

# Inflammatory Arthritis Education Series

## Medications to Treat Inflammatory Arthritis

This program has been reviewed and endorsed by



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**CAPA** Canadian Arthritis  
Patient Alliance  
experience · perspective · voice



# Objectives

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By the end of the session, you will:

- Understand the goals of treatment in inflammatory arthritis
- Understand the role of medications in treating inflammatory arthritis
  - Identify which medications control the inflammatory process and which medications are used to help manage pain
- Understand the roles of other parts of the treatment plan

# Goals of arthritis management

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- Educate you and your family
- Prevent/stop damage to joints and other tissues
- Control inflammation
- Relieve pain
- Improve fatigue (feeling of extreme tiredness)
- Improve mobility and level of fitness
- Protect your joints
- Improve or correct deformities
- Provide emotional and social support

# Your role in treatment

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- Taking an active role in your treatment will help you understand your care and get the best results from your treatment:
  - Successful management of arthritis requires a team approach to care
  - You are an active part of that team
- The more you understand about your treatment, the more likely you are to benefit

# When considering medications

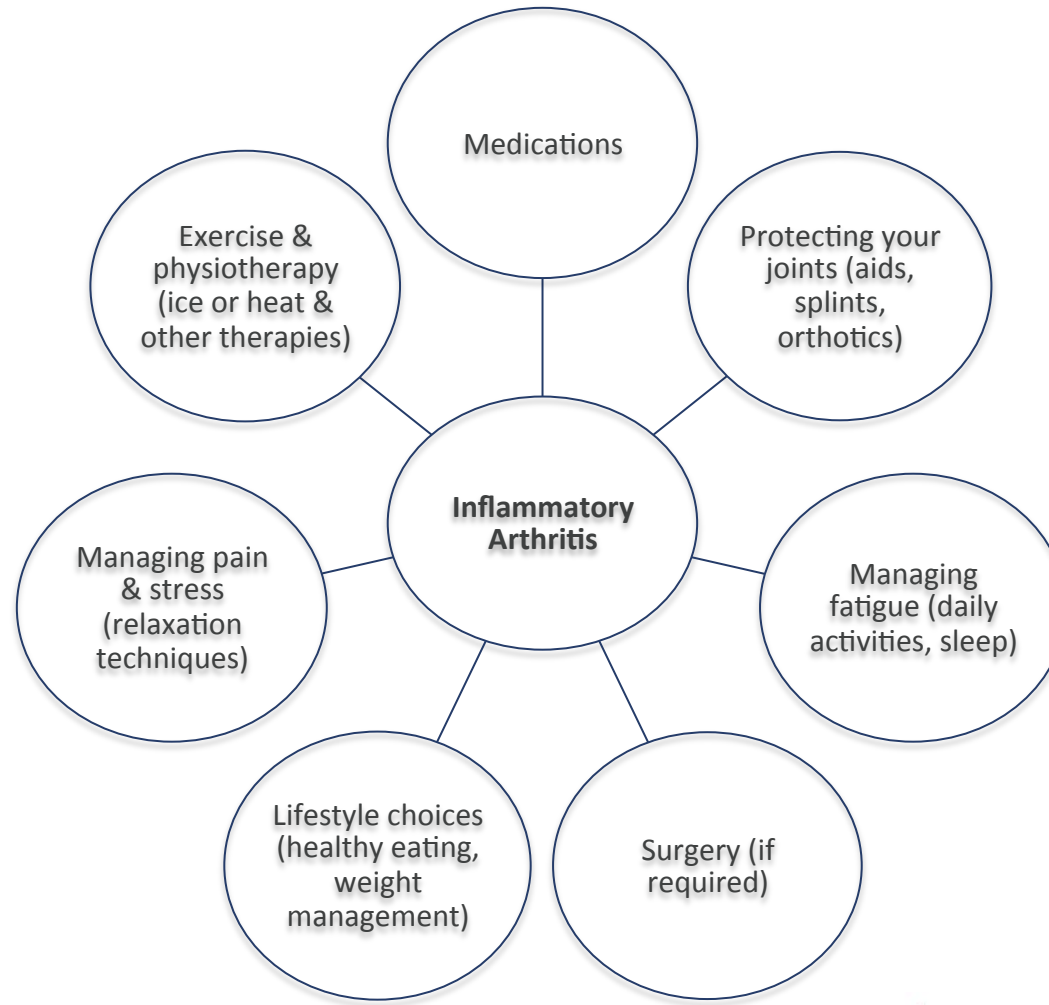
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- Understand how to take your medications
- Take medications exactly as prescribed
- Do not stop medications without first consulting your doctor or pharmacist as doing so may be dangerous
- Full benefits of some medications, such as increased movement and energy and decreased swelling and pain, may take 6 to 12 weeks to occur
- Don't hesitate to ask questions



# Treatment options for inflammatory arthritis

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# Understanding medications

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- Correct medications can only be prescribed following a diagnosis from your primary care provider
- Specific doses are prescribed to meet your needs
- Tell your doctor about any allergies or other medications and/or supplements you are taking for other chronic conditions
  - Arthritis medications can interact with other drugs
- Tell your doctor if you are pregnant, trying to become pregnant, or breastfeeding
  - Medications may have to be changed or stopped for a short while





# Questions to ask before starting a medication

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- Why should I take this?
- How does it work?
- What are the benefits?
- How long does it take for benefits to occur?
- How should I take it?
- What are the possible side effects or risks?
- Are there any possible interactions with current medications, supplements or health conditions?
- Who should I contact if I develop a side effect or problem?

# Medication considerations

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Medication treatment is divided into two categories:

## 1. Medication for symptom control:

- Painkillers, anti-inflammatories
- Begin to work in days to weeks
- Make you feel better, but do not stop arthritis from progressing

## 2. Medication for disease control:

- Prevent/stop joint damage and keep joints healthy
- May take weeks to months to work at controlling inflammation (swelling)



# Medications to treat inflammatory arthritis

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- Medications to control pain:
  - NSAIDs (non-steroidal anti-inflammatory drugs)
  - Acetaminophen
  - Narcotics
- Medications to control inflammation:
  - NSAIDs
  - Corticosteroids - cortisone
  - DMARDs (disease modifying anti-rheumatic drugs)
  - Biologics

# Non-steroidal anti-inflammatory drugs (NSAIDs)

# NSAIDs

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- Over-the-counter (OTC) or by prescription
- Useful to relieve symptoms of pain and swelling
- Do not stop arthritis progression or joint damage
- Must be taken on a regular basis at a prescribed dose to reduce inflammation
- Take only one type of NSAID at a time (including OTC NSAIDs)
- Work with your doctor to determine which NSAID is best for you
- Take with food to reduce stomach upset

# NSAIDs

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- Non-Prescription NSAIDs:
  - Acetylsalicylic acid (ASA, Aspirin, Entrophen)
  - Ibuprofen (Motrin, Advil)
  - Naproxen (Aleve)
- Prescription NSAIDs (common examples):
  - Flurbiprofen (Froben)
  - Naproxen (Naprosyn)
  - Indomethacin (Indocid)
  - Diclofenac (Voltaren)
  - Diclofenac and misoprostol (Arthrotec)

# NSAIDs: Cox-2 inhibitors

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- Block Cox-2, an enzyme that promotes joint inflammation, but not Cox-1, an enzyme that helps protect the mucous lining of the stomach
- Safer on the stomach than traditional NSAIDs
- Cox-2 inhibitors may be prescribed if traditional NSAIDs are not tolerated
  - For example, celecoxib (Celebrex) at 100 to 200 mg twice a day
- Taking ASA (Aspirin) at the same time will decrease the stomach protection effect of the Cox-2 inhibitor

# NSAIDs: Take as directed

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- Number of tablets and number of times they are taken per day varies by type of medication
- Take NSAIDs exactly as prescribed
- More is not better, and less is not better
  - Adjusting your own dose will not allow your doctor to assess how the medication is working
- Side effects: stomach irritation, nausea, constipation, increased blood pressure
- Monitoring required: blood tests, blood pressure





# NSAIDs: Possible side effects

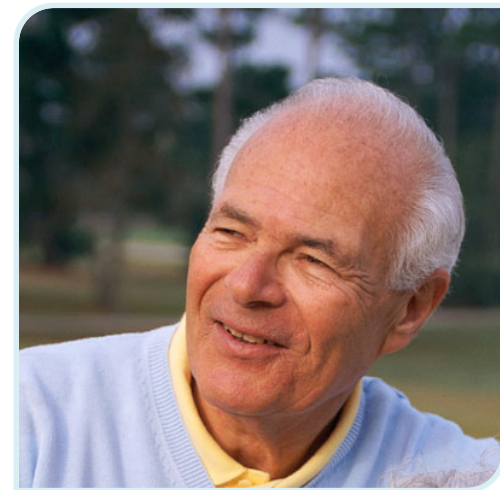
Symptom	Frequency	Call doctor
Nausea/heartburn/ stomach pain/cramps	Common	If severe or persistent
Constipation	Common	If severe or persistent
Vomiting/diarrhea	Rare	If severe or persistent
Skin rash	Rare	Yes
Ringing in ears	Rare	Yes
Dizziness/light headedness	Rare	Yes
Increase in blood pressure	Rare	Monitored periodically by your doctor
Black or bloody stools	Rare	Yes
Wheezing/shortness of breath	Rare	Yes
Fluid retention	Rare	Yes
Chest pain or pressure	Rare	Yes

\*Note: common is 20-50% of patients and rare is less than 1% of patients

# People who should be careful taking NSAIDs

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- Anyone who:
  - is over the age of 65 years
  - has had a stomach ulcer
  - is taking blood thinners (warfarin or heparin)
  - is at a very high risk of heart attack
  - has more than 3 medical conditions (also known as ‘co-morbidities’)



# Acetaminophen

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- Examples: Tylenol, Panadol, Exdol
- Reduces pain and fever, but not inflammation
- Can be safely combined with prescription NSAIDs

Medication	Dose	Instructions
Tylenol Regular Strength	325 mg	1 to 3 tablets every 4 to 6 hours as needed
Tylenol Extra Strength	500 mg	1 to 2 tablets every 4 to 6 hours as needed
Tylenol Arthritis Pain	650 mg (extended release)	1 to 2 tablets every 8 hours as needed

# Acetaminophen

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- Maximum dose:
  - No more than 1,000 mg\* should be taken at one time with a maximum of 4,000 mg in a day
  - Overdosing with acetaminophen can lead to liver damage
- Lower dosages are recommended for:
  - Elderly people
  - People who take blood thinners
  - People who drink more than 2 alcohol drinks a day

*\*Exception: Tylenol Arthritis Pain (AP) extended release dosage is 650 mg x 2 capsules*

# Narcotic medications for pain

# Narcotic medications for pain

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- A type of pain medication sometimes prescribed by your doctor when NSAIDs are not strong enough to relieve pain
- Some examples include:
  - Codeine (Tylenol 1, 2, 3, and Emtec)
  - Morphine (MS-contin)
  - Hydromorphone (Dilaudid)
  - Merperidine (Demerol)
  - Fentanyl (Duragesic patches)
  - Tramadol: Tramacet (Tramadol 37.5 mg and Acetaminophen 325 mg)

# Acetaminophen with codeine

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Medication	Prescription Required?	Ingredients
Tylenol 1	✘	Acetaminophen 300 mg, caffeine 15 mg and codeine 8 mg
Tylenol 2	✓	Acetaminophen 300 mg, caffeine 15 mg and codeine 15 mg
Tylenol 3	✓	Acetaminophen 300 mg, caffeine 15 mg and codeine 30 mg
Emtec	✓	Acetaminophen 300 mg and codeine 30 mg

*\*Note: For all of these medications, instructions are to take 1 to 2 tablets every 4 to 6 hours as prescribed by your doctor to a maximum of 12 tablets in 24 hours*

# Acetaminophen with codeine

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## Note:

- Tylenol with codeine may also be taken with Tylenol Regular or Tylenol Extra Strength
- Codeine affects the central nervous system, reducing pain sensitivity and increasing drowsiness
- Avoid drinking alcohol when taking acetaminophen or codeine
- When using acetaminophen, you must consider all products that contain acetaminophen do not exceed the total maximum dose of 4000 mg/day



# Acetaminophen with codeine

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- Possible side effects of codeine:
  - Constipation
  - Nausea
  - Dizziness
  - Drowsiness (avoid driving or combining with other medications that increase sedation)

# Corticosteroids as anti-inflammatory medication

# Corticosteroids

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- Also called cortisone
- Decrease inflammation
- Fast-acting
- Can be taken as:
  - Pill (prednisone)
  - Injection into muscle
  - Injection into inflamed joints
- May be used initially until disease-modifying anti-rheumatic drugs (DMARDs) work, or during periods of flares and sometimes at low doses over long term if needed

# Corticosteroids: Possible side effects of prolonged use

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- Increased appetite
- Insomnia
- Mood changes
- In addition, long-term use can cause:
  - Thinning of the bones (osteoporosis)
  - Cataracts
  - Fluid retention, weight gain, “moon face”
  - Increased blood pressure, heart disease
  - Increased blood sugars, risk of diabetes
  - Increased risk of infection, and poor wound healing

# Corticosteroids: Considerations

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- If taking more than 7.5 mg of prednisone daily for more than 3 months, will require therapy to prevent osteoporosis
  - Calcium, vitamin D and bone-building medication
- Take with food
- Decrease gradually; never stop abruptly if you have been taking corticosteroids for more than 3 weeks
- Rest joint for 24 hours after a joint injection; may do range-of-motion exercises
- May increase risk of infection or mask infection

# Disease-modifying anti-rheumatic drugs (DMARDs)

# DMARDs

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- Slow down or stop inflammation to prevent joint damage
  - By reducing inflammation there is less swelling, heat, pain
  - Modify the immune system's response
- Use early after diagnosis to alter disease progression and to help minimize joint damage
- One or more DMARDs may be required
- Effects usually seen in 1 to 6 months
- Blood tests will be done regularly to monitor for side effects

# DMARDs

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- Methotrexate (Rheumatrex)
- Sulfasalazine (Salazopyrin)
- Hydroxychloroquine (Plaquenil)
- Azathioprine (Imuran)
- Leflunomide (Arava)
- Often 2 or more of these medications are taken together to control inflammation from your arthritis



# DMARDs: Possible side effects

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- In general, the risk of joint damage and permanent disability is much greater than the risk of side effects of medications to control inflammatory arthritis
- The majority of side effects are reversible:
  - By lowering the dose, or
  - By stopping the medication and switching to another one
- It is important to determine whether the issue is the medication or an arthritis symptom (for example, dry eyes/mouth), or another illness, such as a viral infection

# DMARDs: Possible side effects

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- Common DMARD side effects include:
  - Flu-like symptoms (fatigue, headache, dizziness)
  - Stomach upset/pain, nausea
  - Diarrhea
  - Mouth sores
  - Hair loss
  - Dry eyes or mouth
  - Sun sensitivity
  - Increased risk of upper respiratory infections
- If you are concerned about any side effects you are experiencing, contact your doctor to discuss them.



\*Note: common is 20-50% of patients and rare is less than 1% of patients

# Biologic response modifiers (Biologics)

# Biologics

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- Drugs created by living organisms
- Modify the immune system to control the inflammatory process, benefit seen within 1 to 6 months
- Used in combination with DMARDs
- Used after 2 or more DMARDs have been tried and did not control the inflammation
- Are taken by subcutaneous injection (SC) or intravenous (IV) infusion
- Caution with any previous tuberculosis exposure, cancer or chronic infections (e.g. HIV)
- Expensive because of how they are made (cost is in the tens of thousands of dollars/year)

# Biologics: Mechanism of action

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- Mechanism of action is a term that describes the part of the immune system that the drug targets
- This can be thought of as ‘how the drug works’
- Different biologics have different mechanisms of action:
  - TNF inhibitors target a molecule called TNF
  - T cell inhibitors target T cells
  - B cell inhibitors target B cells
  - IL-6 inhibitors target a molecule called IL-6.

# Biologics: TNF inhibitors

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- These drugs all target TNF alpha in the immune system.

Medication	Subcutaneous (SC) or Intravenous (IV)	Injection or Infusion Frequency
Adalimumab (Humira)	SC	Every 2 weeks
Certolizumab (Cimzia)	SC	3 injections in the first month, then every 2 or 4 weeks
Etanercept (Enbrel)	SC	Once or twice a week
Golimumab (Simponi)	SC and IV	SC: once a month, IV: once a month and then moves to every 2 months
Infliximab (Remicade, Inflectra)	IV	Infusion done initially, week 2 and 6, then every 6 to 8 weeks

\*Injection into body fat, which could be thigh or stomach

# Other biologics

Medication	Subcutaneous (SC) or Intravenous (IV)	Mechanism of Action	Injection or Infusion Frequency
Abatacept (Orencia)	SC and IV	Affects the T cells in your immune system	SC: weekly, IV: 30 minute infusion: 3 in the first 4 weeks, then every 4 weeks
Rituximab (Rituxan)	IV	Affects the B cells in your immune system	2 infusions, 2 weeks apart, once or twice/year
Tocilizumab (Actemra)	SC and IV	Affects IL-6 cells in your immune system	SC: every 1 to 2 weeks, IV: 1 hour infusion every 4 weeks

# Biologics: Possible side effects

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- Common biologic side effects include:
  - Increased risk of infection
  - Colds or sinus infections
  - Injection site reactions
  - Infusion reactions
  - Headaches/dizziness
  - Nausea or diarrhea
  - Reactivation of infections like hepatitis or tuberculosis or risk of skin cancer
- If you are concerned about any side effects you are experiencing, contact your doctor to discuss them.





# Biologics: When you may need to stop taking them

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- You will need to talk to your doctor about potentially stopping your biologic in some instances:
  - When you are thinking about becoming pregnant
  - When you are scheduled for surgery
  - If you develop a major infection
  - If you have a major open wound
- Before you stop taking your biologic, contact your doctor to discuss these situations or other concerns you may have.

# What's new in treatments for RA?

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- There is a new DMARD called tofacitinab (Xeljanz)
  - A pill, taken at 5 mg twice a day
  - Is well-tolerated
- This targets the JAK pathway in the body
- Should not take with with biologics, cyclosporine or Imuran
- Anti-fungals increase this drug in the body
- Must be screened for tuberculosis before starting this
- Must monitor for infections & herpes zoster

# What's new in treatments for PSA?

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- Apremilast (Otezla) is a new DMARD for PSA & psoriasis
  - Tablets taken at 30 mg twice a day
- This is a small molecule drug (that is, not a biologic)
- This drug targets phosphodiesterase 4
- Side effects may include nausea and diarrhea initially, weight loss and possible risk of increased depression

# What's new in treatments for PSA?

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- Ustekinumab (Stelera) for PSA & moderate to severe plaque psoriasis
- Taken subcutaneously via self-injection:
  - If weight is less than or equal to 100 kg, patients take 45 mg
  - If weight is greater than 100 kg, patients take 90 mg
  - Taken at weeks 0, 4, and then every 12 weeks
- Targets the body's IL-12 & IL-23 pathways
- This drug is a biologic and has side effects similar to other biologics

# Key messages

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- Early treatment with DMARDs ensures better control of your inflammatory arthritis and less damage to joints and other tissues
- Take your medication as prescribed by your doctor to achieve the best results
- Inform your doctor of any side effects that you develop as soon as possible
- Blood tests are required to monitor both 'disease activity' and potential adverse effects of medications used to treat your arthritis

# Resources

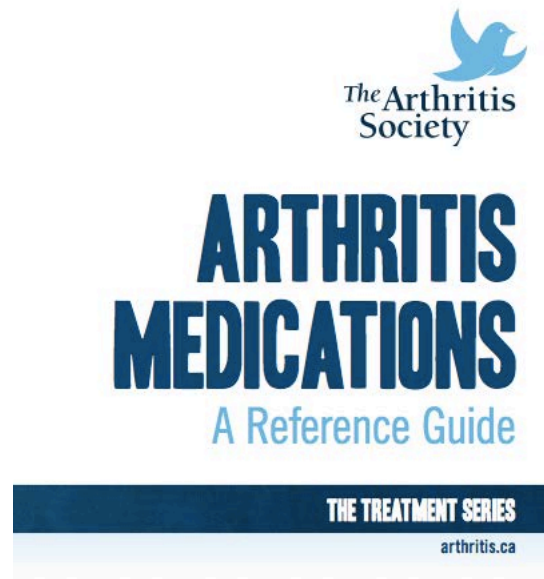
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- Arthritis Consumer Experts [www.jointhehealth.org](http://www.jointhehealth.org)
- The Arthritis Foundation [www.arthritis.org](http://www.arthritis.org)
- The Arthritis Society [www.arthritis.ca](http://www.arthritis.ca)
- Canadian Arthritis Patient Alliance [www.arthritispatient.ca](http://www.arthritispatient.ca)
- Canadian Psoriasis Network [www.cpn-rcp.com](http://www.cpn-rcp.com)
- Canadian Spondylitis Association [www.spondylitis.ca](http://www.spondylitis.ca)
- Rheuminfo [www.rheuminfo.com](http://www.rheuminfo.com)

# Resources

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- *Arthritis Medications: A Reference Guide*, The Arthritis Society, 2015.



# Resources

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