

## Contraception in Women with Autoimmune and Systemic Inflammatory Disorders: Practical Tips for Clinicians

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Autoimmune disorders are common among women of reproductive age, with conditions like rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE) affecting their peak reproductive years (1). Contraception plays a pivotal role in reproductive health due to potential pregnancy risks associated with disease activity, medication use, and disease-related complications (2). This article discusses the considerations for selecting appropriate contraceptive methods for patients with autoimmune disorders.

The patient's medical condition, tobacco usage, family history of hormone-dependent malignancies, laboratory findings such as antiphospholipid antibodies, and stage of reproductive life should all be taken into consideration when deciding which contraceptive technique to employ (3). In counseling about contraceptive regulations, there are frequently instances where practices and recommendations diverge from current guidelines (4).

In this article, the safety of using various

methods of contraception in people with rheumatic diseases is summarized from reliable sources, including the American college of rheumatology (ACR)/European league against rheumatism (EULAR), and associations of rheumatology specialists in various countries, and the clinical advice in this category is available for clinicians and health service providers.

Contraception in systemic lupus erythematosus (SLE) and antiphospholipid syndrome (APS): Historically, concerns existed about using hormonal contraceptives in SLE due to fears of worsening disease activity and thrombosis (5). However, emerging evidence suggests that careful planning and individualized contraceptive counseling can mitigate these risks (6). Women with SLE require tailored counseling considering disease activity, thrombotic risk, and antiphospholipid antibody status (7). Contraceptive options such as oral contraceptives, subcutaneous implants, and intrauterine devices (IUDs) are discussed based on the disease activity and thrombotic risk (8).

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The most up-to-date data currently does not demonstrate a risk of increasing disease activity in women with inactive or stable SLE who use hormonal contraception (5).

Contraception involving combined hormones (such as the oral pill, vaginal ring, or transdermal patch) should be avoided in women who have positive antiphospholipid antibodies (aPL) (with or without definite APS) (9).

These women can utilize progestin-only methods (pills, subcutaneous depot injections), although the risk of thrombosis should be considered (9). Long-term use of progesterone injections can raise the risk of osteoporosis. Osteoporosis, fractures, or avascular necrosis of bone are more common in women with SLE or RA, either as a result of the disease or from long-term corticosteroid consumption (10). Use of these methods raises concerns about how hormonal contraception, especially injectable depot medroxyprogesterone acetate (DMPA) contraception, affects bone (5).

IUDs are typically regarded in SLE patients as an effective and low-risk contraceptive alternative, despite the possibility of some risk of associated sexually transmitted (STIs) or pelvic inflammatory disorders (1). Treatment with hormonal contraceptives, such as the levonorgestrel-releasing IUD (LNG-IUD), may be beneficial for women with SLE who have excessive menstrual bleeding or hemorrhagic ovarian cysts due to anticoagulant use or a subsequent onset of thrombocytopenia (11).

Notably, all SLE and/or APS patients can safely use emergency contraception, including IUDs and pills (11).

Contraception in rheumatoid arthritis (RA): RA symptoms often improve during pregnancy, leading to investigations into the impact of contraceptive methods on disease activity (12). While most contraceptive methods are considered safe for women with RA, considerations about bone health, infection risk, and medication interactions are highlighted (13).

All forms of contraception seem to be safe for the majority of RA patients, with the notable exception of progestin-only injectable for those who are at most at risk for osteoporosis (5).

The possibility of infection with IUD insertion, particularly if a woman is taking

immunosuppressive medications, is one of the worries regarding the use of contraception in RA patients. In women with RA, using an IUD has not been associated with a higher risk of pelvic infection (12-13). However, in women with RA who are currently IUD-users the increased Anti-citrullinated protein antibodies (ACPAs) positivity as well as higher ACPAs titers has been suggested (14).

In women with RA who are receiving long-term corticosteroid treatment and who have a history of, or risk factors for, non-traumatic fractures, the risks of using progestin-only injectables might be greater than the advantages, because RA itself can lead to osteoporosis and non-traumatic fractures, in addition to the frequent use of corticosteroids in this condition (7). It should be noted that all RA patients can safely use emergency contraception including IUDs and oral contraceptives (15). Finally, self-insertion methods of contraception like vaginal ring may be challenging for women with joint abnormalities (7).

Thrombocytopenia and contraceptive use: Thrombocytopenia is prevalent among patients with autoimmune disorders, impacting contraceptive choices (16). The association between aPL-positive status and thrombocytopenia is explored, along with potential causes of platelet count reduction (17). The article provides insights into evaluating thrombocytopenia in the context of contraceptive initiation, highlighting considerations for specific methods.

Initiation and follow-up of contraception: The CDC's Selected Practice Recommendations for Contraceptive Use (SPR) provide valuable guidance for initiating and monitoring contraception in women with autoimmune disorders. Blood pressure assessment, pelvic examinations, sexually transmitted infections (STIs) screenings, past and current medical history, and disease-specific evaluations, especially assessment of aPLs status, are emphasized (18). Follow-up visits and coordination with primary rheumatologic care are recommended to ensure effective contraceptive management (19).

In conclusion, selecting appropriate contraceptive methods for women with autoimmune and systemic inflammatory

disorders requires a comprehensive assessment of disease activity, thrombotic risks, medication interactions, and individual needs of patients. Collaborative efforts between rheumatologists, gynecologists, and reproductive health specialists are crucial for providing safe and effective contraceptive care.

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### Authors' contribution

MS and EM contributed substantially in the conception and design of the study. EM and SA conducted the search process. ZM, SM and EM carried out the data collection. EM and SA drafted the first version of the manuscript. MS reviewed the manuscript critically for important intellectual content. All authors reviewed the article and approved its content.

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