OTC Pain Relief Safety Guide

A plain-language reference to paracetamol, ibuprofen, naproxen, and combination analgesics — published by Omega Chemist, September 2026

This guide summarizes publicly available drug-facts information for four widely used over-the-counter (OTC) pain-relief medications. It is intended as a quick, plain-language reference — not a substitute for the product's own package label, or for the advice of a licensed pharmacist or physician. Always read the label of the specific product you have, since exact strengths and instructions vary by formulation and manufacturer.

At-a-Glance Comparison

Medication	Drug Class	Typical Adult Dose	Key Warning
Paracetamol	Analgesic / antipyretic (pain reliever and fever reducer)	325-650 mg every 4-6 hours, or 1000 mg every 6-8 hours, not to exceed 4,000 mg in 24 hours from all combined sources unless directed by a physician	The primary safety concern is liver (hepatotoxicity) injury from exceeding the maximum daily dose, or from combining multiple products that each contain acetami…
Ibuprofen	Nonsteroidal anti-inflammatory drug (NSAID)	200-400 mg every 4-6 hours as needed, not to exceed 1,200 mg in 24 hours for OTC use unless directed by a physician	NSAIDs carry a boxed warning for increased risk of gastrointestinal bleeding/ulceration and cardiovascular events (heart attack or stroke), particularly with lo…
Naproxen	Nonsteroidal anti-inflammatory drug (NSAID), longer-acting	220 mg every 8-12 hours as needed, not to exceed 660 mg in 24 hours for OTC use unless directed by a physician	Shares the same NSAID-class boxed warnings for GI bleeding and cardiovascular risk as ibuprofen; because each dose lasts longer, it is especially important not …

Medication	Drug Class	Typical Adult Dose	Key Warning
Maxigesic	Fixed-dose combination analgesic (paracetamol + ibuprofen)	Follow the specific product label exactly, as strengths vary by formulation (for example 500 mg paracetamol / 150 mg ibuprofen per tablet, or 1000 mg / 300 mg per sachet for hot-drink formulations); do not exceed the maximum daily amounts for either active ingredient individually.	Because it contains both paracetamol and ibuprofen, all of the warnings for both ingredients apply together — liver risk from paracetamol overuse and GI/cardiov…

Full warnings, who-should-avoid guidance, storage instructions, and drug-interaction notes for each product are on the corresponding Omega Chemist product page (see the links at the end of this guide) — this table is a summary only.

Product-by-Product Detail

Paracetamol (Acetaminophen)

Class: Analgesic / antipyretic (pain reliever and fever reducer)
How it works: Works centrally to reduce pain signaling and reset the body's temperature set-point in the hypothalamus; unlike NSAIDs it has minimal anti-inflammatory effect and is generally gentler on the stomach lining.
Typical adult dose: 325-650 mg every 4-6 hours, or 1000 mg every 6-8 hours, not to exceed 4,000 mg in 24 hours from all combined sources unless directed by a physician
Common uses: Headache, Muscle aches, Backache, Minor arthritis pain, Toothache, Common cold and flu symptoms, Fever reduction, Menstrual cramps
Who should check with a pharmacist first: People with liver disease, chronic heavy alcohol use, or anyone already taking another product containing acetaminophen should talk to a pharmacist or physician before use.

■ The primary safety concern is liver (hepatotoxicity) injury from exceeding the maximum daily dose, or from combining multiple products that each contain acetaminophen/paracetamol without realizing it. Consuming alcohol regularly increases this risk.

Ibuprofen

Class: Nonsteroidal anti-inflammatory drug (NSAID)
How it works: Blocks cyclooxygenase (COX) enzymes to reduce the production of prostaglandins, lowering inflammation, pain, and fever at the site of injury as well as centrally.
Typical adult dose: 200-400 mg every 4-6 hours as needed, not to exceed 1,200 mg in 24 hours for OTC use unless directed by a physician
Common uses: Muscle and joint pain, Minor arthritis inflammation, Headache, Toothache, Backache, Menstrual cramps, Fever reduction
Who should check with a pharmacist first: People with a history of stomach ulcers or GI bleeding, kidney disease, heart disease, or who are in the third trimester of pregnancy should consult a physician before use.

■ NSAIDs carry a boxed warning for increased risk of gastrointestinal bleeding/ulceration and cardiovascular events (heart attack or stroke), particularly with long-term use, higher doses, or in people with existing heart or GI conditions.

Naproxen Sodium

Class: Nonsteroidal anti-inflammatory drug (NSAID), longer-acting
How it works: Like ibuprofen, naproxen inhibits COX enzymes to reduce prostaglandin production, but its longer half-life allows less frequent dosing for sustained pain and inflammation control.
Typical adult dose: 220 mg every 8-12 hours as needed, not to exceed 660 mg in 24 hours for OTC use unless directed by a physician
Common uses: Arthritis pain, Back pain, Muscle aches, Menstrual cramps, Headache, Minor injury swelling, Fever reduction
Who should check with a pharmacist first: The same populations who should avoid ibuprofen (GI, kidney, heart conditions, late pregnancy) should also avoid naproxen without medical guidance.

■ Shares the same NSAID-class boxed warnings for GI bleeding and cardiovascular risk as ibuprofen; because each dose lasts longer, it is especially important not to exceed the labeled maximum.

Maxigesic (Paracetamol + Ibuprofen Dual-Action)

Class: Fixed-dose combination analgesic (paracetamol + ibuprofen)
How it works: Combines paracetamol's central pain/fever action with ibuprofen's peripheral anti-inflammatory action, giving two complementary mechanisms in a single dose rather than requiring two separate products.
Typical adult dose: Follow the specific product label exactly, as strengths vary by formulation (for example 500 mg paracetamol / 150 mg ibuprofen per tablet, or 1000 mg / 300 mg per sachet for hot-drink formulations); do not exceed the maximum daily amounts for either active ingredient individually.
Common uses: Moderate pain not relieved by a single-ingredient product, Dental pain, Back pain, Migraine, Post-procedure pain, Cold and flu body aches
Who should check with a pharmacist first: Anyone who should avoid either paracetamol or ibuprofen individually (see above) should avoid this combination product, and should not take it alongside any other product containing either ingredient.

■ Because it contains both paracetamol and ibuprofen, all of the warnings for both ingredients apply together — liver risk from paracetamol overuse and GI/cardiovascular risk from ibuprofen. It must never be combined with additional standalone paracetamol or NSAID products.

General Safety Rules That Apply to All OTC Pain Relievers

• Check every other medication you take — including multi-symptom cold/flu products — for the same active ingredient before adding another product. This is the single most common cause of accidental overdose with OTC pain relievers.

• Never exceed the labeled 24-hour maximum, even if pain persists — contact a pharmacist or physician instead of taking more than the label allows.

• OTC pain relievers are generally intended for short-term, as-needed use. Pain lasting more than 10 days, or fever lasting more than 3 days, warrants medical evaluation.

• Pregnant, nursing, or planning to become pregnant? Paracetamol is generally the preferred OTC option, while NSAIDs (ibuprofen, naproxen) are generally avoided, especially in the third trimester — always confirm with an obstetric provider.

• Children and teenagers require weight-based, age-appropriate formulations — never estimate a children's dose from an adult product.

• Regular heavy alcohol use increases the risk of liver injury from acetaminophen/paracetamol.

• A history of stomach ulcers, GI bleeding, kidney disease, or heart disease is a reason to talk to a physician before using an NSAID (ibuprofen or naproxen), even at OTC doses.

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