illness
- A history of previous blood clot
- the presence of SSA and SSB antibodies
- IVF (in vitro fertilization)
- pregnancy with twins, triplets, etc
- Maternal age over 40 years

Each woman’s rheumatic disease should be well under control for a period of at least 3-6 months before attempting pregnancy. As long as your medicines are not harmful to the fetus, you should remain on your medicines to prevent risk of a disease flare. Prednisone should be used at doses below 10 mg/d whenever possible, due to the risk of associated complications such as high blood pressure, diabetes, excessive weight gain, risk of infections and premature rupture of membranes. Hydroxychloroquine, is an extremely safe drug for both the mother and the fetus, and should not be stopped before, during or

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after pregnancy. High blood pressure should be managed using medicines that are safe during pregnancyCCaptopril and enalapril are safe drugs during breast feeding.

Women with APS must receive low-dose aspirin, **with or without** heparin depending on the previous obstetric and thrombotic history. In some women with antiphospholipid antibody syndrome or previous history of blood clots, prevention of blood clots using heparin following delivery is recommended for 4-6 weeks. Those with previous blood clot should re-start warfarin as soon as possible after delivery, since this drug is safe during lactation (Table 1).

Women with a low-risk profile should include in their usual treatment plan regular three-monthly visits to the rheumatologist, as a precaution. However, those with a high risk profile should be managed by a combined medical and obstetric team with experience in high risk pregnancies. Visits should be more frequent as pregnancy advances (weekly during the late third trimester), and include monitoring of fetal and maternal well-being. Blood-pressure measurements and urine dipstick also must be frequently performed to assure the early detection and treatment of pre-eclampsia.

Points to remember

- All women should undergo counseling before conception for their specific risk, depending on their rheumatic condition and the medications they are taking.
- Each woman's rheumatic disease should be well under control for a period of at least 3-6 months before attempting pregnancy. As long as your medicines are not harmful to the fetus, you should remain on your medicines to prevent risk of a disease flare. In particular, hydroxychloroquine is a very safe drug during pregnancy and lactation.
- Women with a low-risk profile can be managed with usual visits to the rheumatologist as a precaution. Those with a high-risk profile should be managed by both the rheumatologist and obstetric team with experience in high-risk pregnancies

All women should undergo counseling before conception for their specific risk profile and subsequent design of a management plan.

To find a rheumatologist

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For more information

The American College of Rheumatology has compiled this list to give you a starting point for your own additional research. The ACR does not endorse or maintain these Web sites, and is not responsible for any information or claims provided on them. It is always best to talk with your rheumatologist for more information and before making any decisions about your care.

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