

**TABLE 2: SUMMARY OF MEDICATIONS USED IN JIA.**

<b>NSAID</b>	<b>Most Common Brand Name</b>	<b>Administration and Frequency</b>	<b>Formulation</b>	<b>Side Effects</b>
<b>NAPROXEN</b>	Naprosyn	By mouth, twice daily	Liquid or pill	<p><b>Common:</b></p> <ul style="list-style-type: none"> <li>• Stomach upset (pain, nausea)</li> </ul> <p><b>Less common:</b></p>
<b>IBUPROFEN</b>	Advil Motrin	By mouth, 3-4 times daily	Liquid or pill	<ul style="list-style-type: none"> <li>• Vomiting, diarrhea or constipation</li> <li>• Bloody or tarry black stools</li> <li>• Severe abdominal pain from stomach ulcers</li> <li>• Dizziness, drowsiness, headaches</li> </ul>
<b>INDOMETHACIN</b>	Indocid	By mouth, 3 times daily	Liquid or pill	<ul style="list-style-type: none"> <li>• Rash, hives or itching</li> <li>• Fragility and scarring of the skin</li> <li>• Nosebleeds, bleeding gums, easy bruising</li> <li>• Anemia, mild abnormalities in liver or kidney function</li> </ul>
<b>DICLOFENAC SODIUM</b>	Voltaren	By mouth, 1-2 times daily	Pill	<p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Stomach upset can frequently be avoided by taking the medication with food</li> <li>• Stomach protective drugs may be prescribed to children to help reduce stomach upset</li> <li>• Laboratory blood and urine tests may be done by your doctor at clinic visits to ensure that there are no side effects from NSAIDs</li> </ul>
<b>PIROXICAM</b>	Feldene	By mouth, once daily	Pill	
<b>CELECOXIB</b>	Celebrex	By mouth, 2 times a day	Pill	<p>If you child requires additional medication for pain or fever relief, acetaminophen can be given safely as taking additional ibuprofen, or ASA with NSAIDs can result in more side effects.</p> <ul style="list-style-type: none"> <li>• If you child requires additional medication for pain or fever relief, acetaminophen (Tylenol) can be given safely as taking additional ibuprofen, or ASA with NSAIDs can result in more side effects.</li> </ul>

<b>STEROID</b>	<b>Most Common Brand Name</b>	<b>Administration and Frequency</b>	<b>Formulation</b>	<b>Side Effects</b>
<b>PREDNISONE</b>	Prednisone	By mouth, 1-3 times daily	Liquid or pill	<p><b>Early Side Effects:</b></p> <ul style="list-style-type: none"> <li>• Increased appetite</li> <li>• Stomach ache or burning, nausea</li> <li>• Trouble sleeping, mood changes</li> </ul> <p><b>Late Side Effects</b></p> <ul style="list-style-type: none"> <li>• Weight gain, puffy face, acne, increased body hair and stretch marks</li> <li>• Stomach ache or burning, nausea</li> <li>• Trouble sleeping, mood changes</li> <li>• Changes in menstrual pattern</li> <li>• May reduce the activity of the immune system and you may see more frequent infections</li> <li>• Fluid retention/swollen feet and/or ankles</li> </ul>
<b>PREDNISOLONE</b>	Pediapred	By mouth, 1-3 times daily	Liquid	<ul style="list-style-type: none"> <li>• High blood pressure</li> <li>• Cataract formation</li> <li>• High blood sugar (increased thirst frequent urination)</li> <li>• Reduced blood flow to bone causing bone softening (avascular necrosis)</li> <li>• Osteoporosis (fractures, back or rib pain)</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Stomach upset can frequently be avoided by taking the medication with food</li> <li>• Stomach protective drugs may be prescribed to children</li> <li>• Adequate calcium and vitamin D (by diet or vitamin supplements) should be consumed while on steroids</li> <li>• If child develops a fever, should be assessed by doctor as soon as possible</li> </ul>
<b>METHYL-PREDNISOLONE</b>	Solu-Medrol	Intravenously (IV)	IV Treatment	<ul style="list-style-type: none"> <li>• If child has not had chicken pox and is exposed to known cases of chicken-pox, should contact doctor as soon as possible for further management</li> <li>• Steroids should never be stopped suddenly and should be tapered or discontinued according to the doctor's instructions</li> <li>• Children taking steroids for a prolonged period (more than 3 months) should wear a Medic-Alert bracelet or necklace (<a href="http://www.medicalert.ca">www.medicalert.ca</a> or phone 1-800-668-1507)</li> <li>• Child should not receive live vaccines (MMR, varicella) while taking steroids</li> </ul>

<b>STEROID</b>	<b>Most Common Brand Name</b>	<b>Administration and Frequency</b>	<b>Formulation</b>	<b>Side Effects</b>
<b>TRIAMCINOLONE HEXACETONIDE</b>	Aristospan	Joint injection, 1-3 times per year as needed	Injection	<p><b>Possible Side Effects</b></p> <ul style="list-style-type: none"> <li>• Risk of infection in joint (unusual if proper cleaning of skin and sterile techniques utilized)</li> <li>• Thinning of skin over joint injection site</li> <li>• Steroids injected into joints can sometimes be seen as deposits on X-rays (does not cause symptoms of pain or affect function of joint)</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Child should be seen immediately by doctor, if within 24-48 hours following a joint injection, develops either fever, redness or increasing pain over the joint injection site</li> </ul>
<b>TRIAMCINOLONE ACETONIDE</b>	Kenalog	Joint injection, 1-3 times per year as needed	Injection	
<b>METHYL- PREDNISOLONE</b>	Depo-Medrol	Joint injection, 1-3 times per year as needed	Injection	

DMARDS	Most Common Brand Name	Administration and Frequency	Formulation	Side Effects
<b>METHOTREXATE</b>	Methotrexate	By mouth or injection under skin, Once weekly	Pill, liquid, injection	<p><b>Common Side Effects:</b></p> <ul style="list-style-type: none"> <li>• Feel unwell for 24-48 hours</li> </ul> <p><b>Less Common Side Effects:</b></p> <ul style="list-style-type: none"> <li>• Nausea, vomiting, stomach ache</li> <li>• Mouth sores</li> <li>• Low white blood cell counts</li> <li>• Abnormalities in liver function</li> <li>• Breathing problems</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Prior to starting methotrexate, your child will have to undergo blood tests to ensure that any signs of infection (hepatitis) or dysfunction of the liver have been addressed</li> <li>• Children should be vaccinated or already had chicken pox before starting treatment with methotrexate</li> <li>• Vitamin supplementation with folic acid or folinic acid should be taken daily to alleviate side effects of methotrexate</li> <li>• Regular laboratory blood tests must be done to ensure that there are no side effects from methotrexate</li> <li>• If child develops a fever, he or she should be assessed by doctor as soon as possible</li> <li>• If child has not had chicken pox and is exposed to known cases of chicken-pox, should contact doctor as soon as possible for further management</li> <li>• Avoid use of antibiotics that contain sulfamethoxazole/trimethoprim as they may reduce blood counts along with methotrexate</li> <li>• Live vaccines (MMR, varicella) should not be given while child receiving methotrexate</li> <li>• Teenagers taking methotrexate should avoid using alcohol and if necessary practice birth control.</li> </ul>
<b>SULFASALAZINE</b>	Salazopyrin	By mouth, Twice daily	Liquid or pill	<p><b>Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Stomach upset, nausea, vomiting</li> <li>• Headache, dizziness</li> <li>• Skin rash, sun sensitivity</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Low red blood cell and white blood cell counts</li> <li>• Abnormalities in liver function</li> </ul>

				<p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Avoid this medication if your child has an allergy to sulfa (as it is contained in this medication)</li> <li>• Laboratory blood tests will be done by your doctor at clinic visits to ensure that there are no side effects from sulfasalazine</li> </ul>
<b>HYDROXY-CHLOROQUINE</b>	Plaquenil	By mouth, daily	Pill	<p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Stomach upset, nausea</li> <li>• Rash, sun sensitivity</li> <li>• Hair bleaching</li> <li>• Low blood counts</li> <li>• Blind spot on back of the eye or altered coloured vision (rare)</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Regular eye checks by an eye doctor every 6-12 months. If any problems detected, the drug will be stopped well before any changes to your child's vision.</li> <li>• Laboratory blood tests may be done by your doctor at clinic visits to ensure that there are no side effects from hydroxychloroquine</li> </ul>
<b>LEFLUNOMIDE</b>	Arava	By mouth, daily	Pill	<p><b>Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Nausea and diarrhea</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Skin rash</li> <li>• Thinning hair</li> <li>• High blood pressure</li> <li>• Abnormalities in liver function</li> <li>• Low platelet count</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Children should be vaccinated or already had chicken pox before starting treatment with leflunomide</li> <li>• Regular laboratory blood tests must be done to ensure that there are no side effects from leflunomide</li> <li>• If child develops a fever, should be assessed by doctor as soon as possible</li> <li>• If child has not had chicken pox and is exposed to known cases of chicken-pox, should contact doctor as soon as possible for further management</li> <li>• Live vaccines (MMR, varicella) should not be given while child receiving leflunomide</li> </ul>

<b>BIOLOGIC AGENT</b>	<b>Brand Name</b>	<b>Administration and Frequency</b>	<b>Formulation</b>	<b>Side Effects</b>
<p><b>ETANERCEPT</b></p> <p>How it works: Blocks TNF</p> <p>Approved by Health Canada for use in JIA</p>	Enbrel	Injection under skin, once or twice weekly	Injection	<p><b>Most Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Injection site reactions (redness, itchiness, pain,swelling)</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Rash</li> <li>• Flu-like symptoms</li> <li>• Low blood counts</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> <li>• Production of autoantibodies</li> </ul>
<p><b>INFLIXIMAB</b></p> <p>How it works: Blocks TNF</p>	Remicade	Intravenously, usually every 1-2 months in a clinic or hospital	IV Treatment	<p><b>Most Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Infusion reactions during or shortly after an infusion (hives, breathing difficulties, chest pain, stomach pain, nausea, diarrhea, blood pressure problems). Usually prevented with Tylenol and Benadryl given prior to infusion.</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Flu-like symptoms</li> <li>• Low blood counts</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> <li>• Production of autoantibodies</li> </ul>
<p><b>ADALIMUMAB</b></p> <p>How it works: Blocks TNF</p> <p>Approved by Health Canada for use in JIA</p>	Humira	Injection under skin, Every 2 weeks	Injection	<p><b>Most Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Injection site reactions (redness, itchiness, pain, swelling)</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Rash</li> <li>• Flu-like symptoms</li> <li>• Low blood counts</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> <li>• Production of autoantibodies</li> </ul>

<p><b>ANAKINRA</b></p> <p>How it works: Blocks IL-1</p> <p>Approved by Health Canada for use in JIA</p>	<p>Kineret</p>	<p>Injection under skin, Daily</p>	<p>Injection</p>	<p><b>Most Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Injection site reactions (redness, itchiness, swelling or stinging)</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Low white blood cell counts</li> <li>• Headaches</li> <li>• Flu-like symptoms</li> <li>• Stomach Upset</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> </ul>
<p><b>ABATACEPT</b></p> <p>How it works: Blocks CTLA-4 Receptor (interferes with communication between immune cells)</p> <p>Approved by Health Canada (HC) for use in JIA</p>	<p>Orencia</p>	<p>Intravenously, usually every month in hospital</p>	<p>IV Treatment</p>	<p><b>Most common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Infusion reactions during or shortly after an infusion (hives, breathing difficulties, chest pain, stomach pain, nausea, diarrhea, blood pressure problems). Usually prevented with Tylenol and Benadryl given prior to infusion.</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Headache</li> <li>• Flu-like symptoms</li> <li>• Nausea</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> </ul>
<p><b>RITUXIMAB</b></p> <p>How it works: Blocks and destroys premature and mature B-cells</p>	<p>Rituxan</p>	<p>Intravenously, 2 weeks apart in hospital</p>	<p>IV Treatment</p>	<p><b>Most Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Infusion reactions during or shortly after an infusion (hives, breathing difficulties, chest pain, stomach pain, nausea, diarrhea, blood pressure problems). Usually prevented with Tylenol and Benadryl given prior to infusion.</li> </ul> <p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Abdominal pain, nausea, vomiting, diarrhea</li> <li>• Headaches and dizziness</li> <li>• Aching in the joints and muscles</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> <li>• Low blood cell counts</li> </ul>
<p><b>TOCILIZUMAB</b></p> <p>How it works: Blocks soluble IL-6 receptor</p>	<p>Actemra</p>	<p>Intravenously, Every 2 weeks in hospital</p>	<p>IV Treatment</p>	<p><b>Common Side Effects</b></p> <ul style="list-style-type: none"> <li>• Infusion reactions during or shortly after an infusion (hives, breathing difficulties, chest pain, stomach pain, nausea, diarrhea, blood pressure problems). Usually prevented with Tylenol and Benadryl given prior to infusion.</li> <li>• Flu-like symptoms</li> <li>• Headache</li> </ul>

				<p><b>Rare Side Effects</b></p> <ul style="list-style-type: none"> <li>• Increase in liver function tests</li> <li>• High blood pressure</li> <li>• Increased risk of infection</li> <li>• Increased risk of malignancies</li> </ul>
--	--	--	--	--

<p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Children should be vaccinated or already had chicken pox before starting treatment with biologic</li> <li>• Prior to starting biologic, your child will have to undergo a skin test and chest X-ray to ensure that any signs of tuberculosis infection (TB) have been addressed</li> <li>• Laboratory blood tests may be done by your doctor at clinic visits to ensure that there are no side effects from the biologics</li> <li>• Should child develop fever or signs of infection, DO NOT give the next dose of biologic, and inform your child's doctor for further instructions</li> <li>• Should child be exposed to or develop chicken pox, DO NOT give the next dose of biologic, and inform your child's doctor for further instructions</li> <li>• Live vaccines (MMR, varicella) should not be given while you/your child is receiving a biologic. Please discuss all vaccinations with your family doctor.</li> <li>• Teenagers taking biologics if necessary should practice birth control.</li> </ul>				
--	--	--	--	--