About DMARDs
In people with autoimmune or inflammatory diseases, the immune system doesn’t work properly. It becomes overactive even when there is no infection to fight, or it mistakenly attacks healthy cells and tissues. The result is inflammation that can damage joints and affect organs and body systems.

Disease-modifying antirheumatic drugs (DMARDs) work to slow or stop the inflammation by suppressing the overactive immune system. This helps to decrease pain and stiffness, reduce or prevent joint damage and preserve the health of vital organs.

These powerful medicines are used to treat many types of arthritis and related conditions, including rheumatoid arthritis (RA), juvenile idiopathic arthritis, psoriatic arthritis, ankylosing spondylitis and systemic lupus erythematosus (lupus), among others. DMARDs are only available by prescription.

Types of DMARDs
There are three subsets of DMARDs:
• Conventional (sometimes called traditional) DMARDs have a broad immune suppressing effect and are taken orally or by injection.
• Biologics are made from living cells. They are taken by self-injection or infusion and target specific proteins, cells and pathways of the immune system.
• Targeted DMARDs are the newest type of DMARDs. They are taken orally and target specific immune system molecules.

Side Effects of DMARDs
Each DMARD has its own set of risks and potential
side effects. DMARDs are not suitable for people with certain medical conditions, and some may be used only if extra care is taken. Although all DMARDs may cause side effects, not everyone experiences them or to the same degree. Some negative effects get better with time. These side effects may include:

- Stomach upset, diarrhea and nausea.
- Headache.
- Injection site reaction.
- Hair loss.
- Lack of energy.
- Rash.
- Weight loss.

**Risks of DMARDs**
These medications suppress the immune system and can cause an increased risk of serious infections. They also may cause or worsen problems with the heart, liver, kidneys, gastrointestinal (GI) system, skin or eyes. You may bleed or bruise easily while taking these drugs. Some of these drugs are also associated with a slight (rare) increase in certain cancers. You will need to discuss pregnancy and breastfeeding with your doctor before starting DMARD therapy.

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<td><strong>How long does it take for DMARDs to take effect?</strong> DMARDs won’t stop symptoms immediately. Some may take up to three months to take full effect. That’s why your rheumatologist may also prescribe other anti-inflammatory medications, such as corticosteroids and NSAIDs, at the same time.</td>
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<td><strong>Why are so many DMARDs expensive?</strong> Due to high manufacturing costs, some DMARDs, especially biologics and newer drugs, come with a high out-of-pocket price tag. The good news is these drugs are often covered by insurance. Also, drugs called biosimilars, which are less costly versions of biologics, are becoming more available. Financial assistance is available through nonprofit organizations, drug makers and government programs. Visit arthritis.org/patientassistance for more details.</td>
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<td>Sometimes a single medication is all that’s needed to control inflammatory arthritis. But more commonly, two or more medications may be used (combination therapy) to relieve symptoms and prevent long-term joint damage and disability. Methotrexate is the most commonly used DMARD and most likely to be combined with other DMARDs, including biologics. Research shows that in many cases the effectiveness of biologics is improved by adding a DMARD, most commonly methotrexate. Often DMARDs are prescribed with other medications, such as corticosteroids or nonsteroidal anti-inflammatory drugs (NSAIDs) for quick relief of inflammation and pain. This is particularly important during the time it takes DMARDs to take effect, which can be several weeks or months.</td>
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