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Brand Names

7T Gummy ES, Acephen, Aceta, Actamin, Adult Pain Relief, Anacin Aspirin Free, Aphen, Apra, Children's Acetaminophen, Children's Pain & Fever , Children's Pain Relief, Comtrex Sore Throat Relief, ED-APAP, ElixSure Fever/Pain, Feverall, Genapap, Genebs, Goody's Back & Body Pain, Infantaire, Infants' Acetaminophen, Infants' Pain & Fever, Infant's Silapap, Leader 8HR Arthritis Pain Relief, LIQUID PAIN RELIEF, Little Fevers, Little Remedies Infant Fever + Pain Reliever, Mapap, Mapap Arthritis Pain, Mapap Infants, Mapap Junior, Midol Long Lasting Relief, M-PAP, Nortemp, Ofirmev, Pain & Fever , Pain and Fever , PAIN RELIEF , PAIN RELIEF Extra Strength, Panadol, PediaCare Children's Fever Reducer/Pain Reliever, PediaCare Children's Smooth Metls Fever Reducer/Pain Reliever, PediaCare Infant's Fever Reducer/Pain Reliever, Pediaphen, PHARBETOL, Plus PHARMA, Q-Pap, Q-Pap Extra Strength, Silapap, Triaminic Fever Reducer and Pain Reliever, Triaminic Infant Fever Reducer and Pain Reliever, Tylenol, Tylenol 8 Hour, Tylenol 8 Hour Arthritis Pain, Tylenol 8 Hour Muscle Aches & Pain, Tylenol Arthritis Pain, Tylenol Children's, Tylenol Children's Pain+Fever, Tylenol CrushableTablet, Tylenol Extra Strength, Tylenol Infants', Tylenol Infants Pain + Fever, Tylenol Junior Strength, Tylenol Pain + Fever, Tylenol Regular Strength, Tylenol Sore Throat, XS No Aspirin, XS Pain Reliever

Indication Specific Dosing

General dosing information:

Maximum daily dosage limits are based on all routes of administration (e.g., intravenous, oral, rectal) and all products containing acetaminophen, including both single-entity and combination products. Exceeding maximum daily dosage limits can result in hepatic injury, hepatic failure, and death. In an attempt to reduce the risk of hepatotoxicity, the FDA has recommended limiting the amount of acetaminophen in prescription combination products to 325 mg per dosage unit.

For the treatment of fever

Oral dosage (immediate-release)

Adults

325 to 650 mg PO every 4 to 6 hours, as needed. Alternatively, 1,000 mg PO every 6 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children and Adolescents weighing 60 kg or more

325 to 650 mg PO every 4 to 6 hours as needed. Alternatively, 1,000 mg PO every 6 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children and Adolescents weighing less than 60 kg

10 to 15 mg/kg/dose PO every 4 to 6 hours as needed. Max single dose: 15 mg/kg/dose or 1,000 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 4,000 mg/day, whichever is less.

Infants

10 to 15 mg/kg/dose PO every 4 to 6 hours as needed. Max single dose: 15 mg/kg/dose. Max daily dose: 75 mg/kg/day.

Neonates 10 to 29 days

10 to 15 mg/kg/dose PO every 4 to 8 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 90 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Neonates 0 to 9 days

10 to 15 mg/kg/dose PO every 6 to 8 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 32 to 37 weeks gestation

10 to 15 mg/kg/dose PO every 8 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 28 to 31 weeks gestation

10 to 15 mg/kg/dose PO every 12 hours as needed. Some experts recommend an

initial load of 20 mg/kg PO. Max: 40 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Oral dosage (extended-release)

Adults

650 to 1,300 mg PO every 8 hours as needed. Max single dose: 1,300 mg/dose. Max daily dose: 3,900 mg/day.

Children and Adolescents 12 to 17 years

650 to 1,300 mg PO every 8 hours as needed. Max single dose: 1,300 mg/dose. Max daily dose: 3,900 mg/day.

Rectal dosage

Adults

325 to 650 mg PR every 4 to 6 hours as needed. Alternatively, 1,000 mg PR 2 to 4 times per day can be given. Do not exceed 1 g/dose or 4 g/day.

Children and Adolescents weighing 60 kg or more

325 to 650 mg PR every 4 to 6 hours as needed. Alternatively, 1,000 mg PR 2 to 4 times per day can be given. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children and Adolescents weighing less than 60 kg

10 to 20 mg/kg/dose PR every 4 to 6 hours as needed. Max single dose: 20 mg/kg/dose or 1,000 mg/dose, whichever is less. Max daily dose: 100 mg/kg/day or 4,000 mg/day, whichever is less.

Infants

10 to 20 mg/kg/dose PR every 4 to 6 hours as needed. Max single dose: 20 mg/kg/dose. Max daily dose: 75 mg/kg/day.

Neonates 10 to 29 days

20 mg/kg/dose PR every 6 to 8 hours as needed. Some experts recommend an initial load of 30 mg/kg PR. Max: 90 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Neonates 0 to 9 days

20 mg/kg/dose PR every 6 to 8 hours as needed. Some experts recommend an initial load of 30 mg/kg PR. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 32 to 37 weeks gestation

20 mg/kg/dose PR every 8 hours as needed. Some experts recommend an initial load of 30 mg/kg PR. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 28 to 31 weeks gestation

15 mg/kg/dose PR every 12 hours as needed. Some experts recommend an initial load of 20 mg/kg PR. Max: 40 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Intravenous dosage

Adults weighing 50 kg or more

1,000 mg IV every 6 hours or 650 mg IV every 4 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Adults weighing less than 50 kg

15 mg/kg/dose IV every 6 hours or 12.5 mg/kg/dose IV every 4 hours as needed. Max single dose: 15 mg/kg/dose or 750 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 3,750 mg/day, whichever is less.

Adolescents weighing 50 kg or more

1,000 mg IV every 6 hours or 650 mg IV every 4 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children 2 to 12 years and Adolescents weighing less than 50 kg

15 mg/kg/dose IV every 6 hours or 12.5 mg/kg/dose IV every 4 hours as needed. Max single dose: 15 mg/kg/dose or 750 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 3,750 mg/day, whichever is less.

Infants and Children 1 to 23 months

15 mg/kg/dose IV every 6 hours as needed. Max daily dose: 60 mg/kg/day.

Neonates

12.5 mg/kg/dose IV every 6 hours as needed. Max daily dose: 50 mg/kg/day.

Premature Neonates 32 to 37 weeks gestation

12.5 mg/kg/dose IV every 6 hours as needed. Max daily dose: 50 mg/kg/day.

Premature Neonates 28 to 31 weeks postmenstrual age†

Limited data available; dose not established. Some experts do not recommend use of IV acetaminophen in premature neonates less than 32 weeks PMA until sufficient pharmacokinetic and pharmacodynamic studies have been conducted. A loading dose of 20 mg/kg IV, then 10 mg/kg/dose IV every 12 hours as needed has been recommended. Alternatively, 7.5 mg/kg/dose IV every 8 hours as needed has been suggested. Max single dose: 10 mg/kg/dose. Max daily dose: 22.5 mg/kg/day.

For the treatment of mild pain or for the temporary relief of headache, myalgia, back pain, musculoskeletal pain, dental pain (e.g., toothache), dysmenorrhea, arthralgia, or minor aches and pains associated with the common cold or flu

Oral dosage (immediate-release)

Adults

325 to 650 mg PO every 4 to 6 hours as needed. Alternatively, 1,000 mg PO every 6 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children and Adolescents weighing 60 kg or more

325 to 650 mg PO every 4 to 6 hours as needed. Alternatively, 1,000 mg PO every 6 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children and Adolescents weighing less than 60 kg

10 to 15 mg/kg/dose PO every 4 to 6 hours as needed. Max single dose: 15

mg/kg/dose or 1,000 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 4,000 mg/day, whichever is less.

Infants

10 to 15 mg/kg/dose PO every 4 to 6 hours as needed. Max single dose: 15 mg/kg/dose. Max daily dose: 75 mg/kg/day.

Neonates 10 to 29 days

10 to 15 mg/kg/dose PO every 4 to 8 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 90 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Neonates 0 to 9 days

10 to 15 mg/kg/dose PO every 6 to 8 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 32 to 37 weeks gestation

10 to 15 mg/kg/dose PO every 8 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 28 to 31 weeks gestation

10 to 15 mg/kg/dose PO every 12 hours as needed. Some experts recommend an initial load of 20 mg/kg PO. Max: 40 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Oral dosage (extended-release)

Adults

650 to 1,300 mg PO every 8 hours as needed. Max single dose: 1,300 mg/dose. Max daily dose: 3,900 mg/day.

Children and Adolescents 12 to 17 years

650 to 1,300 mg PO every 8 hours as needed. Max single dose: 1,300 mg/dose. Max daily dose: 3,900 mg/day.

Rectal dosage

Adults

325 to 650 mg PR every 4 to 6 hours as needed. Alternatively, 1,000 mg PR 2 to 4 times per day can be given. It is important to note that doses effective for acute pain relief may not be effective in chronic pain states, which require higher daily doses. Do not exceed 1 g/dose or 4 g/day.

Children and Adolescents weighing 60 kg or more

325 to 650 mg PR every 4 to 6 hours as needed. Alternatively, 1,000 mg PR 2 to 4 times per day can be given. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children and Adolescents weighing less than 60 kg

10 to 20 mg/kg/dose PR every 4 to 6 hours as needed. Max single dose: 20 mg/kg/dose or 1,000 mg/dose, whichever is less. Max daily dose: 100 mg/kg/day or 4,000 mg/day, whichever is less. High-dose rectal acetaminophen (25 to 45 mg/kg/dose) has been studied and recommended as an initial loading dose for pain management, as well as for the scheduled management of peri- and postoperative pain, in pediatric patients. Its use is controversial, as optimal dosing has not been established.

Infants

10 to 20 mg/kg/dose PR every 4 to 6 hours as needed. Max single dose: 20 mg/kg/dose. Max daily dose: 75 mg/kg/day. High-dose rectal acetaminophen (25 to 45 mg/kg/dose) has been studied and recommended as an initial loading dose for pain management, as well as for the scheduled management of peri- and postoperative pain, in pediatric patients. Its use is controversial, as optimal dosing has not been established.

Neonates 10 to 29 days

20 mg/kg/dose PR every 6 to 8 hours as needed. Some experts recommend an initial load of 30 mg/kg PR. Max: 90 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Neonates 0 to 9 days

20 mg/kg/dose PR every 6 to 8 hours as needed. Some experts recommend an initial load of 30 mg/kg PR. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 32 to 37 weeks gestation

20 mg/kg/dose PR every 8 hours as needed. Some experts recommend an initial load of 30 mg/kg PR. Max: 60 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Premature Neonates 28 to 31 weeks gestation

15 mg/kg/dose PR every 12 hours as needed. Some experts recommend an initial load of 20 mg/kg PR. Max: 40 mg/kg/day. Do not exceed 48 consecutive hours at the maximum dose.

Intravenous dosage

Adults weighing 50 kg or more

1,000 mg IV every 6 hours or 650 mg IV every 4 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Adults weighing less than 50 kg

15 mg/kg/dose IV every 6 hours or 12.5 mg/kg/dose IV every 4 hours as needed. Max single dose: 15 mg/kg/dose or 750 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 3,750 mg/day, whichever is less.

Adolescents weighing 50 kg or more

1,000 mg IV every 6 hours or 650 mg IV every 4 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children 2 to 12 years and Adolescents weighing less than 50 kg

15 mg/kg/dose IV every 6 hours or 12.5 mg/kg/dose IV every 4 hours as needed. Max single dose: 15 mg/kg/dose or 750 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 3,750 mg/day, whichever is less.

Infants and Children 1 to 23 months†

7.5 to 15 mg/kg/dose IV every 6 hours as needed. Max daily dose: 60 mg/kg/day.

Efficacy of IV acetaminophen for the treatment of acute pain has not been established in patients younger than 2 years. In clinical trials, there was no difference in analgesic effect, measured by the reduced need for additional opioid treatment for pain control, in those younger than 2 years receiving opioid plus acetaminophen vs. opioid plus placebo.

Neonates†

The FDA-approved dose for fever in this age group is 12.5 mg/kg/dose IV every 6 hours as needed; Max daily dose: 50 mg/kg/day. Efficacy of IV acetaminophen for the treatment of acute pain has not been established in patients younger than 2 years. In clinical trials, there was no difference in analgesic effect, measured by the reduced need for additional opioid treatment for pain control, in those younger than 2 years receiving opioid plus acetaminophen vs. opioid plus placebo. In the literature, a loading dose of 20 mg/kg IV, then 7.5 to 15 mg/kg/dose IV every 6 hours as needed has been suggested. For scheduled postoperative analgesia in neonates, decreasing the dose by 50% after 4 days of continuously scheduled acetaminophen has been recommended; do not exceed 6 days of scheduled acetaminophen therapy.

Premature Neonates 32 to 37 weeks gestation

The FDA-approved dose for fever in this age group is 12.5 mg/kg/dose IV every 6 hours as needed; Max daily dose: 50 mg/kg/day. Efficacy of IV acetaminophen for the treatment of acute pain has not been established in patients younger than 2 years. In clinical trials, there was no difference in analgesic effect, measured by the reduced need for additional opioid treatment for pain control, in those younger than 2 years receiving opioid plus acetaminophen vs. opioid plus placebo. In the literature, a loading dose of 20 mg/kg IV, then 10 mg/kg/dose IV every 8 hours as needed has been recommended. Alternatively, 7.5 to 10 mg/kg/dose IV every 6 hours as needed has been suggested. For scheduled postoperative analgesia in neonates, decreasing the dose by 50% after 4 days of continuously scheduled acetaminophen has been recommended; do not exceed 6 days of scheduled acetaminophen therapy.

Premature Neonates 28 to 31 weeks postmenstrual age

Limited data available; dose not established. Some experts do not recommend use of IV acetaminophen in premature neonates less than 32 weeks PMA until sufficient pharmacokinetic and pharmacodynamic studies have been conducted. A loading dose of 20 mg/kg IV, then 10 mg/kg/dose IV every 12 hours as needed has been recommended. Alternatively, 7.5 mg/kg/dose IV every 8 hours as

needed has been suggested. Max single dose: 10 mg/kg/dose. Max daily dose: 22.5 mg/kg/day. For scheduled postoperative analgesia in neonates, decreasing the dose by 50% after 4 days of continuously scheduled acetaminophen has been recommended; do not exceed 6 days of scheduled acetaminophen therapy.

For the treatment of moderate pain to severe pain with adjunctive opioid analgesics

Intravenous dosage

Adults weighing 50 kg or more

1,000 mg IV every 6 hours or 650 mg IV every 4 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Adults weighing less than 50 kg

15 mg/kg/dose IV every 6 hours or 12.5 mg/kg/dose IV every 4 hours as needed. Max single dose: 15 mg/kg/dose or 750 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 3,750 mg/day, whichever is less.

Adolescents weighing 50 kg or more

1,000 mg IV every 6 hours or 650 mg IV every 4 hours as needed. Max single dose: 1,000 mg/dose. Max daily dose: 4,000 mg/day.

Children 2 to 12 years and Adolescents weighing less than 50 kg

15 mg/kg/dose IV every 6 hours or 12.5 mg/kg/dose IV every 4 hours as needed. Max single dose: 15 mg/kg/dose or 750 mg/dose, whichever is less. Max daily dose: 75 mg/kg/day or 3,750 mg/day, whichever is less.

Infants and Children 1 to 23 months†

7.5 to 15 mg/kg/dose IV every 6 hours as needed. Max daily dose: 60 mg/kg/day. Efficacy of IV acetaminophen for the treatment of acute pain has not been established in patients younger than 2 years. In clinical trials, there was no difference in analgesic effect, measured by the reduced need for additional opioid treatment for pain control, in those younger than 2 years receiving opioid plus acetaminophen vs. opioid plus placebo.

Neonates†

The FDA-approved dose for fever in this age group is 12.5 mg/kg/dose IV every 6

hours as needed; Max daily dose: 50 mg/kg/day. Efficacy of IV acetaminophen for the treatment of acute pain has not been established in patients younger than 2 years. In clinical trials, there was no difference in analgesic effect, measured by the reduced need for additional opioid treatment for pain control, in those younger than 2 years receiving opioid plus acetaminophen vs. opioid plus placebo. In the literature, a loading dose of 20 mg/kg IV, then 7.5 to 15 mg/kg/dose IV every 6 hours as needed has been suggested. For scheduled postoperative analgesia in neonates, decreasing the dose by 50% after 4 days of continuously scheduled acetaminophen has been recommended; do not exceed 6 days of scheduled acetaminophen therapy.

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Premature Neonates 28 to 31 weeks postmenstrual age

Limited data available; dose not established. Some experts do not recommend use of IV acetaminophen in premature neonates less than 32 weeks PMA until sufficient pharmacokinetic and pharmacodynamic studies have been conducted. A loading dose of 20 mg/kg IV, then 10 mg/kg/dose IV every 12 hours as needed has been recommended. Alternatively, 7.5 mg/kg/dose IV every 8 hours as needed has been suggested. Max single dose: 10 mg/kg/dose. Max daily dose: 22.5 mg/kg/day. For scheduled postoperative analgesia in neonates, decreasing the dose by 50% after 4 days of continuously scheduled acetaminophen has been recommended; do not exceed 6 days of scheduled acetaminophen therapy.

For the acute treatment of migraine†

Oral dosage

Adults

1,000 mg PO once. Guidelines classify acetaminophen as having established efficacy for the treatment of acute migraine for non-incapacitating attacks.

Children and Adolescents

15 mg/kg/dose (Max: 1,000 mg/dose) PO once. There is insufficient evidence to determine whether children and adolescents receiving oral acetaminophen are more or less likely than those receiving placebo to be headache-free at 2 hours.

For the treatment of osteoarthritis

Oral dosage

Adults

1,300 mg PO every 8 hours.

Contraindications And Precaution

Drug Interactions

The coadministration of certain medications may lead to harm and require avoidance or therapy modification; review all drug interactions prior to concomitant use of other medications.

Hypersensitivity

This medication is contraindicated in patients with a history of hypersensitivity to it or any of its components.

alcohol use disorder, ethanol ingestion, hepatic disease, hepatic failure, hepatotoxicity, hypovolemia, malnutrition, risk of medication errors

Acetaminophen injection is contraindicated in individuals with hepatic failure or severe active hepatic disease. Use acetaminophen with caution in individuals with hepatic disease. A reduced total daily dose of acetaminophen may be warranted in these individuals. Acetaminophen has been associated with hepatotoxicity. Most of the cases of liver injury are associated with the use of acetaminophen at doses more than 4 g/day, and often involve more than 1 acetaminophen-containing product. The risk of acute liver failure is higher in individuals with underlying liver disease and with chronic ethanol ingestion while taking acetaminophen, which may be defined as 3 or more alcohol

beverages per day. Use acetaminophen with caution in individuals with alcohol use disorder, chronic malnutrition, severe hypovolemia (i.e., due to dehydration or blood loss), or severe renal impairment (CrCl 30 mL/minute or less). Take care when prescribing, preparing, and administering acetaminophen to avoid risk of medication errors which could result in accidental overdose and death. Ensure that the acetaminophen injection dose is in milligrams (mg) and milliliters (mL) is not confused; the dosing is based on weight for individuals less than 50 kg; infusion pumps are properly programmed; and the total daily dose of acetaminophen from all sources does not exceed maximum daily limits.

renal failure, renal impairment

Longer dosing intervals or a reduced total daily dose of acetaminophen may be warranted in individuals with severe renal impairment or renal failure (CrCl 30 mL/minute or less). Additionally, severe renal impairment may increase the risk for hepatotoxicity from acetaminophen.

hypertension

Some acetaminophen chewable gels may contain sodium. Use sodium-containing acetaminophen chewable gels with caution in individuals with hypertension.

breast-feeding

Acetaminophen is compatible with breast-feeding and is considered a first-line choice for analgesia, headache, or fever in the lactating individual, including for those patients who are immediately postpartum and planning to breastfeed. Amounts present in milk are much less than the doses usually given to infants, and adverse effects in breastfed infants appear to be rare. Limited published studies report acetaminophen is present in human milk, with similar concentrations in the milk and plasma. Average and maximum neonatal doses of 1% and 2%, respectively, of the weight-adjusted maternal dose are reported after a single oral dose of 1,000 mg. There is one well-documented report of rash occurring in a breastfed infant that resolved with drug discontinuation and recurred when acetaminophen was resumed.

diabetes mellitus

Some acetaminophen chewable gels may contain sugar. Use sugar-containing acetaminophen chewable gels with caution in individuals with diabetes mellitus.

phenylketonuria

Some acetaminophen chewable tablets may contain sodium phenylalanine. Use phenylalanine-containing acetaminophen chewable tablets with caution in individuals with phenylketonuria.

pregnancy

Acetaminophen has long been established as the analgesic and antipyretic of choice for short-term use during pregnancy. The American College of Obstetricians and Gynecologists (ACOG), Society for Maternal-Fetal Medicine (SMFM), and the Society of Obstetricians and Gynaecologists of Canada (SOGC) continue to support its use when medically necessary and taken at recommended doses for the shortest duration required. The World Health Organization (WHO) stresses that current research does not provide definitive proof of a connection between acetaminophen use in pregnancy and autism. Epidemiological studies have not found a clear link between oral acetaminophen use during pregnancy and birth defects, miscarriage, or other adverse outcomes. Large observational studies of first-trimester exposure show no increased risk of congenital malformations or major birth defects. While the FDA has issued a notice about a potential association between prenatal acetaminophen use and increased risk for childhood neurological conditions, extensive research has not confirmed significant links to autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), or intellectual disability. In a Swedish cohort study with over 2.48 million children, there was no significant association with prenatal acetaminophen exposure and the risk of autism (HR 0.98), ADHD (HR 0.98), or intellectual disability (HR 1.01) after sibling control analysis. Similarly, a Norwegian cohort study with 26,613 children from 12,902 families observed no increased risk of ADHD with short-term acetaminophen use (up to 28 days). While long-term exposure (29 days or more) initially appeared linked to 2-fold higher risk, this association disappeared after accounting for familial factors, indicating potential confounding. While some studies have suggested a possible association between prenatal acetaminophen use and neurodevelopmental disorders, particularly with long-term, higher-dose, or more frequent acetaminophen use, study limitations have prevented large-scale acceptance of their results. The Nurses' Health Study II, involving over 116,000 women, reported a modest increase in offspring ADHD risk (odds ratio = 1.34, 95% CI: 1.05, 1.72) with maternal use during pregnancy. However, limitations such as reliance on self-reported data, lack of detailed exposure information, and potential confounders restrict the conclusiveness of these findings. Additionally, the Boston Birth Cohort found that fetal exposure to acetaminophen, measured via cord blood biomarkers, was associated with increased risk of ADHD and ASD in a dose-dependent manner. Nonetheless, this study's limitations include a single time-point measurement, potential residual confounders, and limited generalizability. While some research hints at possible risks, overall evidence does not strongly support a causal link.

between prenatal acetaminophen use and neurodevelopmental disorders. Conversely, untreated conditions like fever during pregnancy can pose significant risks to both the pregnant person and the fetus, underscoring the importance of appropriate medical management.

Pregnancy And Lactation

Acetaminophen has long been established as the analgesic and antipyretic of choice for short-term use during pregnancy. The American College of Obstetricians and Gynecologists (ACOG), Society for Maternal-Fetal Medicine (SMFM), and the Society of Obstetricians and Gynaecologists of Canada (SOGC) continue to support its use when medically necessary and taken at recommended doses for the shortest duration required. The World Health Organization (WHO) stresses that current research does not provide definitive proof of a connection between acetaminophen use in pregnancy and autism. Epidemiological studies have not found a clear link between oral acetaminophen use during pregnancy and birth defects, miscarriage, or other adverse outcomes. Large observational studies of first-trimester exposure show no increased risk of congenital malformations or major birth defects. While the FDA has issued a notice about a potential association between prenatal acetaminophen use and increased risk for childhood neurological conditions, extensive research has not confirmed significant links to autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), or intellectual disability. In a Swedish cohort study with over 2.48 million children, there was no significant association with prenatal acetaminophen exposure and the risk of autism (HR 0.98), ADHD (HR 0.98), or intellectual disability (HR 1.01) after sibling control analysis. Similarly, a Norwegian cohort study with 26,613 children from 12,902 families observed no increased risk of ADHD with short-term acetaminophen use (up to 28 days). While long-term exposure (29 days or more) initially appeared linked to 2-fold higher risk, this association disappeared after accounting for familial factors, indicating potential confounding. While some studies have suggested a possible association between prenatal acetaminophen use and neurodevelopmental disorders, particularly with long-term, higher-dose, or more frequent acetaminophen use, study limitations have prevented large-scale acceptance of their results. The Nurses' Health Study II, involving over 116,000 women, reported a modest increase in offspring ADHD risk (odds ratio = 1.34, 95% CI: 1.05, 1.72) with maternal use during pregnancy. However, limitations such as reliance on self-reported data, lack of detailed exposure information, and potential confounders restrict the conclusiveness of these findings. Additionally, the Boston Birth Cohort found that fetal exposure to acetaminophen, measured via cord blood biomarkers, was associated with increased risk of ADHD and ASD in a dose-dependent manner. Nonetheless, this study's limitations include a single time-point measurement, potential residual confounders, and limited generalizability. While some

research hints at possible risks, overall evidence does not strongly support a causal link between prenatal acetaminophen use and neurodevelopmental disorders. Conversely, untreated conditions like fever during pregnancy can pose significant risks to both the pregnant person and the fetus, underscoring the importance of appropriate medical management.

Interactions

Abacavir; lamiVUDine, 3TC; Zidovudine, ZDV: (Minor) Both acetaminophen and zidovudine, ZDV undergo glucuronidation. Competition for the metabolic pathway is thought to have caused a case of acetaminophen-related hepatotoxicity. This interaction may be more clinically significant in patients with depleted glutathione stores, such as patients with acquired immunodeficiency syndrome, poor nutrition, or alcoholism. Aluminum Hydroxide: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Aluminum Hydroxide; Magnesium Carbonate: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Aluminum Hydroxide; Magnesium Hydroxide: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Aluminum Hydroxide; Magnesium Hydroxide; Simethicone: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Aluminum Hydroxide; Magnesium Trisilicate: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Amobarbital: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Antacids: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Aprepitant, Fosaprepitant: (Minor) Use caution if acetaminophen and aprepitant are used concurrently and monitor for an increase in acetaminophen-related adverse effects for several days after administration of a multi-day aprepitant regimen.

Acetaminophen is a minor (10 to 15%) substrate of CYP3A4. Aprepitant, when administered as a 3-day oral regimen (125 mg/80 mg/80 mg), is a moderate CYP3A4 inhibitor and inducer and may increase plasma concentrations of acetaminophen. For example, a 5-day oral aprepitant regimen increased the AUC of another CYP3A4

substrate, midazolam (single dose), by 2.3-fold on day 1 and by 3.3-fold on day 5. After a 3-day oral aprepitant regimen, the AUC of midazolam (given on days 1, 4, 8, and 15) increased by 25% on day 4, and then decreased by 19% and 4% on days 8 and 15, respectively. As a single 125 mg or 40 mg oral dose, the inhibitory effect of aprepitant on CYP3A4 is weak, with the AUC of midazolam increased by 1.5-fold and 1.2-fold, respectively. After administration, fosaprepitant is rapidly converted to aprepitant and shares many of the same drug interactions. However, as a single 150 mg intravenous dose, fosaprepitant only weakly inhibits CYP3A4 for a duration of 2 days; there is no evidence of CYP3A4 induction. Fosaprepitant 150 mg IV as a single dose increased the AUC of midazolam (given on days 1 and 4) by approximately 1.8-fold on day 1; there was no effect on day 4. Less than a 2-fold increase in the midazolam AUC is not considered clinically important.

Articaine; EPINEPHrine: (Moderate) Coadministration of articaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue articaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Aspirin, ASA; Butalbital; Caffeine: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Aspirin, ASA; Citric Acid; Sodium Bicarbonate: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Barbiturates: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

BUPivacaine Liposomal: (Moderate) Coadministration of bupivacaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue bupivacaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

BUPivacaine: (Moderate) Coadministration of bupivacaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue bupivacaine and

any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

BUPivacaine; EPINEPHrine: (Moderate) Coadministration of bupivacaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue bupivacaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

BUPivacaine; Meloxicam: (Moderate) Coadministration of bupivacaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue bupivacaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Busulfan: (Moderate) Use busulfan and acetaminophen together with caution; concomitant use may result in increased busulfan levels and increased busulfan toxicity. Separating the administration of these drugs may mitigate this interaction; avoid giving acetaminophen within 72 hours prior to or concurrently with busulfan. Busulfan is metabolized in the liver through conjugation with glutathione; acetaminophen decreases glutathione levels in the blood and tissues and may reduce the clearance of busulfan.

Butalbital; Acetaminophen: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Butalbital; Acetaminophen; Caffeine: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Butalbital; Acetaminophen; Caffeine; Codeine: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Butalbital; Aspirin; Caffeine; Codeine: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen

metabolites.

carBAMazepine: (Minor) Carbamazepine may potentially accelerate the hepatic metabolism of acetaminophen. In addition, due to enzyme induction, carbamazepine may increase the risk for acetaminophen-induced hepatotoxicity via generation of a greater percentage of acetaminophen's hepatotoxic metabolite, NAPQI. Clinicians should be alert to decreased effect of acetaminophen. Dosage adjustments may be necessary, and closer monitoring of clinical and/or adverse effects is warranted.

Charcoal: (Minor) Activated charcoal binds many drugs within the gut. Administering charcoal dietary supplements at the same time as a routine acetaminophen dosage would be expected to interfere with the analgesic and antipyretic efficacy of acetaminophen. Charcoal is mostly used in the setting of acetaminophen overdose; however, patients should never try to treat an acetaminophen overdose with charcoal dietary supplements. Advise patients to get immediate medical attention for an acetaminophen overdose.

Chloroprocaine: (Moderate) Coadministration of chloroprocaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia.

Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue chloroprocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Cholestyramine: (Moderate) Cholestyramine has been shown to decrease the absorption of acetaminophen by roughly 60%. Experts have recommended that cholestyramine not be given within 1 hour of acetaminophen if analgesic or antipyretic effect is to be achieved.

Choline Salicylate; Magnesium Salicylate: (Moderate) Prolonged concurrent use of acetaminophen and salicylates is not recommended. Although salicylates are rarely associated with nephrotoxicity, high-dose, chronic administration of salicylates combined other analgesics, including acetaminophen, significantly increases the risk of analgesic nephropathy, renal papillary necrosis, and end-stage renal disease. Additive hepatic toxicity may occur, especially in combined overdose situations. Do not exceed the recommended individual maximum doses when these agents are given concurrently for short-term therapy.

Dapsone: (Moderate) Coadministration of dapsone with acetaminophen may increase the risk of developing methemoglobinemia. Advise patients to discontinue treatment and seek immediate medical attention with any signs or symptoms of methemoglobinemia.

Desogestrel: Ethinyl Estradiol; Ferrous Bisglycinate: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by

inhibition of conjugation.

Desogestrel; Ethynodiol-Duo: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethynodiol-duo use. Acetaminophen may increase plasma ethynodiol-duo concentrations, possibly by inhibition of conjugation. Diflunisal: (Moderate) Acetaminophen plasma concentrations can increase by approximately 50% following administration of diflunisal. Acetaminophen has no effect on diflunisal concentrations. Acetaminophen in high doses has been associated with severe hepatotoxic reactions; therefore, caution should be exercised when using these agents concomitantly.

Drospirenone; Ethynodiol-Duo: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and drospirenone/ethynodiol-duo use. Acetaminophen may increase plasma drospirenone/ethynodiol-duo concentrations, possibly by inhibition of conjugation. Drospirenone; Ethynodiol-Duo; Levomefolide: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and drospirenone/ethynodiol-duo/levomefolide use.

Acetaminophen may increase plasma drospirenone/ethynodiol-duo concentrations, possibly by inhibition of conjugation.

Efavirenz: (Minor) Drugs that induce the hepatic isoenzymes CYP2E1 and CYP1A2, such as efavirenz, may potentially increase the risk for acetaminophen-induced hepatotoxicity via generation of a greater percentage of acetaminophen's hepatotoxic metabolite, NAPQI. Also, the analgesic activity of acetaminophen may be reduced.

Efavirenz; Emtricitabine; Tenofovir Disoproxil Fumarate: (Minor) Drugs that induce the hepatic isoenzymes CYP2E1 and CYP1A2, such as efavirenz, may potentially increase the risk for acetaminophen-induced hepatotoxicity via generation of a greater percentage of acetaminophen's hepatotoxic metabolite, NAPQI. Also, the analgesic activity of acetaminophen may be reduced.

Efavirenz; Imlivudine; Tenofovir Disoproxil Fumarate: (Minor) Drugs that induce the hepatic isoenzymes CYP2E1 and CYP1A2, such as efavirenz, may potentially increase the risk for acetaminophen-induced hepatotoxicity via generation of a greater percentage of acetaminophen's hepatotoxic metabolite, NAPQI. Also, the analgesic activity of acetaminophen may be reduced.

Eltrombopag: (Moderate) Eltrombopag is a UDP-glucuronyltransferase inhibitor.

Acetaminophen is a substrate of UDP-glucuronyltransferases. The significance or effect of this interaction is not known; however, elevated concentrations of acetaminophen are possible. Monitor patients for adverse reactions if these drugs are coadministered.

Ethanol: (Major) The risk of developing hepatotoxicity from acetaminophen appears to be increased in patients who regularly consume alcohol. Patients who drink more than 3 alcohol-containing drinks a day and take acetaminophen are at increased risk of developing hepatotoxicity. Acute or chronic alcohol use increases acetaminophen-induced hepatotoxicity by inducing CYP2E1 leading to increased formation of the hepatotoxic metabolite of acetaminophen. Also, chronic alcohol use can deplete liver

glutathione stores. Administration of acetaminophen should be limited or avoided altogether in patients with alcoholism or patients who consume alcohol regularly. Ethinyl Estradiol; Norelgestromin: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Ethinyl Estradiol; Norethindrone Acetate: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use.

Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Ethinyl Estradiol; Norgestrel: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Ethynodiol Diacetate; Ethinyl Estradiol: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Etonogestrel; Ethinyl Estradiol: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Exenatide: (Minor) Although an interaction is possible, these drugs may be used together. To avoid potential pharmacokinetic interactions that might alter effectiveness of acetaminophen, it may be advisable for patients to take acetaminophen at least 1 hour prior to an exenatide injection. When 1,000 mg acetaminophen elixir was given with 10 mcg exenatide (at 0 hours) and at 1, 2 and 4 hours after exenatide injection, acetaminophen AUCs were decreased by 21%, 23%, 24%, and 14%, respectively; Cmax was decreased by 37%, 56%, 54%, and 41%, respectively. Additionally, acetaminophen Tmax was delayed from 0.6 hours in the control period to 0.9, 4.2, 3.3, and 1.6 hours, respectively. Acetaminophen AUC, Cmax, and Tmax were not significantly changed when acetaminophen was given 1 h before exenatide injection. The mechanism of this interaction is not available (although it may be due to delayed gastric emptying from exenatide use) and the clinical impact has not been assessed.

Fosphenytoin: (Minor) Hydantoin anticonvulsants induce hepatic microsomal enzymes and may increase the metabolism of other drugs, leading to reduced efficacy of medications like acetaminophen. In addition, the risk of hepatotoxicity from acetaminophen may be increased with the chronic dosing of acetaminophen along with phenytoin. Adhere to recommended acetaminophen dosage limits. Acetaminophen-related hepatotoxicity has occurred clinically with the concurrent use of acetaminophen 1300 mg to 6200 mg daily and phenytoin. Acetaminophen cessation led to serum transaminase normalization within 2 weeks.

Hydantoins: (Minor) Hydantoin anticonvulsants induce hepatic microsomal enzymes and may increase the metabolism of other drugs, leading to reduced efficacy of medications like acetaminophen. In addition, the risk of hepatotoxicity from acetaminophen may be increased with the chronic dosing of acetaminophen along with phenytoin. Adhere to recommended acetaminophen dosage limits. Acetaminophen-related hepatotoxicity has occurred clinically with the concurrent use of acetaminophen 1300 mg to 6200 mg daily and phenytoin. Acetaminophen cessation led to serum transaminase normalization within 2 weeks.

Imatinib: (Major) Imatinib, STI-571 may affect the metabolism of acetaminophen. In vitro, imatinib was found to inhibit acetaminophen O-glucuronidation at therapeutic levels. Therefore, systemic exposure to acetaminophen is expected to be increased with coadministration of imatinib. Chronic acetaminophen therapy should be avoided in patients receiving imatinib.

Insulin Glargine; Lixisenatide: (Minor) When 1,000 mg acetaminophen was given 1 or 4 hours after 10 mcg lixisenatide, the AUC was not significantly changed, but the acetaminophen Cmax was decreased by 29% and 31%, respectively and median Tmax was delayed by 2 and 1.75 hours, respectively. Acetaminophen AUC, Cmax, and Tmax were not significantly changed when acetaminophen was given 1 h before lixisenatide injection. The mechanism of this interaction is not available (although it may be due to delayed gastric emptying) and the clinical impact has not been assessed. To avoid potential pharmacokinetic interactions that might alter effectiveness of acetaminophen, it may be advisable for patients to take acetaminophen at least one hour prior to lixisenatide subcutaneous injection.

Isavuconazonium: (Moderate) Concomitant use of isavuconazonium with acetaminophen may result in increased serum concentrations of acetaminophen. Acetaminophen is a substrate of the hepatic isoenzyme CYP3A4; isavuconazole, the active moiety of isavuconazonium, is a moderate inhibitor of this enzyme. Caution and close monitoring are advised if these drugs are used together.

Isoniazid, INH: (Major) Agents which induce the hepatic isoenzyme CYP2E1, such as isoniazid, may potentially increase the risk for acetaminophen-induced hepatotoxicity via generation of a greater percentage of acetaminophen's hepatotoxic metabolites. The combination of isoniazid and acetaminophen has caused severe hepatotoxicity in at least one patient; studies in rats have demonstrated that pre-treatment with isoniazid potentiates acetaminophen hepatotoxicity.

IamiVUDine, 3TC; Zidovudine, ZDV: (Minor) Both acetaminophen and zidovudine, ZDV undergo glucuronidation. Competition for the metabolic pathway is thought to have caused a case of acetaminophen-related hepatotoxicity. This interaction may be more clinically significant in patients with depleted glutathione stores, such as patients with acquired immunodeficiency syndrome, poor nutrition, or alcoholism.

IamoTRIgine: (Moderate) Monitor patients for possible loss of lamotrigine efficacy and

seizure activity during coadministration with acetaminophen. Acetaminophen may induce glucuronidation pathways involved in lamotrigine metabolism. During a study among 12 healthy volunteers, concomitant administration of acetaminophen 4 g/day with lamotrigine at steady-state increased the formation clearance of lamotrigine glucuronide conjugates by 45%, decreased lamotrigine AUC by 20%, and reduced lamotrigine trough concentrations by 25%.

Levonorgestrel; Ethinyl Estradiol: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Levonorgestrel; Ethinyl Estradiol; Ferrous Bisglycinate: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Levonorgestrel; Ethinyl Estradiol; Ferrous Fumarate: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Lidocaine: (Moderate) Coadministration of lidocaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue lidocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Lidocaine; EPINEPPhrine: (Moderate) Coadministration of lidocaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia.

Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue lidocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Lidocaine; Prilocaine: (Moderate) Coadministration of lidocaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia.

Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue lidocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

(Moderate) Coadministration of prilocaine with oxidizing agents, such as

acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue prilocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Lixisenatide: (Minor) When 1,000 mg acetaminophen was given 1 or 4 hours after 10 mcg lixisenatide, the AUC was not significantly changed, but the acetaminophen Cmax was decreased by 29% and 31%, respectively and median Tmax was delayed by 2 and 1.75 hours, respectively. Acetaminophen AUC, Cmax, and Tmax were not significantly changed when acetaminophen was given 1 h before lixisenatide injection. The mechanism of this interaction is not available (although it may be due to delayed gastric emptying) and the clinical impact has not been assessed. To avoid potential pharmacokinetic interactions that might alter effectiveness of acetaminophen, it may be advisable for patients to take acetaminophen at least one hour prior to lixisenatide subcutaneous injection.

Lomitapide: (Moderate) Caution should be exercised when lomitapide is used with other medications known to have potential for hepatotoxicity, such as acetaminophen (> 4 g/day PO for >= 3 days/week). The effect of concomitant administration of lomitapide with other hepatotoxic medications is unknown. More frequent monitoring of liver-related tests may be warranted.

Lopinavir; Ritonavir: (Moderate) Concurrent administration of acetaminophen with ritonavir may result in elevated acetaminophen plasma concentrations and subsequent adverse events. Acetaminophen is metabolized by the hepatic isoenzyme CYP3A4; ritonavir is an inhibitor of this enzyme. Caution and close monitoring are advised if these drugs are administered together.

Magnesium Hydroxide: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Magnesium Salts: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Mepivacaine: (Moderate) Coadministration of mepivacaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue mepivacaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Methohexital: (Minor) Chronic therapy with barbiturates can increase the metabolism

and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

metyrapone: (Major) Coadministration of metyrapone and acetaminophen may result in acetaminophen toxicity. Acetaminophen glucuronidation is inhibited by metyrapone. It may be advisable for patients to avoid acetaminophen while taking metyrapone.

Mitotane: (Minor) Use caution if mitotane and acetaminophen are used concomitantly, and monitor for decreased efficacy of acetaminophen. Mitotane is a strong CYP3A4 inducer and acetaminophen is a minor (10% to 15%) CYP3A4 substrate; coadministration may result in decreased plasma concentrations of acetaminophen.

Nirmatrelvir; Ritonavir: (Moderate) Concurrent administration of acetaminophen with ritonavir may result in elevated acetaminophen plasma concentrations and subsequent adverse events. Acetaminophen is metabolized by the hepatic isoenzyme CYP3A4; ritonavir is an inhibitor of this enzyme. Caution and close monitoring are advised if these drugs are administered together.

Norethindrone Acetate; Ethinyl Estradiol; Ferrous fumarate: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Norethindrone; Ethinyl Estradiol: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Norethindrone; Ethinyl Estradiol; Ferrous fumarate: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Norgestimate; Ethinyl Estradiol: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Omeprazole; Amoxicillin; Rifabutin: (Moderate) As a cytochrome P450 isoenzyme inducers, rifabutin could induce the metabolism of acetaminophen. An increase in acetaminophen-induced hepatotoxicity may be seen by increasing the metabolism of acetaminophen to its toxic metabolite, NAPQI. Also, the analgesic activity of acetaminophen may be reduced.

Omeprazole; Sodium Bicarbonate: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

Penicillin G Benzathine; Penicillin G Procaine: (Moderate) Coadministration of penicillin G procaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of

methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue penicillin G procaine and any other oxidizing agents.

Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Penicillin G Procaine: (Moderate) Coadministration of penicillin G procaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue penicillin G procaine and any other oxidizing agents.

Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

PENTobarbital: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

PHENobarbital: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

PHENobarbital; Hyoscyamine; Atropine; Scopolamine: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Phenytoin: (Minor) Hydantoin anticonvulsants induce hepatic microsomal enzymes and may increase the metabolism of other drugs, leading to reduced efficacy of medications like acetaminophen. In addition, the risk of hepatotoxicity from acetaminophen may be increased with the chronic dosing of acetaminophen along with phenytoin. Adhere to recommended acetaminophen dosage limits. Acetaminophen-related hepatotoxicity has occurred clinically with the concurrent use of acetaminophen 1300 mg to 6200 mg daily and phenytoin. Acetaminophen cessation led to serum transaminase normalization within 2 weeks.

Pneumococcal Vaccine, Polyvalent: (Moderate) Concomitant administration of antipyretics, such as acetaminophen, may decrease an individual's immunological response to the pneumococcal vaccine. A post-marketing study conducted in Poland using a non-US vaccination schedule (2, 3, 4, and 12 months of age) evaluated the impact of prophylactic oral acetaminophen on antibody responses to Prevnar 13. Data show that acetaminophen, given at the time of vaccination and then dosed at 6 to 8 hour intervals for 3 doses on a scheduled basis, reduced the antibody response to some serotypes after the third dose of Prevnar 13 when compared to the antibody responses of infants who only received antipyretics 'as needed' for treatment. However, reduced

antibody responses were not observed after the fourth dose of Prevnar 13 with prophylactic acetaminophen.

Posaconazole: (Moderate) Posaconazole and acetaminophen should be coadministered with caution due to an increased potential for acetaminophen-related adverse events.

Posaconazole is a potent inhibitor of CYP3A4, an isoenzyme partially responsible for the metabolism of acetaminophen. These drugs used in combination may result in elevated acetaminophen plasma concentrations, causing an increased risk for acetaminophen-related adverse events.

Pramlintide: (Minor) Because pramlintide has the potential to delay the absorption of concomitantly administered medications, medications should be administered at least 1 hour before or 2 hours after pramlintide injection when the rapid onset of a concomitantly administered oral medication is a critical determinant of effectiveness (i.e., analgesics).

Prilocaine: (Moderate) Coadministration of prilocaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue prilocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Prilocaine; EPINEPHrine: (Moderate) Coadministration of prilocaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue prilocaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Primidone: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Rifabutin: (Moderate) As a cytochrome P450 isoenzyme inducers, rifabutin could induce the metabolism of acetaminophen. An increase in acetaminophen-induced hepatotoxicity may be seen by increasing the metabolism of acetaminophen to its toxic metabolite, NAPQI. Also, the analgesic activity of acetaminophen may be reduced.

rifAMPin: (Moderate) Concomitant use of acetaminophen with rifampin may increase the known risk of hepatotoxicity in relation to each drug. Severe hepatic dysfunction including fatalities were reported in patients taking rifampin with other hepatotoxic agents.

Ritonavir: (Moderate) Concurrent administration of acetaminophen with ritonavir may

result in elevated acetaminophen plasma concentrations and subsequent adverse events. Acetaminophen is metabolized by the hepatic isoenzyme CYP3A4; ritonavir is an inhibitor of this enzyme. Caution and close monitoring are advised if these drugs are administered together.

ROPIvacaine: (Moderate) Coadministration of ropivacaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue ropivacaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

Secobarbital: (Minor) Chronic therapy with barbiturates can increase the metabolism and decrease the effectiveness of acetaminophen. During acute overdoses, barbiturates can enhance the formation of toxic acetaminophen metabolites.

Seegersterone Acetate; Ethinyl Estradiol: (Moderate) Monitor for estrogen-related adverse effects during concomitant acetaminophen and ethinyl estradiol use. Acetaminophen may increase plasma ethinyl estradiol concentrations, possibly by inhibition of conjugation.

Sodium Bicarbonate: (Minor) Antacids can delay the oral absorption of acetaminophen, but the interactions are not likely to be clinically significant as the extent of acetaminophen absorption is not appreciably affected.

St. John's Wort, Hypericum perforatum: (Minor) St. John's wort, Hypericum perforatum induces cytochrome P450 1A2. About 10 to 15% of the acetaminophen dose undergoes oxidative metabolism via cytochrome P450 isoenzymes CYP2E1, 3A4 and 1A2, which produces the hepatotoxic metabolite, N-acetyl-p-benzoquinonimine. Thus, theoretically St. John's wort might increase the risk of acetaminophen-induced hepatotoxicity by increasing the metabolism of acetaminophen to NAPQI.

Tetracaine: (Moderate) Coadministration of tetracaine with oxidizing agents, such as acetaminophen, may increase the risk of developing methemoglobinemia. Monitor patients closely for signs and symptoms of methemoglobinemia if coadministration is necessary. If methemoglobinemia occurs or is suspected, discontinue tetracaine and any other oxidizing agents. Depending on the severity of symptoms, patients may respond to supportive care; more severe symptoms may require treatment with methylene blue, exchange transfusion, or hyperbaric oxygen.

tizANidine: (Minor) Tizanidine delays the time to attain peak concentrations of acetaminophen by about 16 minutes. The clinical significance of this interaction is unknown.

Vemurafenib: (Moderate) Concomitant use of vemurafenib and acetaminophen may result in altered concentrations of acetaminophen. Vemurafenib is an inhibitor of CYP1A2 and CYP2A6, and an inducer of CYP3A4. Acetaminophen is a substrate of

CYP1A2, CYP2A6, and CYP3A4. Use caution and monitor patients for toxicity and efficacy.

Warfarin: (Minor) Although acetaminophen is routinely considered safer than aspirin and agent of choice when a mild analgesic/antipyretic is necessary for a patient receiving therapy with warfarin, acetaminophen has also been shown to augment the hypoprothrombinemic response to warfarin. Concomitant acetaminophen ingestion may result in increases in the INR in a dose-related fashion. Clinical bleeding has been reported. Single doses or short (i.e., several days) courses of treatment with acetaminophen are probably safe in most patients taking warfarin. Clinicians should be alert for an increased INR if acetaminophen is administered in large daily doses for longer than 10 to 14 days.

Zidovudine, ZDV: (Minor) Both acetaminophen and zidovudine, ZDV undergo glucuronidation. Competition for the metabolic pathway is thought to have caused a case of acetaminophen-related hepatotoxicity. This interaction may be more clinically significant in patients with depleted glutathione stores, such as patients with acquired immunodeficiency syndrome, poor nutrition, or alcoholism.

ZOLMitriptan: (Minor) Zolmitriptan can delay the Tmax of acetaminophen by one hour. A single 1 g dose of acetaminophen does not alter the pharmacokinetics of zolmitriptan and its active metabolite. The interaction between zolmitriptan and acetaminophen is not likely to be clinically significant.

Adverse Reaction

headache, medication overuse headache, withdrawal

In clinical trials of adults receiving IV acetaminophen, headache occurred in 10% of patients compared to 9% of those receiving placebo. Headache (1% or more) was also reported in clinical trials of IV acetaminophen in pediatric patients. Overuse of drugs for treating acute headaches, including acetaminophen, may lead to medication overuse headache. Patients may experience migraine-like daily headaches or a significant increase in migraine attack frequency. Discontinuation of the overused drug and treatment of withdrawal symptoms (e.g., transient worsening of headache) may be necessary. Advise patients about the risks of medication overuse (e.g., use of acetaminophen for at least 15 days/month or any combination of therapy for at least 10 days/month) and encourage them to keep a written record of headache frequency and drug use. Pediatric guidelines recommend no more than 14 days/month of over-the-counter medication and no more than 9 days/month of any combination of therapy to avoid medication overuse headache.

constipation, diarrhea, nausea, vomiting

The most common gastrointestinal side effects reported in clinical trials of IV acetaminophen in adults were nausea, occurring in 34% of patients who received acetaminophen vs. 31% of those who received placebo, and vomiting, occurring in 15% of the acetaminophen group vs. 11% of those who received placebo. Nausea, vomiting, and constipation were among the most commonly reported adverse reactions (5% or more) in pediatric patients treated with IV acetaminophen during clinical trials.

Additionally, diarrhea was reported in 1% or more of pediatric patients. Oral therapy is not usually associated with significant adverse reactions in recommended doses. If a patient who has taken oral acetaminophen presents with significant gastrointestinal symptoms (e.g., nausea, vomiting, and/or abdominal pain), acetaminophen-induced liver toxicity should be considered.

anorexia, elevated hepatic enzymes, hepatic encephalopathy, hepatic failure, hepatic necrosis, hepatotoxicity, hypoprothrombinemia, jaundice, malaise

The hepatic effects of acetaminophen are well-known. In a study of combined data collected over a 5-year period (1998 to 2003) from 22 specialty medical centers in the United States, acetaminophen-induced liver injury was the leading cause of acute hepatic failure. Unintentional overdose accounted for almost half of the reported cases; acetaminophen toxicity may occur as the result of acute overdose or chronic excessive dosing. Young children appear to be at less risk of developing hepatotoxicity, possibly because of an age-related difference in the metabolism of the drug. Acetaminophen-induced hepatotoxicity is manifested as hepatic necrosis, jaundice, and hepatic encephalopathy. Early nonspecific symptoms include nausea/vomiting, anorexia, abdominal pain, and malaise. After acute overdose, elevated hepatic enzymes occur within 12 to 36 hours and maximal liver damage and hepatic impairment peak 3 to 5 days after ingestion. GI bleeding can occur secondary to hypoprothrombinemia. Administration of intravenous vitamin K is recommended for hypoprothrombinemia due to acetaminophen overdosage. If more than 150 to 200 mg/kg, 10 g, or an unknown amount of acetaminophen is ingested, obtain a serum acetaminophen concentration 4 hours after ingestion or as soon as possible thereafter. Promptly administer N-acetylcysteine (NAC), which serves as a substitute sulfhydryl donor for glutathione, if the acetaminophen concentration plots above the treatment line on the Rumack-Matthew nomogram. NAC treatment should begin immediately if the estimated time after ingestion approaches 8 hours. Avoid acetaminophen misuse; do not exceed recommended doses and account for intake from all sources (e.g., single-entity products and combination products). Excessive acetaminophen exposure, malnutrition, concurrent ethanol consumption (acute and chronic), and/or concurrent use of enzyme-

inducing drugs (e.g., isoniazid) may lead to greater exposure of the toxic metabolite, N-acetyl-para-benzoquinoneimine (NAPQI), and increase the risk for toxicity.

interstitial nephritis, oliguria, renal failure (unspecified), renal papillary necrosis, renal tubular necrosis

Acetaminophen has been associated with chronic analgesic nephropathy, a condition characterized by interstitial nephritis and renal papillary necrosis in patients receiving large doses of analgesics for an extended period of time. Though the National Kidney Foundation states there is negligible evidence to suggest chronic acetaminophen use causes analgesic nephropathy, they have recognized a weak association between chronic use and the prevalence of chronic renal failure (unspecified) and end-stage renal disease. In addition, acetaminophen overdose can result in acute renal failure and renal tubular necrosis, though such toxicity rarely occurs without severe hepatic toxicity. Oliguria (1% or more) has been reported in pediatric clinical trials of IV acetaminophen. The risk of renal complications appears to be higher in patients with poor nutrition, chronic alcohol consumption, or concurrent use of enzyme-inducing drugs (e.g., isoniazid).

hypoalbuminemia, hypokalemia, hypomagnesemia, hypophosphatemia, peripheral edema

Hypokalemia and peripheral edema occurred in at least 1% of patients in clinical trials. Other metabolic disturbances reported in at least 1% of pediatric patients after administration of IV acetaminophen included hypoalbuminemia, hypomagnesemia, and hypophosphatemia.

hypertension, hypotension

Cardiovascular adverse events reported in clinical trials of IV acetaminophen in at least 1% of adult and pediatric patients include both hypertension and hypotension.

agranulocytosis, anemia, fever, neutropenia, pancytopenia, thrombocytopenia, thrombocytosis

Anemia (1% or more) and fever (1% or more) have been reported during pediatric clinical trials of IV acetaminophen. In addition, sporadic case reports of agranulocytosis, thrombocytopenia, thrombocytosis, neutropenia, and pancytopenia have been described in patients taking acetaminophen. Investigate symptoms such as unusual tiredness or weakness, unusual bleeding or bruising, and unexplained sore throat or fever promptly.

hemolysis, hemolytic anemia

Drug-induced hemolysis and hemolytic anemia have been associated with acetaminophen overdose in patients with glucose-6-phosphate dehydrogenase (G6PD) deficiency. Though several case reports of hemolytic anemia in G6PD-deficient patients receiving therapeutic doses of acetaminophen exist, a direct cause and effect relationship has not been well established. Monitor G6PD-deficient patients presenting with acetaminophen toxicity closely for signs and symptoms of hemolysis.

acute generalized exanthematous pustulosis (AGEP), anaphylactic shock, anaphylactoid reactions, angioedema, contact dermatitis, erythema, exfoliative dermatitis, maculopapular rash, pruritus, Stevens-Johnson syndrome, toxic epidermal necrolysis, urticaria

Acetaminophen has been associated with a risk of rare but serious and sometimes fatal skin reactions, including Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and acute generalized exanthematous pustulosis (AGEP). These reactions can occur at any time during acetaminophen use, even after the first dose. Toxic epidermal necrolysis (TEN) occurred in a 7-year-old girl after she took 3 doses of oral acetaminophen to treat a fever and sore throat. Twelve hours after the last dose, an erythematous rash appeared, which became generalized and vesicular over the next few hours. The patient developed a fever, low blood pressure, and an elevated erythrocyte sedimentation rate and liver function tests. Skin biopsy was positive for subepidermal blister formation with full-thickness necrolysis of the epidermis. Acetaminophen rechallenge, performed 6 months later in an allergy clinic, produced similar symptoms within 30 minutes of administration and confirmed the initial diagnosis. SJS and TEN usually begin with flu-like symptoms followed by rash, blistering, and sloughing, all of which spread from the face downwards to the entire body (including palms of hands and soles of feet); recovery ranges from weeks to months and complications include corneal ulcerations, blindness, and internal organ damage. AGEP is typically a less severe reaction, characterized by acute onset, fever, and nonfollicular pustules on an erythematous rash; it usually resolves within 2 weeks of drug discontinuation. In addition to the aforementioned skin reactions, multiple cases of allergic contact dermatitis (delayed hypersensitivity type) have been reported in the literature. Various reactions, including generalized pruriginous micropapular eruption, facial edema, generalized pruriginous exanthem, exfoliative dermatitis, and generalized exanthema occurred within several hours after acetaminophen ingestion. Pruritus was one of the most common adverse reactions reported in pediatric clinical trials of IV acetaminophen, occurring in 5% or more of patients. Hypersensitivity reactions to acetaminophen may be manifested by urticaria, erythema, rash, maculopapular rash, and fever. Though rare,

anaphylactic shock, angioedema, and anaphylactoid reactions have been reported. Discontinue acetaminophen immediately and seek medical attention for symptomatic treatment in patients who develop dermatologic or hypersensitivity reactions.

purpura

A case of acquired purpura fulminans developed in a 32-year-old woman who was instructed to take acetaminophen 1,000 mg every 4 to 6 hours as needed for pain. The patient noted rapidly spreading purpuric lesions and associated edema. Her lesions were nonblanchable and enlarging, and she had multiple purplish-black hemorrhagic and necrotic areas. Purpura fulminans is usually associated with disseminated intravascular coagulation and can occur in patients with inherited or acquired deficiencies of the protein C anticoagulant pathway. Based on the patient's history of alcohol use and poor nutritional status, the authors concluded that reduced hepatic glutathione stores were further reduced by the introduction of acetaminophen, leading to impaired protein C and S synthesis and propagation of the disseminated intravascular coagulation cascade. Discontinuation of alcohol and acetaminophen and administration of vitamin K, heparin, and a systemic antibiotic led to almost complete purpuric lesion and hepatotoxicity resolution in 6 days.

agitation, anxiety, fatigue, insomnia

Insomnia occurred in 7% of adult patients who received IV acetaminophen in clinical trials vs. 5% of those who received placebo. Anxiety and fatigue also occurred in adult patients treated with IV acetaminophen. In clinical trials of pediatric patients receiving IV acetaminophen, agitation occurred in 1% or more of patients.

dyspnea, pleural effusion, pulmonary edema, wheezing

Atelectasis, pleural effusion, pulmonary edema, stridor, and wheezing were reported in 1% or more of pediatric patients, while dyspnea and abnormal breath sounds were reported in 1% or more of adult patients. There is epidemiological evidence in children and adults associating acetaminophen use with asthma symptoms. In addition, evidence suggests in utero and early infancy exposure may be associated with an increased risk of childhood asthma. Researchers hypothesize that acetaminophen may contribute to asthma through depletion of airway mucosal glutathione, increasing oxidative stress, epithelial damage, and airway inflammation.

elevated creatine kinase, muscle cramps, rhabdomyolysis, trismus

Muscle cramps or spasms occurred in 1% or more of adult and pediatric subjects treated with IV acetaminophen in clinical trials. Other musculoskeletal events included

trismus in adult subjects. Acetaminophen-induced rhabdomyolysis has been described in a single case report. A 17-year-old male with a past medical history of drug-induced reactions (hepatitis, agranulocytosis, desquamative dermatitis, and pyrexia) after receiving acetaminophen with or without concurrent antibiotics, was rechallenged with oral acetaminophen 400 mg. Within 5 hours of administration, the adolescent presented with febrile exanthema, neutropenia, and increased C-reactive protein, elevated creatine kinase, tumor necrosis factor-alpha, interleukin-6, and interleukin-10; the skin eruption and fever lasted 36 hours. Investigate symptoms such as unusual tiredness, weakness or unusual pain and swelling of the extremities, nausea and vomiting, and dark-colored urine promptly.

heart failure, myocarditis

Toxic myocarditis was reported in a 15-year-old female after an intentional overdose of an unspecified amount of acetaminophen. The patient expired as a result of acute heart failure.

hearing loss

Prospective studies have shown there to be a slight but consistent association between regular analgesic use and hearing loss. Acetaminophen-related ototoxicity may result from depletion of glutathione, which protects the cochlea from noise damage. As a true long-term association may exist, counsel patients to minimize long-term treatment with acetaminophen as much as possible. A prospective analysis examining the association between analgesic use and the risk of hearing loss was conducted in 62,261 women 31 to 48 years of age at study enrollment who were originally enrolled in the Nurses' Health Study II. The association between self-reported hearing loss and analgesic use (including acetaminophen, aspirin, and NSAIDs) was examined over 14 years. During 764,247 person-years of follow-up, 10,012 cases of hearing loss were reported. After adjustment for confounders, acetaminophen use 2 or more days per week was independently associated with an increased risk of hearing loss, with the relative risk of hearing loss increasing with increasing frequency of use. Acetaminophen use 2 to 3, 4 to 5, or 6 or more days per week was associated with relative risks of 1.11 (95% CI 1.02 to 1.19), 1.21 (95% CI 1.07 to 1.37), and 1.08 (95% CI 0.95 to 1.22), respectively ($p = 0.0007$). Of note, those with more frequent use of acetaminophen had higher body mass indices; were more likely to smoke, have hypertension, or have diabetes; and were less physically active. In a similar study in male patients, the association between professionally diagnosed hearing loss and analgesic use (including acetaminophen, aspirin, and NSAIDs) was prospectively analyzed in 26,917 patients 40 to 74 years of age at study enrollment over 18 years. During 369,079 person-years of follow-up, 3,488 cases of hearing loss were reported. After adjustment for confounders, the hazard ratio (HR) for

acetaminophen-associated hearing loss was 1.22 (95% CI 1.07 to 1.39, $p = 0.09$) in patients who were regular users of the drug (at least 2 times weekly) compared to those with less use. Men who regularly used acetaminophen for 4 years or more were 33% (14% to 56%) more likely to develop hearing loss than those with shorter use. In men younger than 50 years, the HR of hearing loss was 1.99 (95% CI 1.34 to 2.95); the degree of association generally decreased with aging. These studies do suggest association; however, data are based on patient reporting of the outcomes. Information regarding noise exposure and analgesic doses was not provided.

injection site reaction

An injection site reaction, described as infusion site pain, occurred in 1% or more of patients receiving IV acetaminophen during clinical trials.

Description

Acetaminophen is a para-aminophenol analgesic that possesses analgesic and antipyretic activity. It is effective in the relief of both acute and chronic pain and may be preferred over nonsteroidal anti-inflammatory drugs (NSAIDs) in certain individuals due to fewer hematologic, gastrointestinal, and renal effects. Acetaminophen has a history of safe and effective use when used properly; however, numerous FDA alerts have addressed the risk of drug-induced hepatotoxicity. Administration of acetaminophen in doses higher than recommended may result in hepatic injury, including the risk of liver failure and death; therefore, the maximum recommended daily dose of acetaminophen is not to be exceeded. The maximum recommended daily dose of acetaminophen includes all routes of acetaminophen administration and all acetaminophen-containing products administered, including combination products. Acetaminophen may also rarely cause serious skin reactions such as acute generalized exanthematous pustulosis (AGEP), Stevens-Johnson Syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal.

Mechanism Of Action

Acetaminophen has analgesic and antipyretic properties, but lacks peripheral anti-inflammatory properties. Acetaminophen appears to inhibit the COX pathway in the central nervous system but not the peripheral tissues. Acetaminophen acts within the CNS to increase the pain threshold by inhibiting central cyclooxygenase, an enzyme involved in prostaglandin (PG) synthesis. Acetaminophen inhibits both isoforms of central cyclooxygenase, COX-1 and COX-2, but seems to reduce COX activity by a different mechanism than the nonsteroidal antiinflammatory drugs. It has been suggested acetaminophen may inhibit a specific site on the prostaglandin H₂ synthetase

(PGHS) molecule; the 2 major forms of this enzyme, PGHS1 and PGHS2, are commonly referred to as COX-1 and COX-2. PGHS has 2 active sites, COX and peroxidase (POX). It is thought acetaminophen acts as a reducing co-substrate at the POX site and interferes with the conversion of arachidonic acid to PGH₂, thereby inhibiting PG synthesis. Other potential mechanisms may involve inhibition of the nitric oxide pathway mediated by a variety of neurotransmitter receptors (e.g., N-methyl-D-aspartate and substance p) and indirect activation of cannabinoid receptors. Acetaminophen produces its antipyretic effect by inhibiting PG synthesis in the central nervous system and blocking the actions of endogenous pyrogens at the hypothalamic thermoregulatory centers.

Pharmacokinetics

Acetaminophen is administered orally, rectally, or intravenously. At therapeutic concentrations, protein binding is about 10% to 25%. Acetaminophen is widely distributed throughout most body tissues except fat; low protein binding and molecular weight allow blood-brain barrier penetration. Vd is approximately 1 L/kg in children and adults.

Acetaminophen is primarily metabolized in the liver by first-order kinetics and involves 3 separate pathways: glucuronidation, sulfate conjugation, and cytochrome P450 (CYP450) oxidation. Glucuronidation and sulfate conjugation are the major routes of metabolism, while a small amount of drug undergoes oxidative metabolism via CYP2E1 producing the hepatotoxic metabolite, N-acetyl-p-benzoquinoneimine (NAPQI). At therapeutic doses, NAPQI is rapidly conjugated with glutathione to form inert cysteine and mercapturic acid metabolites. The P450 isoenzymes 1A2 and 3A4 appear to have a minor role in the metabolism of acetaminophen. Supratherapeutic or repeated therapeutic doses of acetaminophen, fasting, and alcoholism may deplete glutathione stores, leading to increased concentrations of NAPQI and hepatotoxicity. The elimination half-life of acetaminophen is 2 to 3 hours in healthy adult patients. Acetaminophen is renally excreted primarily as the glucuronide conjugate (40% to 65%) and sulfate metabolite (25% to 35%). Mercapturic acid and cysteine metabolites account for 5% to 12% of the urinary metabolites; less than 5% is excreted as unchanged drug.

Affected cytochrome P450 isoenzymes and drug transporters: CYP2E1

Although acetaminophen is primarily metabolized via glucuronidation and sulfate conjugation, it is also a substrate of CYP2E1. Drugs that induce CYP2E1 may increase the metabolism of acetaminophen to its toxic metabolite and therefore increase the risk of hepatotoxicity. Because CYP1A2 and CYP3A4 have negligible contribution to acetaminophen metabolism, the enzymes are unlikely to affect toxic metabolite formation.

Route-Specific Pharmacokinetics

- **Oral Route**

Immediate-release acetaminophen is rapidly and almost completely absorbed from the gastrointestinal (GI) tract, primarily the small intestine. Bioavailability ranges from 85% to 98%. Peak plasma concentrations occur within 30 to 60 minutes and range from 7.7 to 17.6 mcg/mL after a single 1,000 mg dose and 7.9 to 27 mcg/mL at steady state after 1,000 mg every 6 hours in adult patients. In a study of febrile children 2 to 7 years of age, acetaminophen 12 mg/kg achieved maximum concentration (14.6 +/- 2.6 mcg/mL) within 0.55 +/- 0.08 hours. Maximum concentrations of acetaminophen are delayed with concurrent food administration, however the extent of absorption is not affected.

- **Intravenous Route**

The maximum concentration after administration of an IV dose of acetaminophen is up to 70% higher than that seen after the same dose is given orally; however, the overall exposure, described by area under the concentration time curve (AUC), is similar. The pharmacokinetic profile of IV acetaminophen in adults is dose proportional after administration of single doses of 500, 650, and 1,000 mg.

- **Other Route(s)**

Rectal Route

Rectal absorption of acetaminophen is prolonged and highly variable compared to other routes of administration; reported bioavailability ranges from 6.5% to 98%. Several factors may influence absorption, including lipophilicity of the vehicle, placement of the suppository, rectal contents, premature defecation of the suppository, suppository size, number of suppositories administered, and/or rectal pH. Compared to adult patients, pediatric patients appear to absorb acetaminophen from suppositories to a greater extent.

- **Hepatic Impairment**

The half-life of acetaminophen may be prolonged in patients with hepatic disease.

- **Renal Impairment**

In severe renal impairment (CrCl 10 to 30 mL/minute), the elimination of acetaminophen is slightly delayed, with an elimination half-life of 2 to 5.3 hours. In addition, the elimination of sulfate and glucuronide conjugates is 3 times slower in patients with severe renal impairment than in healthy subjects, leading to potential accumulation.

- **Pediatrics**

Neonates and Infants

Slow and erratic gastric emptying in the neonate leads to a slower rate of oral acetaminophen absorption (0.21 hours); adult rates are reached by 6 to 8 months of age. Rectal absorption of an acetaminophen suppository decreases with increasing age; perhaps attributable to rectal insertion height and consequent rectal venous drainage

patterns. Because of fetal body composition and water distribution, premature neonates and young infants have a slightly larger Vd compared to older pediatric patients and adults. At 28 weeks postconceptual age (PCA), Vd is 1.47 L/kg, whereas at 60 weeks PCA Vd is 1.04 L/kg. Observed concentrations of IV acetaminophen are similar in neonates older than 32 weeks gestation at birth treated with 12.5 mg/kg/dose; infants, children, and adolescents treated with 15 mg/kg/dose; and adults treated with 1,000 mg/dose. Neonates and infants have a lower risk of acetaminophen-induced hepatotoxicity compared to older children and adults because of hepatic enzyme immaturity (specifically CYP2E1, which is responsible for producing the hepatotoxic metabolite NAPQI). However, immature hepatic pathways also result in a delayed drug clearance. In neonates, sulfate conjugation is pronounced, while glucuronide conjugation is deficient. The relative contribution of sulfate and glucuronide conjugation changes with age and normal adult ratios (2:1 glucuronide to sulfate conjugates) are reached by late childhood. Acetaminophen clearance also has great interpatient variability and appears to increase with patient weight and age. Clearance increases from 28 weeks PCA (0.01 L/kg/hour) with a maturation half-life of 11.3 weeks to reach 0.15 L/kg/hour by early infancy (60 weeks PCA); clearance approaches adult values by 1 year of age. Additionally, clearance may be reduced in the presence of high unconjugated bilirubin concentrations. Approximate half-life of acetaminophen is as follows: neonate 28 to 32 weeks gestation = 11 hours, neonate 32 to 36 weeks gestation = 5 hours, term neonate = 3 to 3.5 hours, infant = 4 hours.

Children and Adolescents

Acetaminophen is excreted primarily as the sulfate conjugate in children, due to a deficiency in glucuronide formation in younger pediatric patients. The relative contribution of sulfate and glucuronide conjugation changes with age and normal adult ratios (2:1 glucuronide to sulfate conjugates) are reached by 12 years of age. The AUC of acetaminophen in children and adolescents after a single IV dose of 15 mg/kg (38 and 41 mcg x hour/mL, respectively) is similar to that in adults after a single IV dose of 1,000 mg (43 mcg x hour/mL). In addition, the mean half-life of IV acetaminophen in pediatric patients is longer than the half-life in adults, with younger patients having the slowest clearance (children = 3 hours, adolescents = 2.9 hours, adults = 2.4 hours). Observed concentrations of IV acetaminophen are similar in infants, children, and adolescents treated with 15 mg/kg/dose; adults treated with 1,000 mg/dose, and neonates at least 32 weeks gestation at birth treated with 12.5 mg/kg/dose.

Administration

For storage information, see the specific product information within the How Supplied section.

Oral Administration

May be administered without regard to meals.

Oral Solid Formulations

Chewable tablets: May be swallowed whole or chewed.

Chewable gel: Chew thoroughly before swallowing.

Oral granules: Mix with a small amount of soft food (i.e., applesauce, ice cream, or jam) immediately prior to administration.

Oral powders: Do not administer the capsules containing the powder whole. Open capsule and sprinkle over a small amount of water (less than 5 mL) or mix with a small amount of soft food (i.e., applesauce, ice cream, or jam) immediately prior to administration.

Dissolve packs: Tear packet and pour onto tongue.

Effervescent tablets: Dissolve tablet fully in 6 ounces of room temperature water. Do not chew or swallow whole tablets.

Immediate-release tablets: Administer with a sufficient amount of water.

Extended-release tablets: Do not crush, chew, split, or dissolve in liquid.

Oral Liquid Formulations

Liquid acetaminophen may be available in multiple concentrations. Always verify the concentration before administering each dose.

For home administration, advise caregivers to administer the amount of medicine listed on the specific drug product label for the patient's weight and age or provide written instructions that specify the dose in milligrams (mg) and/or the concentration and the dose in milliliters (mL).

Oral solution:

Administer using an oral calibrated measuring device to ensure accurate dosing.

Oral suspension:

Shake well prior to each use.

Administer using an oral calibrated measuring device to ensure accurate dosing.

Injectable Administration

Visually inspect parenteral products for particulate matter and discoloration prior to administration whenever solution and container permit.

To reduce the risk of dosing errors that can lead to accidental overdose, hepatotoxicity,

and even death, use special care when preparing and administering acetaminophen intravenous injection. Specifically, ensure that:

the dose in milligrams (mg) and milliliters (mL) is not confused

weight-based dosing is used for patients weighing less than 50 kg

infusion pumps are properly programmed

the total daily acetaminophen dose from all sources does not exceed recommended daily maximum limits

Intravenous Administration

Intermittent IV Infusion Preparation

No further dilution of acetaminophen injectable solution is required.

Do not add other medications to the vial or infusion device.

For doses less than 1,000 mg, the appropriate dose must be withdrawn from the container using aseptic technique and placed in a separate empty, sterile container (e.g., glass bottle, plastic intravenous container, or syringe) prior to administration.

For patients (weighing 50 kg or more) requiring a 1,000 mg dose, administer the dose by inserting an intravenous set directly in the container; use a vented set for vials and a non-vented set for bags.

Storage: Acetaminophen containers are preservative free. FDA-approved labeling recommends administering the dose within 6 hours once the seal on the container has been penetrated or the dose transferred to another container. Discard any unused portion. Of note, acetaminophen has retained physical and chemical stability in a range of volumes (10 to 90 mL) for up to 84 hours in opened vials and polypropylene syringes at room temperature (23 to 25 degrees C). According to USP 797 guidelines, a single transfer of acetaminophen from the original vial to a syringe would be classified as a low-risk condition. The maximum exposure time of low-risk-level compounded sterile products (CSPs) is 48 hours at room temperature when the CSP is compounded aseptically within ISO class 5 or higher air quality.

Intermittent IV Infusion Administration

Infuse the dose over 15 minutes.

Rectal Administration

Instruct patient or caregiver on proper use of suppository.

Prior to insertion, carefully remove the wrapper. Avoid excessive handling as to avoid melting of the suppository.

If suppository is too soft to insert, chill in the refrigerator for 30 minutes or run cold water over it before removing the wrapper.

Moisten the suppository with cool water prior to insertion.

Have patient lie down on their side, usually in the Sim's lateral position to provide

support and comfort.

Apply gentle pressure to insert the suppository completely into the rectum, pointed end first, using a gloved, lubricated index finger.

After insertion, keep the patient lying down to aid retention. May gently hold the buttock cheeks close together to keep the patient from immediately expelling the suppository.

The suppository must be retained in rectum to ensure complete absorption.

Maximum Dosage Limits

- **Adults**

1,000 mg/dose PO/PR/IV or 4,000 mg/day PO/PR/IV for most formulations; some OTC formulations have lower max doses, see individual products. For the extended-release oral product, 1,300 mg/dose PO, with the same overall daily dose limits as other formulations. The total daily maximum dose of 4,000 mg is the maximum dose of acetaminophen from all sources.

- **Geriatric**

1,000 mg/dose PO/PR/IV or 4,000 mg/day PO/PR/IV for most formulations; some OTC formulations have lower max doses, see individual products. For the extended-release oral product, 1,300 mg/dose PO, with the same overall daily dose limits as other formulations. The total daily maximum dose of 4,000 mg is the maximum dose of acetaminophen from all sources.

- **Adolescents**

Weighing 60 kg or more: 1,000 mg/dose PO/IV/PR (Max daily dose: 4,000 mg/day PO/IV/PR).

Weighing 50 to 59 kg: 15 mg/kg/dose PO (Max daily dose: 75 mg/kg/day [Max: 4,000 mg/day] PO); 20 mg/kg/dose PR (Max single dose: 1,000 mg/dose PR; Max daily dose: 100 mg/kg/day [Max: 4,000 mg/day] PR); 1,000 mg/dose IV (Max daily dose: 4,000 mg/day IV).

Weighing less than 50 kg: 15 mg/kg/dose PO/IV (Max daily dose: 75 mg/kg/day [Max: 3,750 mg/day] PO/IV); 20 mg/kg/dose PR (Max daily dose: 100 mg/kg/day [Max: 4,000 mg/day] PR).

- **Children**

2 to 12 years weighing 60 kg or more: 1,000 mg/dose PO/PR (Max daily dose: 4,000 mg/day PO/PR); 15 mg/kg/dose IV (Max single dose: 750 mg/dose IV; Max daily dose: 75 mg/kg/day [Max: 3,750 mg/day] IV).

2 to 12 years weighing 50 to 59 kg: 15 mg/kg/dose PO (Max daily dose: 75 mg/kg/day [Max: 4,000 mg/day] PO); 20 mg/kg/dose PR (Max single dose: 1,000 mg/dose PR; Max daily dose: 100 mg/kg/day [Max: 4,000 mg/day] PR); 15 mg/kg/dose IV (Max single dose: 750 mg/dose IV; Max daily dose: 75 mg/kg/day [Max: 3,750 mg/day] IV).

2 to 12 years weighing less than 50 kg: 15 mg/kg/dose PO/IV (Max daily dose: 75 mg/kg/day [Max: 3,750 mg/day] PO/IV); 20 mg/kg/dose PR (Max daily dose: 100 mg/kg/day [Max: 4,000 mg/day] PR).

1 to 2 years: 15 mg/kg/dose PO (Max daily dose: 75 mg/kg/day PO); 20 mg/kg/dose PR (Max daily dose: 100 mg/kg/day PR); 15 mg/kg/dose IV (Max daily dose: 60 mg/kg/day IV).

- **Infants**

15 mg/kg/dose PO (Max daily dose: 75 mg/kg/day PO); 20 mg/kg/dose PR (Max daily dose: 75 mg/kg/day PR); 15 mg/kg/dose IV (Max daily dose: 60 mg/kg/day IV).

- **Neonates**

10 to 29 days: 20 mg/kg PO load and 15 mg/kg/dose PO maintenance dose (Max daily dose: 90 mg/kg/day PO); 30 mg/kg PR load and 20 mg/kg/dose PR maintenance dose (Max daily dose: 90 mg/kg/day PR); 12.5 mg/kg/dose IV (Max daily dose: 50 mg/kg/day IV). A loading dose up to 20 mg/kg IV and maintenance doses up to 15 mg/kg IV (Max daily dose: 60 mg/kg/day IV) have been used off-label.

0 to 9 days: 20 mg/kg PO load and 15 mg/kg/dose PO maintenance dose (Max daily dose: 60 mg/kg/day PO); 30 mg/kg PR load and 20 mg/kg/dose PR maintenance dose (Max daily dose: 60 mg/kg/day PR); 12.5 mg/kg/dose IV (Max daily dose: 50 mg/kg/day IV). A loading dose up to 20 mg/kg IV and maintenance doses up to 15 mg/kg IV (Max daily dose: 60 mg/kg/day IV) have been used off-label.

32 to 37 weeks gestation: 20 mg/kg PO load and 15 mg/kg/dose PO maintenance dose (Max daily dose: 60 mg/kg/day PO); 30 mg/kg PR load and 20 mg/kg/dose PR maintenance dose (Max daily dose: 60 mg/kg/day PR); 12.5 mg/kg/dose IV (Max daily dose: 50 mg/kg/day IV). A loading dose up to 20 mg/kg IV and maintenance doses up to 10 mg/kg IV (Max daily dose: 40 mg/kg/day IV) have been used off-label.

28 to 31 weeks PMA: 20 mg/kg PO/PR load and 15 mg/kg/dose PO/PR maintenance dose (Max daily dose: 40 mg/kg/day PO/PR). Safety and efficacy of the IV formulation not established; however, loading doses up to 20 mg/kg IV and maintenance doses up to 10 mg/kg/dose IV (Max daily dose: 22.5 mg/kg/day IV) have been used off-label.

Dosage Forms

- 666 Cold Caplet
- 666 Cold Preparation 325mg-10mg-30mg/15ml Solution
- Acephen 120mg Rectal Suppository
- Acephen 325mg Rectal Suppository
- Acephen 650mg Rectal Suppository
- Acetaminophen 1,000mg/30mL Oral solution
- Acetaminophen 10mg/1mL Solution for injection

- Acetaminophen 120mg Rectal suppository
- Acetaminophen 120mg/5mL, Codeine Phosphate 12mg/5mL Oral solution
- Acetaminophen 160mg Chewable tablet
- Acetaminophen 160mg Soft chew
- Acetaminophen 160mg/5mL Oral solution
- Acetaminophen 160mg/5mL Oral suspension
- Acetaminophen 250mg, Aspirin 250mg, Caffeine 65mg Oral tablet
- Acetaminophen 260mg, Aspirin 520mg, Caffeine 32.5mg Oral powder
- Acetaminophen 300mg, Codeine Phosphate 15mg Oral tablet
- Acetaminophen 300mg, Codeine Phosphate 30mg Oral tablet
- Acetaminophen 300mg, Codeine Phosphate 60mg Oral tablet
- Acetaminophen 320.5mg, Caffeine 30mg, Dihydrocodeine Bitartrate 16mg Oral capsule
- Acetaminophen 325mg Oral tablet
- Acetaminophen 325mg Soft chew
- Acetaminophen 325mg, Caffeine 30mg, Dihydrocodeine Bitartrate 16mg Oral tablet
- Acetaminophen 325mg, Dextromethorphan Hydrobromide 10mg, Guaifenesin 100mg, Phenylephrine Hydrochloride 5mg Oral tablet
- Acetaminophen 500mg Oral capsule
- Acetaminophen 500mg Oral tablet
- Acetaminophen 500mg, Diphenhydramine Hydrochloride 25mg Oral tablet
- Acetaminophen 500mg, Pseudoephedrine Hydrochloride 30mg Oral tablet
- Acetaminophen 500mg/15mL Oral solution
- Acetaminophen 650mg Oral tablet, biphasic release
- Acetaminophen 650mg Oral tablet, extended release
- Acetaminophen 650mg Rectal suppository
- Acetaminophen 650mg/30mL, Dextromethorphan Hydrobromide 30mg/30mL, Doxylamine Succinate 12.5mg/30mL Oral solution
- Acetaminophen 8 Hour Arthritis Pain Relief 650mg Extended-Release Caplet
- Acetaminophen 80mg Chewable tablet
- Acetaminophen 80mg/2.5mL Oral suspension
- Acetaminophen 8HR Arthritis Pain 650mg Extended-Release Tablet
- Acetaminophen Bulk powder
- Acetaminophen Extra-Strength Pain Reliever 500mg Tablet
- Acetaminophen Extra-Strength Pain Reliever 500mg Tablet
- Acetaminophen Pain Relief Extra Strength 500mg Caplet
- Acetaminophen Regular Strength 325mg Tablet
- Actidogesic 500mg-1mg Caplet
- ACTIDOGESIC-DF 500mg-1mg Caplet
- Adult Pain Relief Extra Strength 500mg/15mL Liquid

- Adult PAIN RELIEF Extra Strength 500mg/15ml Liquid (Cherry)
- Advil Dual Action 250mg-125mg Caplet
- Advil Dual Action 8 Hour Back Pain Relief 250mg-125mg Caplet
- Alka-Seltzer Plus Cold & Cough Maximum Strength Liquid Gel Capsule
- Alka-Seltzer Plus Day Cold & Flu Liquid Gel Capsule
- Alka-Seltzer Plus Day Severe Cold & Flu Powder for Solution
- Alka-Seltzer Plus Night Severe Cold & Flu Powder for Solution
- Alka-Seltzer Plus Severe Cold & Flu Effervescent Tablet (Citrus)
- Alka-Seltzer Plus Severe Cough & Cold Day & Night Liquid Gel Capsule
- Alka-Seltzer Plus Severe Cough Mucus & Congestion Liquid Gel Capsule
- Alka-Seltzer Plus Severe Sinus Congestion & Cough Day and Night Liquid Gel Capsule
- Alka-Seltzer Plus Severe Sinus Congestion Allergy & Cough Liquid Gel Capsule
- Alka-Seltzer Plus Severe Sinus, Cold & Cough Liquid Gel Capsule
- Alka-Seltzer Severe Cold & Flu Effervescent Tablet (Citrus)
- Aphen 325mg Tablet
- AUROPHEN Children's Pain and Fever 160mg/5mL Suspension (Cherry)
- Bayer Migraine Formula Caplet
- BC MAX STRENGTH Fast Pain Relief 500mg-500mg-65mg Powder (Lemonade)
- BC Sinus Congestion & Pain 650mg-4mg-10mg Powder
- BeneHealth Acetaminophen 325mg Tablet
- BeneHealth Acetaminophen 500mg Tablet
- Bromo Seltzer Packets
- CAREALL Non-Aspirin Extra Strength 500mg Tablet
- CAREALL Regular Strength Acetaminophen 325mg Tablet
- Children's Acetaminophen 160mg/5mL Solution (Cherry)
- Children's Acetaminophen 160mg/5mL Suspension
- Children's Acetaminophen 160mg/5mL Suspension
- Children's Acetaminophen 160mg/5mL Suspension (Cherry)
- Children's Acetaminophen 160mg/5mL Suspension (Grape)
- Children's Acetaminophen 160mg/5mL Suspension (Grape)
- Children's Acetaminophen 160mg/5mL Suspension (Grape)
- Children's Acetaminophen 160mg/5mL Suspension (Orange)
- Children's ED-APAP 80mg/2.5mL Solution
- Children's Pain Relief 160mg/5mL Suspension (Bubble Gum)
- Children's Pain Relief 160mg/5mL Suspension (Grape)
- Children's Pain Relief 80mg/2.5mL Elixir (Bubblegum)
- Children's Pain Reliever and Fever Reducer MAX Relief Junior 160mg/5ml Elixir (Bubble Gum)
- Cold & Flu Daytime Relief Softgel

- Cold & Flu Nighttime Relief Softgel
- Combogesic 325mg-97.5mg Tablet
- Combogesic IV 1000mg-300mg/100mL Solution for Infusion
- Comtrex Cold and Cough Day/Night Caplet
- Comtrex Cold and Cough Nighttime Caplet
- Comtrex Flu Therapy Day and Night Caplet
- Comtrex Maximum Strength Sore Throat Relief 500mg/15ml Solution
- Comtrex Nighttime Cold And Cough Liquid (Orange)
- Comtrex Sore Throat 1000mg/30ml Liquid (Honey Lemon)
- Contac Cold + Flu Cooling Relief Night Solution
- Contac Cold + Flu Day Maximum Strength Caplet
- Contac Cold/Flu Day/Night Maximum Strength Caplet
- Coricidin HBP Cold & Flu Tablet
- Coricidin HBP Cold and Flu Tablet
- Coricidin HBP Day/Night Multi-Symptom Cold Combo Pack
- Coricidin HBP Flu Maximum Strength Tablet
- Coricidin HBP Flu Maximum Strength Tablet
- Coricidin HBP Maximum Strength Cold, Cough & Flu 650mg-20mg/30mL Liquid (Cherry)
- Coricidin HBP Maximum Strength Multi-Symptom Flu 325mg-2mg-10mg Tablet
- Coricidin HBP Nighttime Multi-Symptom Cold Solution
- CVS 8HR Arthritis Pain Relief 650mg Extended-Release Caplet
- CVS 8HR Muscle Aches & Pain 650mg Extended-Release Caplet
- CVS Acetaminophen 325mg Liquid Gel Capsule
- CVS Acetaminophen 325mg Rapid Release Gelcap
- CVS Acetaminophen 325mg Tablet
- CVS Acetaminophen 500mg Extra Strength Caplet
- CVS Acetaminophen 500mg Extra Strength Caplet (Twin Pack)
- CVS Acetaminophen 500mg Extra Strength Easy Swallow Tablet
- CVS Acetaminophen 500mg Extra Strength Rapid Release Gelcap
- CVS Acetaminophen 500mg/15mL Extra Strength Liquid (Cherry)
- CVS Acetaminophen 500mg/15mL Extra Strength Rapid Burst Liquid (Cherry)
- CVS Acetaminophen PM 500mg-25mg Extra Strength Caplet
- CVS Adult Cold & Sinus Maximum Strength Solution
- CVS Adult Cold, Flu & Sore Throat Maximum Strength Solution
- CVS Adult Severe Congestion Relief Maximum Strength Solution
- CVS Allergy Relief Daytime Multi-Symptom Rapid Release Gelcap
- CVS Arthritis Pain Relief 650mg Extended-Release Caplet
- CVS Arthritis Pain Relief 650mg Extended-Release Geltab
- CVS Children's Cold Relief Suspension (Grape)

- CVS Children's Cough & Runny Nose Suspension
- CVS Children's Fever Reducing 120mg Rectal Suppository
- CVS Children's Flu Relief Suspension (Bubblegum)
- CVS Children's Mucus Relief Cough, Cold & Sore Throat Solution (Berry Blast)
- CVS Children's Multi-Symptom Cold & Fever Liquid (Berry Burst)
- CVS Children's Multi-Symptom Cold Plus Pain Relief Suspension (Grape)
- CVS Children's Pain & Fever 160mg/5mL Suspension (Bubble Gum)
- CVS Children's Pain & Fever 160mg/5mL Suspension (Cherry)
- CVS Children's Pain & Fever 160mg/5mL Suspension (Grape)
- CVS Children's Pain & Fever 160mg/5ml Suspension (Strawberry)
- CVS Children's Pain and Fever 160mg/5mL Suspension (Cherry)
- CVS Children's Pain and Fever 160mg/5mL Suspension (Grape)
- CVS Children's Pain Relief 160mg Chewable Tablet (Bubblegum)
- CVS Children's Pain Relief 160mg/5ml Suspension (Cherry)
- CVS Children's Pain Relief 160mg/5mL Suspension (Tropical Punch)
- CVS Children's Pain Relief 80mg Rapid Tab (Bubblegum)
- CVS Children's Pain Relief 80mg Rapid Tab (Grape)
- CVS Children's Pain Relief Plus Multi-Symptom Cold Suspension (Grape)
- CVS Cold & Cough Nighttime 500mg-15mg-6.25mg/15ml Solution
- CVS Cold & Flu HBP 325mg-2mg Tablet
- CVS Cold & Flu Maximum Strength Liquid Gel Capsule
- CVS Cold & Sinus Maximum Strength Caplet
- CVS Cold Relief Daytime/Nighttime Multi-Symptom Cool Blast Caplet
- CVS Cold Relief Multi-Symptom Daytime Non-Drowsy Cool Caplet
- CVS Cold Relief Multi-Symptom Nighttime Liquid (Cool Mint)
- CVS Cold Relief Multi-Symptom Severe Daytime Liquid (Cool Mint)
- CVS Cold Relief Nighttime Cool Caplet
- CVS Cold, Flu & Sore Throat Maximum Strength Caplet
- CVS Cough & Sore Throat 160mg-5mg/5ml Suspension (Cherry)
- CVS Daytime Cold & Flu Relief Liquid
- CVS DayTime Cold/Flu Liquid
- CVS DayTime Cold/Flu Relief Maximum Strength Softgel
- CVS Daytime Multi-Symptom Cold/Flu Relief 325mg-10mg-5mg Softgel
- CVS Daytime Sinus Relief Non-Drowsy Softgel
- CVS Daytime/Nighttime Multi-Symptom Cold/Flu Relief Combo Pack
- CVS Daytime/Nighttime Multi-Symptom Cold/Flu Relief Combo Pack Softgel
- CVS Daytime/Nighttime Multi-Symptom Sinus Relief Combo Pack Softgel
- CVS Daytime/Nighttime Severe Cold & Flu Combo Pack
- CVS Flu & Severe Cold Daytime Solution
- CVS Flu & Sore Throat Solution

- CVS Flu HBP Maximum Strength 325mg-2mg-10mg Caplet
- CVS Flu HBP Maximum Strength Tablet
- CVS Head Congestion Cold Relief Daytime/Nighttime Cool Blast Caplet
- CVS Headache Relief Extra Strength Caplet
- CVS Headache Relief Extra Strength Geltab
- CVS Headache Relief Extra Strength Rapid Release Gelcap
- CVS Headache Relief Extra Strength Tablet
- CVS Infants' Pain & Fever 160mg/5mL Dye Free Suspension (Cherry)
- CVS Infants' Pain & Fever 160mg/5ml Suspension (Cherry)
- CVS Infants' Pain and Fever 160mg/5ml Suspension (Cherry)
- CVS Infants' Pain and Fever 160mg/5ml Suspension (Grape)
- CVS Infants' Pain Relief 160mg/5mL Suspension (Bubble Gum)
- CVS Infants' Pain Relief 160mg/5mL Suspension Drops (Grape)
- CVS Junior Pain Relief 160mg Rapid Tab (Bubblegum)
- CVS Junior Pain Relief 160mg Rapid Tab (Grape)
- CVS Menstrual Relief Caplet
- CVS Menstrual Relief Complete Caplet
- CVS Migraine Relief Caplet
- CVS Mucus Relief Sinus Pressure, Pain & Cough Maximum Strength Caplet
- CVS Multi-Symptom Nighttime Cold/Flu Relief Liquid (Cherry)
- CVS Multi-Symptom Nighttime Sinus Relief Softgel
- CVS Nighttime Cold & Flu Relief 650mg-30mg-12.5mg/30mL Liquid
- CVS Nighttime Cold/Flu Relief 650mg-30mg-12.5mg/30ml Liquid
- CVS Nighttime Cold/Flu Relief Liquid Twin Pack (Cherry)
- CVS Nighttime Multi-Symptom Cold & Flu Relief 650mg-30mg-12.5mg/30mL Liquid (Cherry)
- CVS Nighttime Multi-Symptom Cold/Flu Relief Softgel
- CVS Non-Drowsy Daytime/Nighttime Multi-Symptom Cold/Flu Relief Combo Pack Softgel
- CVS Pain Relief 325mg Tablet
- CVS Pain Relief Extra Strength 500mg Caplet
- CVS Pain Relief Extra Strength 500mg Geltab
- CVS Pain Relief Extra Strength 500mg Liquid Gel
- CVS Pain Relief Extra Strength 500mg Tablet
- CVS Pain Relief PM Aspirin Free Tablet
- CVS Pain Relief PM Extra Strength 500mg-25mg Caplet
- CVS Pain Relief PM Extra Strength 500mg-25mg Geltab
- CVS Pain Relief PM Extra Strength 500mg-25mg Rapid Release Gelcap
- CVS Pain Relief PM Extra Strength Effervescent Tablet
- CVS Pain Relief PM Solution (Berry)

- CVS Severe Daytime Cold & Flu Solution
- CVS Severe Allergy & Sinus Headache Maximum Strength Caplet
- CVS Severe Cold & Cough Daytime Powder for Solution
- CVS Severe Cold & Flu Daytime Relief Solution (Berry)
- CVS Severe Cold & Flu Nighttime Relief Solution (Berry)
- CVS Severe Cold & Flu Relief Caplet
- CVS Severe Cold Multi-Symptom/Severe Cold & Cough Nighttime Powder for Solution
- CVS Severe Cold Relief PE Caplet
- CVS Severe Cold/Flu Relief Daytime Maximum Strength Caplet
- CVS Severe Congestion & Cold Maximum Strength Caplet
- CVS Severe Congestion Relief Nighttime Maximum Strength Solution
- CVS Severe Cough & Cold Daytime/Nighttime Powder for Solution
- CVS Severe Cough & Cold Nighttime Powder for Solution
- CVS Severe Daytime Cold/Flu Relief Liquid
- CVS Severe Daytime/Nighttime Multi-Symptom Cold/Flu Relief Twin Pack
- CVS Severe Head Congestion Cold Relief Daytime Caplet
- CVS Severe Nighttime Cold & Flu Solution (Berry)
- CVS Severe Nighttime Cold & Flu Twin Pack Solution (Berry)
- CVS Severe Sinus Pain and Congestion Daytime Caplet
- CVS Sinus Congestion & Pain Daytime/Nighttime Cool Blast Caplet
- CVS Sinus Congestion & Pain Nighttime Cool Blast Caplet
- CVS Sinus Pain & Congestion Daytime Caplet
- CVS Sinus PE Pressure & Pain Non-Drowsy Caplet
- CVS Sinus PE Pressure, Pain and Cough Caplet
- CVS Sinus Relief Daytime/Nighttime Maximum Strength Caplet
- CVS Sinus Relief Maximum Strength Pressure & Pain Caplet
- CVS Sinus Relief Severe Congestion Maximum Strength Caplet
- CVS Tension Headache Aspirin-Free Caplet
- CVS Tension Headache Aspirin-Free Rapid Release Gelcap
- CVS Tussin CF Adult Cough + Cold Nighttime Liquid
- Cystex PM 500mg-25mg Caplet
- Daytime/Nighttime Cold & Flu Relief Solution Combo Pack
- Delsym Children's Cough + Chest Congestion + Cold Day and Night Combo Pack Solution
- Delsym Children's Cough + Cold Nighttime Solution (Berry)
- Delsym Cough + Sore Throat Solution (Honey)
- Delsym Nighttime Cough Maximum Strength Fast Release Solution
- Diabetic Tussin Cold and Flu 325mg-4mg-15mg Gelcap
- Diabetic Tussin Nighttime 325mg-10mg-12.5mg/5mL Solution

- Diabetic Tussin Nighttime Solution
- DOLOGEN 325 325mg-1mg Caplet
- DOLOGEN 650mg-2mg Caplet
- Dologesic 500mg-1mg Caplet
- Dologesic-DF 500mg-1mg Caplet
- Duraflu Tablet
- ElixSure Fever/Pain 160mg/5ml Solution (Cherry)
- Eqauline Choice Pain Relief Extra Strength 500mg Easy Tab Tablet
- Equaline Acetaminophen 325mg Tablet
- Equaline Acetaminophen Extra Strength 500mg Gelcap
- Equaline Children's Pain Relief 160mg/5mL Suspension (Bubble Gum)
- Equaline Migraine Formula Caplet
- Equaline Nighttime Cold/Flu Relief 650mg-30mg-12.5mg/30ml Liquid
- Equaline Nighttime Severe Cold & Flu Relief Solution (Berry)
- Equaline PM 500mg-25mg Extra Strength Caplet
- Equate 8 HOUR Arthritis Pain Relief 650mg Extended-Release Tablet
- Equate 8 Hour Arthritis Pain Relief Acetaminophen 650mg Extended-Release Tablet
- Equate 8HR Arthritis Pain Relief 650mg Extended-Release Caplet
- Equate Acetaminophen 500mg Capsule
- Equate Acetaminophen 500mg Extra Strength Caplet
- Equate Acetaminophen 8HR 650mg Arthritis Pain Relief Extended-Release Tablet
- Equate Acetaminophen Extra Strength 500mg Caplet
- Equate Acetaminophen Extra Strength 500mg Tablet
- Equate Adult Pain Reliever Extra Strength 500mg/15mL Liquid (Cherry)
- Equate Children's Pain & Fever 160mg Chewable Tablet (Bubblegum)
- Equate Children's Pain & Fever 160mg Chewable Tablet (Grape)
- Equate Children's Pain & Fever 160mg/5mL Suspension (Bubble Gum)
- Equate Children's Pain & Fever 160mg/5mL Suspension (Grape)
- Equate Children's Pain and Fever 160mg/5mL Suspension (Cherry)
- Equate Cold Multi-Symptom Daytime 325mg-10mg-5mg Gelcap
- Equate Daytime Cold & Flu 325mg-10mg-5mg/15mL Solution
- Equate Headache Relief Extra Strength 250mg-250mg-65mg Caplet
- Equate Headache Relief Extra Strength 250mg-250mg-65mg Tablet
- Equate Infant's Pain and Fever 160mg/5mL Suspension (Grape)
- Equate Nighttime Cold & Flu Relief 650mg-30mg-12.5mg/30mL Liquid
- Equate Nighttime Cold & Flu Relief 650mg-30mg-12.5mg/30mL Liquid (Cherry)
- Equate Pain Reliever Extra Strength 500mg Caplet
- Equate Pain Reliever Extra Strength 500mg Caplet
- Equate Pain Reliever Extra Strength 500mg Caplet (2 Pack)
- Equate Pain Reliever Extra-Strength 500mg Gelcap

- Equate Pain Reliever Regular Strength 325mg Tablet
- Equate Pain Reliever Regular Strength 325mg Tablet
- Equate Severe Allergy Plus Sinus Headache 325mg-25mg-5mg Caplet
- Equate Sinus Congestion and Pain 325mg/5mg Non-Drowsy Capsule
- Equate Sinus Congestion and Pain Severe Daytime Cool Caplet
- Equate Vapor Ice Daytime/Nighttime Cold & Flu Combo Pack
- Excedrin Extra Strength 250mg-250mg-65mg Caplet
- Excedrin Extra Strength Caplet
- Excedrin Extra Strength Geltab
- Excedrin Extra Strength Tablet
- Excedrin Migraine Caplet
- Excedrin Migraine Caplet
- Excedrin Migraine Geltab
- Excedrin Migraine Tablet
- Excedrin PM Caplet
- Excedrin PM Headache Caplet
- Excedrin PM Tablet
- Excedrin QuickTabs Orally Disintegrating Tablet (Peppermint)
- Excedrin QuickTabs Orally Disintegrating Tablet (Spearmint)
- Excedrin Sinus Headache Caplet
- Excedrin Tension Headache 500mg-65mg Caplet
- Excedrin Tension Headache Caplet
- FeverAll 650mg Rectal Suppository
- FeverAll Children's 120mg Rectal Suppository
- FeverAll Jr. Strength 325mg Rectal Suppository
- FLONASE Headache and Allergy Relief 325mg-2mg-5mg Relief Caplet
- Foster & Thrive 8 Hour Pain Relief 650mg Extended-Release Caplet
- Foster & Thrive Allergy Multi-Symptom 325mg-2mg-5mg Cool Taste Caplet
- Foster & Thrive Children's Acetaminophen 160mg Chewable Tablet
- Foster & Thrive Children's Pain & Fever 160mg/5mL Suspension (Grape)
- Foster & Thrive Children's Pain & Fever 160mg/5mL Suspension (Strawberry)
- Foster & Thrive Cold & Flu Nighttime Relief 650mg-30mg-12.5mg/30mL Solution
- Foster & Thrive Cold & Flu Nighttime Relief 650mg-30mg-12.5mg/30mL Solution (Cherry)
- Foster & Thrive Daytime Cold & Flu Relief 325mg-10mg-5mg/15mL Solution
- Foster & Thrive Daytime Severe Cold & Flu Relief 325mg-10mg-200mg-5mg Caplet
- Foster & Thrive Daytime Severe Cold & Flu Relief Solution (Honey)
- Foster & Thrive Daytime/Nighttime Multi-Symptom Cold & Flu Relief Softgel
- Foster & Thrive Dual Action 250mg-125mg Caplet
- Foster & Thrive Infants' Pain and Fever 160mg/5mL Suspension (Grape)

- Foster & Thrive Migraine Relief 250mg-250mg-65mg Tablet
- Foster & Thrive Nighttime Severe Cold & Flu Relief Solution (Honey)
- Foster & Thrive Pain Relief Adult Extra Strength 500mg Rapid Release Caplet
- Foster & Thrive Pain Relief Extra Strength 500mg Caplet
- Foster & Thrive Pain Relief Extra Strength 500mg Gelcap
- Foster & Thrive Pain Relief Extra Strength 500mg Tablet
- Foster & Thrive Pain Relief PM Extra Strength 500mg-25mg Geltab
- Foster & Thrive Pain Relief Regular Strength 325mg Tablet
- Foster & Thrive Pain Reliever Adult Extra Strength 500mg Caplet
- Foster & Thrive Pain Reliever Extra Strength 500mg Tablet
- Foster & Thrive Pain Reliever For Children Acetaminophen 120mg Rectal Suppository
- Foster & Thrive Pain Reliever For Children Acetaminophen 650mg Rectal Suppository
- Foster & Thrive Sinus Severe Non-Drowsy 325mg-200mg-5mg Caplet
- G-DOLOGEN 650mg-2mg Caplet
- Giltuss Children's Multi-Symptom Cold & Flu Solution (Strawberry)
- Giltuss Multi-Symptom Cold & Flu 650mg-4mg-13mg-10mg/10mL Solution (Strawberry)
- GNP 8 Hour Pain Relief 650mg Extended-Release Caplet
- GNP Acetaminophen 325mg Gelcap
- GNP Acetaminophen 8 Hour 650mg Extended-Release Caplet
- GNP Acetaminophen 8 Hour Arthritis Pain 650mg Extended-Release Tablet
- GNP Acetaminophen and Ibuprofen 250mg-125mg Caplet
- GNP Acetaminophen Extra Strength 500mg Liquid Capsule
- GNP Adult Allergy Multi-Symptom 325mg-2mg-5mg Cool Taste Caplet
- GNP Adult Tussin CF MAX Severe Multi-Symptom Cough, Cold and Flu Solution
- GNP Allergy Multi-Symptom Cool Taste Caplet
- GNP Allergy Plus Caplet
- GNP Allergy Plus Maximum Strength Caplet
- GNP Allergy Plus Sinus Headache Caplet
- GNP Arthritis Pain Relief 650mg Extended-Release Caplet
- GNP Arthritis Pain Relief 650mg Extended-Release Caplet
- GNP Arthritis Pain Relief Extended-Release Caplet
- GNP Children's Easy-Melts 80mg Tablet (Bubblegum)
- GNP Children's Easy-Melts 80mg Tablet (Grape)
- GNP Children's Multi-Symptom Cold Plus Suspension
- GNP Children's Pain & Fever 160mg/5mL Suspension (Cherry)
- GNP Children's Pain & Fever 160mg/5mL Suspension (Grape)
- GNP Children's Pain & Fever 160mg/5mL Suspension (Grape)

- GNP Children's Pain and Fever 160mg/5mL Suspension (Cherry)
- GNP Children's Pain Relief 160mg Chewable Tablet (Bubblegum)
- GNP Children's Pain Relief 160mg/5mL Suspension (Bubble Gum)
- GNP Children's Pain Relief 160mg/5mL Suspension (Cherry)
- GNP Children's Pain Relief 160mg/5mL Suspension (Cherry)
- GNP Children's Pain Relief 160mg/5mL Suspension (Grape)
- GNP Children's Pain Relief 160mg/5mL Suspension (Grape)
- GNP Children's Pain Relief Plus Multi-Symptom Cold Suspension
- GNP Children's Plus Multi-Symptom Cold Suspension (Grape)
- GNP Cold & Flu Night Time Maximum Strength Caplet
- GNP Cold & Flu Severe Cool Taste Caplet
- GNP Cold + Head Congestion Nighttime Cool Taste Caplet
- GNP Cold + Head Congestion Severe Cool Taste Caplet
- GNP Cold Head Congestion Nighttime Cool Taste Caplet
- GNP Cold Max Day/Night Cool Taste Caplet
- GNP Cold Max Daytime Non-Drowsy Cool Taste Caplet
- GNP Cold Max Severe Cool Taste Caplet
- GNP Cold Multi-Symptom Nighttime Cool Blast Liquid
- GNP Cold Multi-Symptom Nighttime Cool Ice Liquid
- GNP Cold Relief Cold & Flu Severe Daytime Cool Taste Caplet
- GNP Cold Relief Daytime Non-Drowsy Cool Ice Caplet
- GNP Cold Relief Head Congestion Severe Daytime Cool Taste Caplet
- GNP Cold Relief Multi-Symptom Day/Night Cool Taste Caplet
- GNP Cold Relief Multi-Symptom Daytime Cool Taste Caplet
- GNP Day Time Severe Cold & Flu Liquid
- GNP DayTime Cold & Flu Liquid
- GNP Daytime Cold & Flu Softgel
- GNP DayTime Cold/Flu Relief 325mg-10mg-5mg Softgel
- GNP Dual Action Pain Reliever 250mg-125mg Caplet
- GNP Fast Maximum Night Time Cold & Flu Liquid
- GNP Flu & Severe Cold & Cough Daytime Powder for Solution
- GNP Flu & Severe Cold & Cough Nighttime Powder for Solution
- GNP Flu Relief Therapy Daytime Solution
- GNP Flu Relief Therapy NightTime Solution
- GNP Headache PM 500mg-25mg Tablet
- GNP Headache Relief Caplet
- GNP Headache Relief Extra Strength 250mg-250mg-65mg Caplet
- GNP Headache Relief Extra Strength Caplet
- GNP Infants' Pain & Fever 160mg/5mL Dye Free Suspension (Cherry)
- GNP Infants' Pain & Fever Relief 160mg/5mL Suspension (Grape)

- GNP Infants' Pain and Fever 160mg/5ml Suspension
- GNP Infants' Pain and Fever 160mg/5ml Suspension (Grape)
- GNP Infants' Pain Relief 160mg/5mL Suspension (Cherry)
- GNP Infants' Pain Relief 160mg/5mL Suspension (Grape)
- GNP Migraine Relief 250mg-250mg-65mg Tablet
- GNP Migraine Relief Tablet
- GNP Mucus Relief Cold, Flu & Sore Throat Maximum Strength Caplet
- GNP Mucus Relief Cold, Flu and Sore Throat Maximum Strength Solution
- GNP Mucus Relief Severe Cold Maximum Strength Caplet
- GNP Mucus Relief Severe Congestion & Cold Maximum Strength Caplet
- GNP Mucus Relief Sinus Severe Congestion & Pain Maximum Strength 325mg-200mg-5mg Caplet
- GNP Multi-Symptom Cough Sore Throat Nighttime Cool Ice Liquid
- GNP Multi-Symptom Night Time Cold & Flu Relief Solution
- GNP Multi-Symptom Night Time Cold & Flu Relief Solution
- GNP Multi-Symptom Night Time Cold & Flu Relief Solution (Mixed Berry)
- GNP Multi-Symptom Severe Cold Daytime Powder for Solution
- GNP Night Time Cold & Flu Relief Solution (Cherry)
- GNP Night Time Cold & Flu Relief Solution (Original)
- GNP Night Time Cold & Flu Softgel
- GNP Night time Pain Relief Extra Strength 500mg-25mg Caplet
- GNP Nighttime Cold & Flu Softgel
- GNP Nighttime Cold/Flu Softgel
- GNP Pain + Sleep Nighttime Solution (Berry)
- GNP Pain Relief 325mg Liquid Gel Capsule
- GNP Pain Relief 325mg Tablet
- GNP Pain Relief 325mg Tablet
- GNP Pain Relief 500mg/15mL Extra Strength Rapid Burst Liquid (Cherry)
- GNP Pain Relief Extra Strength 500mg Caplet
- GNP Pain Relief Extra Strength 500mg Caplet
- GNP Pain Relief Extra Strength 500mg Easy Tab Tablet
- GNP Pain Relief Extra Strength 500mg Rapid Release Gelcap
- GNP Pain Relief PM 500mg-25mg Gelcap
- GNP Pain Relief PM Extra Strength 500mg-25mg Caplet
- GNP Pain Relief Rapid Release Extra Strength 500mg Caplet
- GNP Pain Reliever Extra Strength 500mg Caplet
- GNP PM Pain Relief Extra Strength 500mg-25mg Caplet
- GNP Severe Daytime Cold & Flu Caplet
- GNP Severe Night Time Cold & Flu Maximum Strength Caplet
- GNP Severe Night Time Cold & Flu Solution

- GNP Severe Night Time Cold & Flu Solution (Berry)
- GNP Severe Sinus Congestion Allergy & Cough Liquid Gel Capsule
- GNP Sinus + Headache Day/Night Cool Taste Caplet
- GNP Sinus + Headache Daytime Cool Taste Caplet
- GNP Sinus and Headache 325mg-5mg Caplet
- GNP Sinus Pressure/Pain Maximum Strength 325mg-5mg Caplet
- GNP Sinus Relief Congestion & Pain Daytime Cool Taste Caplet
- GNP Sinus Relief Daytime/Nighttime Maximum Strength Caplet
- GNP Sinus Relief Nighttime Cool Taste Caplet
- GNP Sinus Relief Pressure & Pain Maximum Strength Caplet
- GNP Sinus Relief Severe Congestion & Pain Caplet
- GNP Sinus Severe Cool Taste Caplet
- GoodSense 8 Hour Pain Relief 650mg Extended-Release Caplet
- GoodSense Acetaminophen 80mg Chewable Tablet
- GoodSense Allergy Multi-Symptom Cool Ice Caplet
- GoodSense Arthritis Pain Relief 650mg Extended-Release Caplet
- GoodSense Children's Pain & Fever 160mg/5mL Suspension (Bubblegum)
- GoodSense Children's Pain & Fever 160mg/5mL Suspension (Cherry)
- GoodSense Children's Pain and Fever 160mg/5mL Solution (Grape)
- GoodSense Children's Pain Relief 160mg/5mL Suspension (Cherry)
- GoodSense Children's Pain Relief 160mg/5mL Suspension (Grape)
- GoodSense Cold + Head Congestion Severe 325mg-200mg-5mg Tablet
- GoodSense Cold Head Congestion Severe Daytime Non-Drowsy Cool Ice Caplet
- GoodSense Cold Max Multi-Symptom Day/Night Cool Taste Caplet
- GoodSense Cold Multi-Symptom Daytime Non-Drowsy Cool Ice Caplet
- GoodSense DayTime Cold & Flu Relief 325mg-10mg-5mg/15mL Liquid
- GoodSense DayTime Cold/Flu Relief Maximum Strength Softgel
- GoodSense DayTime Multi-Symptom Relief Cold & Flu 325mg-10mg-5mg Softgel
- GoodSense Extra Strength Pain Relief PM 500mg-25mg Caplet
- GoodSense Flu & Severe Cold & Cough Daytime Powder for Solution
- GoodSense Headache PM 500mg-25mg Tablet
- GoodSense Headache Relief Tablet
- GoodSense Infant's Pain and Fever Acetaminophen 160mg/5mL Suspension (Cherry)
- GoodSense Infant's Pain and Fever Acetaminophen 160mg/5mL Suspension (Grape)
- GoodSense Infants' Pain and Fever 160mg/5mL Suspension (Cherry)
- GoodSense Migraine Formula 250mg-250mg-65mg Caplet
- GoodSense Migraine Formula Caplet
- GoodSense NightTime Cold & Flu Relief 650mg-30mg-12.5mg/30mL Solution
- GoodSense NightTime Cough & Sore Throat Cool Ice Solution

- GoodSense Pain Relief 325mg Tablet
- GoodSense Pain Relief Extra Strength 500mg Caplet
- GoodSense Pain Relief Extra Strength 500mg Caplet
- GoodSense Pain Relief Extra Strength 500mg Tablet
- GoodSense Pressure + Pain + Cold PE Non-Drowsy 325mg-10mg-100mg-5mg Caplet
- GoodSense Pressure + Pain + Mucus 325mg-200mg-5mg Caplet
- GoodSense Severe DayTime Cold & Flu Maximum Strength Solution
- GoodSense Sinus Congestion and Pain Daytime Non-Drowsy Cool Ice Caplet
- GoodSense Sinus Relief Severe Congestion Relief Maximum Strength Caplet
- GoodSense Sinus Severe Daytime 325mg-200mg-5mg Caplet
- Goody's Back & Body Pain Powder
- Goody's Back & Body Pain Powder
- Goody's Back & Body Pain Relief Liquid (Orange)
- Goody's Extra Strength Headache Powder
- Goody's Extra Strength Headache Powder
- Goody's Extra Strength Headache Powder (Cool Orange)
- Goody's Extra Strength Headache Powder (Cool Orange)
- Goody's Extra Strength Headache Powder (Mixed Fruit Blast)
- Goody's Extra Strength Headache Powder (Mixed Fruit Blast)
- Goody's Headache Relief Shot Solution (Berry)
- Goody's PM Fast Pain Relief Sleep Aid 500mg-38mg Powder
- Goody's PM Powder
- Goody's PM Powder
- Health Mart Daytime Cold & Flu Liquid
- Health Mart Infants' Pain and Fever 160mg/5ml Suspension (Cherry)
- Health Mart Severe Cold & Cough & Flu Nighttime Powder for Solution
- HEALTH STAR Extra Strength Acetaminophen 500mg Tablet
- Health Star Arthritis Pain Relief 650mg Extended-Release Caplet
- HEALTH STAR Children's Acetaminophen 80mg Chewable Tablet
- Health Star Night Time Pain Medicine Extra Strength 500mg-25mg Caplet
- HEALTH STAR Pain-Reliever Extra Strength 250mg-250mg-65mg Caplet
- HistaFlex 325mg-25mg Tablet
- Infant Q-Pap 80mg/0.8ml Drops (Fruit)
- Infants' Acetaminophen 160mg/5mL Suspension (Cherry)
- Kids Pain and Fever Relief 160mg/5mL Liquid (Cherry)
- KinderMed Infant's Pain & Fever 160mg/5mL Suspension (Cherry)
- Kirkland Acetaminophen Extra Strength 500mg Caplet
- Kirkland Acetaminophen Extra Strength 500mg Gelcap
- Kirkland Migraine Headache Relief 250mg-250mg-65mg Caplet
- Kroger Cold & Flu DayTime Multi-Symptom Relief 325mg-10mg-5mg/15mL Solution

- Leader 8 Hour Pain Reliever 650mg Extended-Release Caplet
- Leader 8HR Arthritis Pain Relief 650mg Extended-Release Caplet
- Leader 8HR Muscle Aches & Pain 650mg Extended-Release Caplet
- Leader 8HR Muscle Aches & Pain Relief Acetaminophen 650mg Extended-Release Tablet
- Leader Acetaminophen 325mg Tablet
- Leader Acetaminophen Extra Strength 500mg Caplet
- Leader Acetaminophen Extra Strength 500mg Rapid Release Gelcap
- Leader Acetaminophen Extra Strength 500mg Tablet
- Leader Acetaminophen PM 500mg-25mg Extra Strength Caplet
- Leader Adult Tussin CF Severe Multi-Symptom Cough Cold + Flu Maximum Strength Solution (Raspberry)
- Leader Allergy Multi-Symptom 325mg-2mg-5mg Caplet
- Leader Allergy Multi-Symptom Cool Ice Caplet
- Leader Arthritis Pain Reliever 650mg Extended-Release Geltab
- Leader Arthritis Pain Reliever Extended-Release Caplet
- Leader Children's Acetaminophen 160mg Chewable Tablet (Bubblegum)
- Leader Children's Acetaminophen 160mg Chewable Tablet (Grape)
- Leader Children's Pain & Fever 160mg/5mL Suspension (Bubble Gum)
- Leader Children's Pain & Fever 160mg/5ml Suspension (Cherry)
- Leader Children's Pain & Fever 160mg/5ml Suspension (Strawberry)
- Leader Children's Pain Reliever 160mg/5ml Suspension (Bubblegum)
- Leader Children's Pain Reliever 160mg/5ml Suspension (Strawberry)
- Leader Children's Pain Reliever 80mg Rapid Melts Tablet (Bubblegum)
- Leader Children's Pain Reliever Suspension (Cherry)
- Leader Children's Pain Reliever Suspension (Grape)
- Leader Cold & Flu Daytime Multi-Symptom Softgel
- Leader Cold & Flu Nighttime Multi-Symptom Softgel
- Leader Cold Head Congestion Daytime 325mg-10mg-5mg Caplet
- Leader Cold Head Congestion Daytime Caplet (Cool Blast)
- Leader Cold Head Congestion Nighttime Cool Caplet (Cool Blast)
- Leader Cold Head Congestion Nighttime Cool Ice Caplet
- Leader Cold Head Congestion Severe Daytime Non-Drowsy Cool Ice Caplet
- Leader Day-Time Multi-Symptom Cold/Flu Relief Liquid
- Leader Day-Time Multi-Symptom Relief Cold & Flu Softgels
- Leader Dual Action Pain Relief 250mg-125mg Caplet
- Leader Flu & Severe Cold & Cough Nighttime Powder for Solution
- Leader Flu HBP Maximum Strength Caplet
- Leader Head Congestion & Mucus Non-Drowsy Caplet
- Leader Headache Relief Extra Strength Caplet

- Leader Headache Relief Extra Strength Tablet
- Leader Infants' Pain & Fever 160mg/5ml Suspension (Grape)
- Leader Menstrual Complete Maximum Strength Caplet
- Leader Menstrual Relief Maximum Strength Multi-Symptom 500mg-25mg-15mg Caplet
- Leader Migraine Formula Caplet
- Leader Migraine Relief 250mg-250mg-65mg Caplet
- Leader Migraine Relief Geltab
- Leader Nighttime Cold & Flu Relief Maximum Strength 650mg-30mg-12.5mg/30mL Solution
- Leader Nighttime Cold & Flu Relief Multi-Symptom Softgel
- Leader Nite-Time Multi-Symptom Cold/Flu Relief Solution
- Leader Nite-Time Multi-Symptom Cold/Flu Relief Solution (Cherry)
- Leader Nite-Time Multi-Symptom Relief Cold & Flu Softgels
- Leader Pain Reliever Extra Strength 500mg Caplet
- Leader Pain Reliever Extra Strength 500mg Rapid Release Gelcap
- Leader Pain Reliever Extra Strength 500mg Tablet
- Leader Severe Cold & Cough Nighttime Powder for Solution (Honey Lemon)
- Leader Severe Cold & Flu Caplet
- Leader Severe Sinus Pain and Congestion Daytime Caplet
- Leader Sinus + Headache Daytime Non-Drowsy 325mg-5mg Caplet
- Leader Sinus Relief Severe Congestion & Pain Maximum Strength Caplet
- Leader Tension Headache 500mg-65mg Caplet
- LIQUID PAIN RELIEF 160mg/5ml Solution (Cherry)
- Little Fevers Children's Fever/Pain Reliever 160mg/5ml Suspension (Grape)
- Little Fevers Infants' 160mg/5ml Suspension (Berry)
- Little Fevers Infants' 160mg/5ml Suspension (Grape)
- Little Remedies Infant Fever + Pain Reliever 160mg/5mL Suspension (Berry) (2 Pack)
- Little Remedies New Baby Essentials Kit
- M-PAP 160mg/5mL Solution
- M-PAP 160mg/5mL Solution (Cherry)
- Mapap 500mg Caplet
- Mapap 500mg Capsule
- Mapap 500mg Tablet
- Mapap Children's 160mg Chewable Tablet (Bubblegum)
- Mapap Children's 160mg/5mL Liquid (Cherry)
- Mapap Children's 80mg Chewable Tablet (Grape)
- Mapap Multi-Symptom Cold Formula 325mg-10mg-5mg Caplet
- Medi-First Sinus Pain & Pressure 500mg-5mg Tablet
- Medique APAP Non-Aspirin Extra Strength 500mg Tablet

- Medique CCP Cold, Cough and Flu Relief Caffeine Free Tablet
- Medique Medicidin-D Cold & Allergy Relief Tablet
- Meijer Infants' Pain & Fever 160mg/5mL Suspension (Grape)
- Member's Mark Acetaminophen 650mg Arthritis Pain Relief Extended-Release Caplet
- Member's Mark Acetaminophen Extra Strength 500mg Caplet
- Midol Complete Multi-Symptom Relief 500mg-60mg-15mg Caplet
- Midol Long Lasting Relief 650mg Extended-Release Caplet
- Midol Menstrual Complete 500mg-60mg-15mg Tablet
- Midol PM 500mg-38mg Caplet
- Midol Pre-Menstrual Syndrome 500mg-25mg-15mg Tablet
- MooreBrand Severe Cold Relief Tablets Pseudoephedrine-Free 325mg-200mg-15mg-5mg Tablet
- Mucinex Children's Cold & Flu 325mg-10mg-200mg-5mg/10mL Solution (Very Berry)
- Mucinex Children's Daytime/Nighttime Multi-Symptom Cold Liquid
- Mucinex Children's FreeFrom Daytime Multi-Symptom Cold, Flu & Sore Throat Liquid (Elderberry & Cherry)
- Mucinex Children's FreeFrom Daytime/Nighttime Multi-Symptom Cold, Flu & Sore Throat Liquid
- Mucinex Children's Night Time Multi-Symptom Cold 325mg-12.5mg-5mg/10mL Liquid (Very Berry)
- Mucinex Cold, Flu & Sore Throat Maximum Strength Solution
- Mucinex Day & Night Cold & Flu Maximum Strength Liquid Pack
- Mucinex Fast-Max Cold & Flu Maximum Strength Caplet
- Mucinex Fast-Max Cold & Flu Maximum Strength Liquid Gel Capsule
- Mucinex Fast-Max Cold & Flu Maximum Strength Solution
- Mucinex Fast-Max Cold & Flu Maximum Strength Solution
- Mucinex Fast-Max Cold & Flu Maximum Strength Solution (Orange & Pineapple)
- Mucinex Fast-Max Cold, Flu & Sore Throat Clear & Cool Maximum Strength Solution
- Mucinex Fast-Max Cold, Flu & Sore Throat Maximum Strength Caplet
- Mucinex Fast-Max Cold, Flu & Sore Throat Maximum Strength Caplet
- Mucinex Fast-Max Cold, Flu & Sore Throat Maximum Strength Liquid Gel Capsule
- Mucinex Fast-Max Congestion & Headache Maximum Strength Liquid Gel Capsule
- Mucinex Fast-Max Day Cold & Flu & Nightshift Night Severe Cold & Flu Caplet
- Mucinex Fast-Max Day Severe Congestion & Cough & Nightshift Night Cold & Flu Caplet
- Mucinex Fast-Max Day/Night Cold & Flu Maximum Strength Liquid Gel Capsule
- Mucinex Fast-Max DM Max Maximum Strength & Nightshift Cold & Flu Solution
- Mucinex Fast-Max Kickstart Severe Cold & Flu Maximum Strength Liquid (Menthol)

- Mucinex Fast-Max Kickstart/Night Time Multi-Symptom Cold & Flu Relief Maximum Strength Solution
- Mucinex Fast-Max Severe Congestion & Cough Maximum Strength & Nightshift Cold & Flu Solution
- Mucinex Freefrom Cold, Flu & Congestion Solution (Elderberry & Cherry)
- Mucinex HBP and Diabetes Safe Cold & Flu 325mg-200mg Liquid Gel Capsule
- Mucinex Nightshift Cold & Flu 650mg-20mg-2.5mg/20mL Solution
- Mucinex Nightshift Cold & Flu Maximum Strength Caplet
- Mucinex Nightshift Severe Cold & Flu Maximum Strength Caplet
- Mucinex Nightshift Severe Cold & Flu Maximum Strength Solution
- Mucinex Nightshift Sinus Maximum Strength Caplet
- Mucinex Nightshift Sinus Solution
- Mucinex Sinus-Max Day Pressure, Pain & Cough & Nightshift Night Sinus Maximum Strength Caplet
- Mucinex Sinus-Max Day/Night Maximum Strength Liquid Gel Capsule
- Mucinex Sinus-Max Night Time Congestion & Cough Solution
- Mucinex Sinus-Max Pressure, Pain & Cough Maximum Strength Caplet
- Mucinex Sinus-Max Pressure, Pain & Cough Maximum Strength Liquid Gel Capsule
- Mucinex Sinus-Max Severe Congestion & Pain Maximum Strength 325mg-200mg-5mg Caplet
- Mucinex Sinus-Max Severe Congestion & Pain Maximum Strength 650mg-400mg-10mg/20mL Solution
- Mucinex Sinus-Max Severe Congestion & Pain Maximum Strength Liquid Gel Capsule
- Mucinex Sinus-Max Severe Congestion & Pain Maximum Strength/Nightshift Sinus Liquid
- Mucinex Sinus-Max Severe Congestion Relief 650mg-400mg-10mg/20mL Solution
- Night Time Cold & Flu Relief Softgel
- Ninjacof-A 160mg-12.5mg-12.5mg/5mL Solution (Cotton Candy)
- Ornex Maximum Strength 500mg-30mg Caplet
- PAIN RELIEF Extra-Strength 500mg Caplet
- PAIN RELIEF Extra-Strength 500mg Gelcap
- PAIN RELIEF Extra-Strength 500mg Tablet
- Pain Reliever Extra Strength 500mg Caplet
- Pain Reliever Plus 250mg-250mg-65mg Caplet
- PAIN-RELIEVER Extra Strength 250mg-250mg-65mg Caplet
- Pamprin Multi-Symptom Maximum-Strength Menstrual Pain Relief Caplet
- Panadol 500mg Extra Strength Caplet
- Panadol Children's Acetaminophen 160mg/5mL Solution (Raspberry)
- Panadol Cold + Flu Non-Drowsy 325mg-5mg Caplet

- Panadol Extra 500mg-65mg Caplet
- Panadol PM 500mg-25mg Extra Strength Caplet
- Percogesic 500mg-12.5mg Extra Strength Caplet
- Percogesic 500mg-12.5mg Extra Strength Caplet
- PHARBETOL 325mg Tablet
- PHARBETOL 500mg Caplet
- PHARBETOL 500mg Tablet
- Pharbetol 500mg Tablet
- Plus PHARMA Acetaminophen Extra-Strength 500mg Tablet
- Plus PHARMA Acetaminophen Regular Strength 325mg Tablet
- Preferred Plus Children's Acetaminophen 160mg/5mL Suspension (Grape)
- Premier Value Acetaminophen 8 Hour 650mg Extended-Release Caplet
- Premier Value Allergy & Sinus Headache Relief Caplet
- Premier Value Allergy Multi-Symptom Cool Taste Caplet
- Premier Value Allergy Relief Plus Sinus Headache Severe 325mg-25mg-5mg Caplet
- Premier Value Arthritis Pain Relief 650mg Extended-Release Caplet
- Premier Value Arthritis Pain Relief 650mg Extended-Release Geltab
- Premier Value Children's Cold, Cough & Sore Throat Liquid
- Premier Value Children's Non-Aspirin 80mg Chewable Tablet (Fruit)
- Premier Value Children's Non-Aspirin Pain Relief 160mg/5ml Suspension (Bubble Gum)
- Premier Value Children's Non-Aspirin Pain Relief 160mg/5ml Suspension (Cherry)
- Premier Value Children's Pain Relief 160mg/5ml Suspension (Cherry)
- Premier Value Children's Pain Relief 160mg/5ml Suspension (Grape)
- Premier Value Children's Pain Reliever 80mg Quick Melt Tablet (Grape)
- Premier Value Children's Plus Cold Multi-Symptom Suspension (Grape)
- Premier Value Children's Plus Cough and Runny Nose Suspension
- Premier Value Cold & Flu Severe Cool Taste Caplet
- Premier Value Cold Daytime Non-Drowsy Cool Taste Caplet
- Premier Value Cold Head Congestion Nighttime Cool Taste Caplet
- Premier Value Cold Head Congestion Severe Daytime Non-Drowsy Cool Taste Caplet
- Premier Value Cold Multi-Symptom Day/Night Cool Taste Caplet
- Premier Value Cold Multi-Symptom Nighttime Liquid (Honey Lemon)
- Premier Value Cold Nighttime Cool Taste Caplet
- Premier Value Day-Time Cold/Flu Relief 325mg-10mg-5mg Softgel
- Premier Value Day-Time Liquid
- Premier Value Daytime Cold Head Congestion Severe Caplet (Cool Taste)
- Premier Value DayTime Cold/Flu Relief 325mg-10mg-5mg Softgel
- Premier Value Daytime Severe Cold & Flu Caplet
- Premier Value Daytime Sinus & Congestion Maximum Strength Liquid Capsule

- Premier Value Daytime Sinus Relief Softgel
- Premier Value Daytime/Nighttime Cold/Flu Relief Softgel
- Premier Value DayTime/NightTime Combo Pack Softgel
- Premier Value Flu Relief Therapy Daytime Liquid
- Premier Value Flu Relief Therapy NightTime Solution
- Premier Value Headache Pain-Reliever Caplet
- Premier Value Infants' Pain Relief 160mg/5ml Suspension (Bubble Gum)
- Premier Value Infants' Pain Relief 160mg/5ml Suspension (Cherry)
- Premier Value Infants' Pain Relief 160mg/5ml Suspension (Grape)
- Premier Value Junior Pain Reliever 160mg Quick Melt Tablet (Grape)
- Premier Value Menstrual Relief Maximum Strength Caplet
- Premier Value Mucus Relief Cold, Flu & Sore Throat Maximum Strength Caplet
- Premier Value Mucus Relief Severe Cold Maximum Strength Caplet
- Premier Value Mucus Relief Sinus Severe Congestion Relief Maximum Strength Caplet
- Premier Value Night-Time Multi-Symptom Cold/Flu Relief Softgel
- Premier Value Night-Time Multi-Symptom Cold/Flu Relief Solution
- Premier Value Night-Time Multi-Symptom Cold/Flu Relief Solution (Cherry)
- Premier Value Night-Time Sinus Softgel
- Premier Value Nighttime Cold/Flu Relief Softgel
- Premier Value Nighttime Pain Plus Sleep Solution (Cool Mint)
- Premier Value Nighttime Sinus & Congestion Maximum Strength Liquid Capsule
- Premier Value Nighttime Sinus Softgel
- Premier Value Non-Aspirin 325mg Tablet
- Premier Value Non-Aspirin 8 Hour 650mg Extended-Release Caplet
- Premier Value Non-Aspirin Extra Strength 500mg Caplet
- Premier Value Non-Aspirin Extra Strength 500mg Tablet
- Premier Value Non-Aspirin PM Extra Strength 500mg-25mg Caplet
- Premier Value Non-Aspirin PM Extra Strength 500mg-25mg Geltab
- Premier Value Non-Aspirin Severe Congestion Caplet
- Premier Value Pain Relief Extra Strength 500mg Cool Caplet
- Premier Value Pain Relief Extra Strength 500mg Rapid Release Gelcap
- Premier Value Pain Relief Extra Strength 500mg Tablet
- Premier Value Pain Reliever Extra Strength 500mg Caplet
- Premier Value Pain Reliever PM Extra Strength Caplet
- Premier Value Pain-Reliever Extra Strength Caplet
- Premier Value Pressure & Pain & Cold Caplet
- Premier Value Pressure & Pain Maximum Strength Caplet
- Premier Value Rapid Burst Acetaminophen Extra Strength 500mg/15ml Liquid (Cherry)

- Premier Value Severe Cold 325mg-12.5mg-5mg Caplet
- Premier Value Sinus Congestion & Pain Daytime Non-Drowsy Cool Taste Caplet
- Premier Value Sinus Pain & Congestion Day/Night Cool Taste Caplet
- Premier Value Tension Headache Relief Caplet
- Premier Value Tension Headache Relief Caplet
- Premsyn pms Maximum-Strength Caplet
- Publix Allergy Sinus PE Caplet
- Publix Arthritis Pain Relief 650mg Extended-Release Caplet
- Publix Children's Pain Relief 160mg/5ml Suspension (Cherry)
- Publix Cold Relief Head Congestion Day/Night Caplet
- Publix Cold Relief Multi-Symptom Day/Night Caplet
- Publix Daytime Cold Caplet
- Publix Daytime Multi-Symptom Softgel
- Publix Daytime PE Softgel
- Publix Daytime PE/Nitetime Combo Pack Softgel
- Publix Headache Relief Tablet
- Publix Infants' Pain Relief 80mg/0.8ml Concentrated Drops (Cherry)
- Publix Migraine Relief Caplet
- Publix Nighttime Cold Caplet
- Publix Nite Time Cold and Flu Relief Softgel
- Publix Nite Time Multi-Symptom Cold & Flu Relief Solution
- Publix Nitetime Multi-Symptom Cold & Flu Relief Solution
- Publix Pain Relief Extra Strength 500mg Caplet
- Publix Pain Relief Extra Strength 500mg Tablet
- Publix Pain Relief Extra Strength Geltab
- Publix Pain Relief PM Extra Strength Caplet
- Publix Pain Relief PM Extra Strength Geltab
- Publix Severe Cold Caplet
- Publix Severe Cold Multi-Symptom Caplet
- Publix Sinus Relief 325mg-5mg Caplet
- Q-Pap 325mg Tablet
- Quality Choice 8 Hour Arthritis Pain 650mg Extended-Release Caplet
- Quality Choice 8 Hour Pain Relief 650mg Extended-Release Caplet
- Quality Choice Acetaminophen 8 Hour 650mg Extended-Release Caplet
- Quality Choice Acetaminophen PM Extra Strength 500mg-25mg Rapid Release Gelcap
- Quality Choice Allergy Multi-Symptom 325mg-2mg-5mg Cool Taste Caplet (Mint)
- Quality Choice Allergy Relief Plus Sinus Headache 325mg-12.5mg-5mg Caplet
- Quality Choice Arthritis Pain Relief 650mg Extended-Release Caplet
- Quality Choice Children's Non-Aspirin 160mg Chewable Tablet (Grape)

- Quality Choice Children's Pain Relief 160mg/5ml Suspension (Bubblegum)
- Quality Choice Children's Pain Relief 160mg/5mL Suspension (Cherry)
- Quality Choice Children's Pain Relief 160mg/5ml Suspension (Grape)
- Quality Choice Cold + Flu Severe Daytime/Nighttime Caplet
- Quality Choice Cold Max Multi-Symptom Day/Night Cool Taste Caplet
- Quality Choice Daytime Cold & Flu 325mg-10mg-5mg/15mL Liquid
- Quality Choice DayTime Cold & Flu Multi-Symptom 325mg-10mg-5mg Softgel
- Quality Choice DayTime Severe Cold & Flu 325mg-10mg-200mg-5mg Softgel
- Quality Choice Daytime Sinus + Headache 325mg-5mg Cool Taste Caplet
- Quality Choice Extra Strength Pain Relief 500mg Cool Taste Caplet
- Quality Choice Flu HBP Maximum Strength 325mg-2mg-10mg Caplet
- Quality Choice Headache Relief Extra Strength 250mg-250mg-65mg Tablet
- Quality Choice Headache Relief Extra Strength 250mg-250mg-65mg Tablet
- Quality Choice Infants' Acetaminophen 160mg/5mL Suspension (Cherry)
- Quality Choice Infants' Acetaminophen 160mg/5ml Suspension (Grape)
- Quality Choice Infants' Pain Relief 160mg/5mL Suspension (Cherry)
- Quality Choice Menstrual Complete Maximum Strength 500mg-60mg-15mg Caplet
- Quality Choice Menstrual Pain Relief Maximum Strength 500mg-25mg-15mg Caplet
- Quality Choice Mucus Relief Cold & Flu All-In-One Maximum Strength 325mg-10mg-200mg-5mg Caplet
- Quality Choice Mucus Relief Cold, Flu & Sore Throat Maximum Strength 650mg-20mg-400mg-10mg/20mL Solution
- Quality Choice Mucus Relief Cold, Flu & Sore Throat Maximum Strength Caplet
- Quality Choice Mucus Relief Cold, Flu & Sore Throat Maximum Strength Softgel
- Quality Choice Mucus Relief Sinus Pressure, Pain & Cough Maximum Strength Caplet
- Quality Choice Mucus Relief Sinus Severe Congestion Relief Maximum Strength 325mg-200mg-5mg Caplet
- Quality Choice Nighttime Cold & Flu 650mg-30mg-12.5mg/30mL Liquid
- Quality Choice Nighttime Cold & Flu 650mg-30mg-12.5mg/30mL Liquid (Cherry)
- Quality Choice NightTime Cold & Flu Multi-Symptom Relief 325mg-15mg-6.25mg Softgel
- Quality Choice NightTime Severe Cold & Flu 325mg-10mg-6.25mg-5mg Softgel
- Quality Choice Non-Aspirin 160mg Rapid Melt Tablet (Grape)
- Quality Choice Non-Aspirin Junior Strength 160mg Rapid Melt Tablet (Grape)
- Quality Choice Non-Aspirin Severe Cold & Flu 325mg-10mg-200mg-5mg Cool Taste Caplet
- Quality Choice Pain Relief 325mg Regular-Strength Tablet
- Quality Choice Pain Relief 500mg Extra-Strength Caplet
- Quality Choice Pain Relief 500mg Extra-Strength Tablet

- Quality Choice Pain Relief Extra Strength 500mg Caplet
- Quality Choice Pain Relief Extra Strength 500mg Easy Tab Tablet
- Quality Choice Pain Relief Extra Strength 500mg Gelcap
- Quality Choice Pain Relief Extra Strength 500mg/15mL Liquid (Cherry)
- Quality Choice Pain Relief PM Extra Strength 500mg-25mg Caplet
- Quality Choice Pain Relief PM Extra Strength 500mg-25mg Geltab
- Quality Choice Pressure + Pain + Cold PE Non-Drowsy 325mg-10mg-100mg-5mg Caplet
- Quality Choice Pressure + Pain + Mucus PE 325mg-200mg-5mg Caplet
- Quality Choice Severe Cold and Cough Nighttime 650mg-25mg-10mg Powder for Solution
- Quality Choice Severe Cold Head Congestion Non-Drowsy 325mg-200mg-5mg Cool Taste Caplet
- Quality Choice Severe Sinus Congestion & Pain 325mg-200mg-5mg Caplet
- RITE AID Acetaminophen 325mg Tablet
- RITE AID Acetaminophen 500mg Gelcaps
- RITE AID Acetaminophen 8 Hour 650mg Extended-Release Caplet
- RITE AID Acetaminophen Extra Strength 500mg Easy Tab Tablet
- RITE AID Acetaminophen PM Extra Strength 500mg-25mg Caplet
- RITE AID Acetaminophen PM Extra Strength 500mg-25mg Geltab
- RITE AID Arthritis Pain Relief 650mg Extended-Release Caplet
- RITE AID Children's Acetaminophen 160mg Chewable Tablet
- RITE AID Children's Cough & Runny Nose Plus Suspension (Cherry)
- RITE AID Children's Fever Reducer/Pain Reliever 160mg/5ml Suspension (Bubblegum)
- RITE AID Children's Fever Reducer/Pain Reliever 160mg/5mL Suspension (Cherry)
- RITE AID Children's Fever Reducer/Pain Reliever 160mg/5ml Suspension (Grape)
- RITE AID Children's Flu Relief Plus Suspension (Bubblegum)
- RITE AID Children's Multi-Symptom Cold Relief Plus Suspension (Grape)
- RITE AID Children's Pain & Fever 160mg/5mL Suspension
- RITE AID Children's Pain Reliever Rapid Melt 80mg Dissolving Tablet (Bubblegum)
- RITE AID Cold & Flu HBP Tablet
- RITE AID Cold and Flu Relief HBP Maximum Strength 500mg-2mg-15mg Tablet
- RITE AID Daytime Cold & Flu Relief Liquid
- RITE AID Daytime Cold & Flu Relief Softgel
- RITE AID Daytime/Nighttime Cough & Cold Relief PE Caplets
- RITE AID Daytime/Nighttime Multi-Symptom Cold & Flu Relief Softgel
- RITE AID Daytime/Nighttime Multi-Symptom Cold Relief Caplet
- RITE AID Head Congestion & Cold Relief Severe Daytime Non-Drowsy Caplet
- RITE AID Infants' Fever Reducer & Pain Reliever 160mg/5ml Suspension (Cherry)

- RITE AID Infants' Fever Reducer & Pain Reliever 160mg/5ml Suspension (Grape)
- RITE AID Infants' Pain Relief 80mg/0.8ml Concentrated Drops (Cherry)
- RITE AID Junior Acetaminophen 160mg Chewable Tablet (Bubble Gum)
- RITE AID Junior Acetaminophen 160mg Rapid Melts Tablet (Bubble Gum)
- RITE AID Junior Acetaminophen 160mg Rapid Melts Tablet (Grape)
- RITE AID Menstrual Complete Caplet
- RITE AID Menstrual Complete Maximun Strength Caplet
- RITE AID Menstrual Pain Relief Maximum Strength Caplet
- RITE AID Migraine Relief Caplet
- RITE AID Mucus Relief Cold, Flu & Sore Throat Maximum Strength 325mg-10mg-200mg-5mg Caplet
- RITE AID Mucus Relief Plus Caplet
- RITE AID Multi-Symptom Daytime Cold Relief Gelcaps
- RITE AID Multi-Symptom Nite Time Cold/Flu Solution (Cherry)
- RITE AID Nighttime Cold & Flu Relief 650mg-30mg-12.5/30ml Liquid
- RITE AID Nighttime Cold & Flu Relief 650mg-30mg-12.5/30ml Liquid (Cherry)
- RITE AID Nighttime Cold & Flu Relief Softgel
- RITE AID Pain Relief 325mg Tablet
- RITE AID Pain Relief Acetaminophen 500mg Extra Strength Caplet
- RITE AID Pain Relief Acetaminophen 500mg Extra Strength Tablet
- RITE AID Pain Relief Extra Strength 500mg Easy Tab Tablet
- RITE AID Pain Relief Extra Strength 500mg Rapid Release Gelcap
- RITE AID Pain Reliever 250mg-250mg-65mg Extra Strength Gelcap
- RITE AID Pain Reliever 250mg-250mg-65mg Extra Strength Tablet
- RITE AID Severe Allergy Plus SINUS HEADACHE Caplet
- RITE AID Severe Cold & Cough Relief Daytime Powder for Solution
- RITE AID Severe Cold & Cough Relief Daytime Solution (Cherry)
- RITE AID Severe Cold & Cough Relief Nighttime Powder for Solution
- RITE AID Severe Cold & Flu Caplet
- RITE AID Severe Cold & Sinus Relief PE Caplet
- RITE AID Severe Cold Relief Caplet (Cool Blast)
- RITE AID Severe Cold, Cough & Flu Relief Daytime Powder for Solution
- RITE AID Severe Sinus Congestion & Pain Relief Daytime Non-Drowsy Caplet
- RITE AID Sinus Congestion and Pain Relief Daytime Non-Drowsy Rapid Release Gelcap
- RITE AID Sinus Pressure & Pain Relief PE Maximum Strength 325mg-5mg Caplet
- RITE AID Tension Headache Caplet
- Robitussin CF MAX Severe Cough + Sore Throat Maximum Strength Solution (Mint)
- Robitussin CF MAX Severe Multi-Symptom Cough Cold + Flu Maximum Strength Solution

- Robitussin Honey CF MAX Severe Cough, Flu + Sore Throat Solution
- Robitussin Severe Multi-Symptom Daytime/Nighttime Cough Cold + Flu Maximum Strength Solution (Berry)
- Robitussin Severe Multi-Symptom Nighttime Cough Cold + Flu Maximum Strength Solution
- Select Brand Arthritis Pain Relief Extended-Release Caplet
- Select Brand Children's Pain Reliever 80mg Chewable Tablet
- Select Brand Children's Pain Reliever Suspension (Bubble Gum)
- Select Brand Children's Pain Reliever Suspension (Grape)
- Select Brand Daytime Liquid
- Select Brand Pain Reliever 325mg Tablet
- Select Brand Pain Reliever 500mg Caplet
- Select Brand Pain Reliever 500mg Rapid Release Gelcap
- Select Brand Pain Reliever 500mg Tablet
- Select Brand Pain Reliever PM 500mg-25mg Caplet
- Sinus Congestion and Pain 325mg/5mg Non-Drowsy Caplet
- Staflex 250mg-2mg Tablet
- Sudafed PE Head Congestion + Flu Severe Tablet
- Sudafed PE Head Congestion + Mucus Tablet
- Sudafed PE Sinus Pressure + Pain 325mg-5mg Maximum Strength Caplet
- Sunmark Nite Time Cold & Flu Multi-Symptom Relief Solution
- Sunmark Pain Reliever Extra Strength 500mg Caplet
- Sunmark Pain Reliever Extra Strength 500mg Tablet
- TACTINAL Regular Strength 325mg Tablet
- Theraflu Cold and Chest Congestion Warming Solution
- Theraflu ExpressMax Severe Cold & Cough Daytime Solution (Berry)
- Theraflu ExpressMax Severe Cold & Cough Daytime Warming Caplet
- Theraflu ExpressMax Severe Cold & Cough Nighttime Solution (Berry)
- Theraflu ExpressMax Severe Cold & Cough Nighttime Warming Caplet
- Theraflu ExpressMax Severe Cold & Flu Caplet
- Theraflu ExpressMax Severe Cold & Flu Solution (Berry)
- Theraflu Flu and Sore Throat Powder for Solution
- Theraflu Flu and Sore Throat Warming Solution
- Theraflu Multi-Symptom Flu Relief Maximum Strength 1000mg-30mg Powder for Solution (Honey Lemon)
- Theraflu Multi-Symptom Severe Cold & Cough Daytime/Nighttime Powder for Solution
- Theraflu Multi-Symptom Severe Cold Powder for Solution
- Theraflu Multi-Symptom Severe Cold Relief 500mg-20mg Powder for Solution (Honey Lemon)

- Theraflu Multi-Symptom Severe Cold Relief 650mg-20mg Powder for Solution (Berry Burst)
- Theraflu Multi-Symptom Severe Cold Relief Nighttime 650mg-25mg Powder for Solution (Honey Lemon)
- Theraflu PowerPods Severe Cold Daytime Pod (Berry)
- Theraflu PowerPods Severe Cold NighttimePod (Honey Lemon)
- Theraflu Severe Cold & Cough Daytime Powder for Solution
- Theraflu Severe Cold & Cough Daytime Powder for Solution
- Theraflu Severe Cold & Cough Daytime/Nighttime Powder for Solution
- Theraflu Severe Cold & Cough Nighttime Powder for Solution
- Theraflu Severe Cold & Cough Nighttime Powder for Solution
- Theraflu Severe Cold and Cough Daytime and Nighttime Waming Solution
- Theraflu Severe Cold and Cough Daytime Waming Solution
- Theraflu Severe Cold and Cough Nighttime Warming Solution
- Theraflu Severe Cold Relief 325mg-10mg Soft Chews (Apple Cinnamon)
- Theraflu Sinus and Cold Warming Solution
- Theraflu-D Flu Relief Max Strength 1000mg-30mg-60mg/30mL Syrup (Cherry)
- Theraflu-D Flu Relief Max Strength Nighttime 1000mg-4mg-30mg-60mg/30mL Syrup (Cherry)
- Theraflu-D Severe Cold Relief + Nasal Decongestant 500mg-20mg-60mg Powder for Solution
- Today's Health Acetaminophen Extra Strength 500mg Caplet
- Today's Health Acetaminophen Extra Strength 500mg Cool Taste Caplet
- Today's Health Acetaminophen Extra Strength 500mg Easy Tab Tablet
- Today's Health Acetaminophen PM Extra Strength 500mg-25mg Caplet
- Today's Health Allergy and Cold 325mg-12.5mg-5mg Caplet
- Today's Health Allergy Relief + Sinus Headache 325mg-12.5mg-5mg Caplet
- Today's Health Arthritis Pain Relief 650mg Extended-Release Caplet
- Today's Health Children's Pain Reliever Suspension (Bubble Gum)
- Today's Health Children's Pain Reliever Suspension (Cherry)
- Today's Health Children's Pain Reliever Suspension (Grape)
- Today's Health Children's Plus Cough and Runny Nose Suspension
- Today's Health Day Time Multi-Symptom Cold/Flu Relief Solution
- Today's Health Day Time Softgel
- Today's Health Nighttime Multi-Symptom Cold & Flu Relief Solution
- Today's Health Nighttime Multi-Symptom Cold & Flu Relief Solution (Cherry)
- Today's Health Pain Reliever PM Extra Strength Geltab
- Today's Health Severe Cold Multi-Symptom Caplet
- Today's Health Sinus Headache PE Maximum Strength 325mg-5mg Caplet
- Top Care 8 Hour Pain Relief 650mg Extended-Release Caplet

- Top Care Allergy Multi-Symptom Cool Ice Caplet
- Top Care Arthritis Pain Relief 650mg Extended-Release Caplet
- Top Care Children's Fever Reducer 120mg Rectal Suppository
- Top Care Children's Pain & Fever 160mg/5mL Suspension (Bubble Gum)
- Top Care Children's Pain & Fever 160mg/5mL Suspension (Grape)
- Top Care Children's Pain Relief 160mg/5ml Suspension (Bubblegum)
- Top Care Children's Pain Relief 160mg/5ml Suspension (Cherry)
- Top Care Children's Pain Relief 160mg/5ml Suspension (Grape)
- Top Care Children's Pain Relief 160mg/5ml Suspension (Strawberry)
- Top Care Children's Pain Relief Plus Multi-Symptom Cold Suspension (Grape)
- Top Care Cold Head Congestion Daytime Cool Ice Caplet
- Top Care Cold Head Congestion Nighttime Cool Ice Caplet
- Top Care Cold Head Congestion Severe Daytime Non-Drowsy Cool Ice Caplet
- Top Care Cold Multi-Symptom DayTime Cool Ice Caplet
- Top Care Cold Multi-Symptom Nighttime Cool Ice Caplet
- Top Care Cold Multi-Symptom Severe Daytime Non-Drowsy Cool Ice Caplet
- Top Care Cough and Sore Throat Daytime Cool Ice Solution
- Top Care DayTime Cold & Flu Relief Liquid
- Top Care Extra Strength Pain Relief 500mg Tablet
- Top Care Flu and Sore Throat Powder for Solution
- Top Care Headache Formula Tablet
- Top Care Headache PM 500mg-25mg Tablet
- Top Care Infants' Pain and Fever 160mg/5mL Suspension (Cherry)
- Top Care Infants' Pain and Fever 160mg/5mL Suspension (Grape)
- Top Care Infants' Pain Relief 80mg/0.8ml Concentrated Drops (Grape)
- Top Care Infants' Pain Relief 80mg/0.8ml Drops (Cherry)
- Top Care Migraine Formula Caplet
- Top Care Multi-Symptom DayTime Cold and Flu Relief 325mg-10mg-5mg Softgel
- Top Care Multi-Symptom NightTime Cold & Flu Relief Solution
- Top Care Multi-Symptom Nite Time Cold & Flu Relief Solution
- Top Care NightTime Cough & Sore Throat Cool Ice Solution
- Top Care Nite Time Cold and Flu Relief Softgel
- Top Care Pain Relief 325mg Tablet
- Top Care Pain Relief 500mg Caplet
- Top Care Pain Relief Extra Strength 500mg Cool Ice Caplet
- Top Care Pain Relief Extra Strength 500mg Rapid Release Gelcap
- Top Care Pain Relief Extra Strength 500mg Tablet
- Top Care Pain Relief PM 500mg-25mg Caplet
- Top Care Pain Relief PM 500mg-25mg Rapid Release Gelcap
- Top Care Pain Relief Regular Strength 325mg Tablet

- Top Care Sinus Congestion and Pain Daytime Non-Drowsy Cool Ice Caplet
- Top Care Sinus Congestion and Pain Nighttime Cool Ice Caplet
- TopCare 8HR Arthritis Pain Relief 650mg Extended-Release Caplet
- TopCare Children's Dye-Free Pain & Fever 160mg/5mL Suspension (Cherry)
- Topcare Children's Pain & Fever 160mg/5mL Suspension (Cherry)
- TopCare Pain Relief Extra Strength 500mg Softgel
- Trezix 320.5mg-30mg-16mg Capsule
- Trezix 320.5mg-30mg-16mg Capsule
- Triaminic Cough & Sore Throat Solution
- Triaminic Multi-Symptom Fever 160mg-1mg-7.5mg/5ml Solution
- Tylenol 325mg Liquid Gel Capsule
- Tylenol 325mg Tablet
- Tylenol 8 Hour 650mg Extended Relief Caplet
- Tylenol 8 Hour Arthritis Pain 650mg Extended-Release Caplet
- Tylenol 8 Hour Muscle Aches & Pain 650mg Extended-Release Caplet
- Tylenol Adult's Pain + Fever 500mg Dissolve Packs Oral Powder (Berry)
- Tylenol Children's 160mg Chewable Tablet (Bubblegum)
- Tylenol Children's 160mg Chewable Tablet (Grape)
- Tylenol Children's 160mg/5ml Suspension (Bubblegum)
- Tylenol Children's 160mg/5ml Suspension (Cherry)
- Tylenol Children's 160mg/5ml Suspension (Grape Splash)
- TYLENOL Children's 160mg/5mL Suspension (Grape)
- TYLENOL Children's 160mg/5mL Suspension (Strawberry)
- Tylenol Children's Be Ready At Home Or On-The-Go 16mg-160mg/5mL Convenience Kit
- Tylenol Children's Cold + Cough + Runny Nose 160mg-1mg-5mg/5mL Suspension (Grape)
- Tylenol Children's Cold + Cough + Sore Throat 160mg-5mg/5mL Suspension (Bubblegum)
- Tylenol Children's Cold Plus Flu Suspension (Bubblegum)
- Tylenol Children's Cold Plus Flu Suspension (Grape)
- Tylenol Children's Pain + Fever 160mg Dissolve Packs Oral Powder
- Tylenol Children's Pain + Fever 160mg/5mL Suspension (Cherry)
- Tylenol Children's Pain + Fever 160mg/5mL Suspension (Grape)
- Tylenol Cold & Flu Severe Caplet
- Tylenol Cold & Flu Severe Liquid (Honey Lemon)
- TYLENOL COLD + FLU + COUGH 325mg-10mg-6.25mg-5mg/15mL NIGHT Solution (WILD BERRY BURST)
- Tylenol Cold + Flu Extra Strength Day and Night Caplet
- Tylenol Cold + Flu Extra Strength Daytime Non-Drowsy Caplet

- Tylenol Cold + Flu Severe Day and Night Caplet
- Tylenol Cold Head Congestion Severe Caplet
- TYLENOL COLD MAX DAY 325mg-10mg-5mg CAPLET
- Tylenol Extra Strength 500mg Rapid Release Gels
- Tylenol Extra Strength 500mg Tablet
- Tylenol Infants' 160mg/5mL Suspension (Cherry)
- Tylenol Infants' 160mg/5mL Suspension (Grape)
- Tylenol Infants' Pain + Fever 160mg/5mL Suspension (Cherry)
- Tylenol Infants' Pain + Fever 160mg/5mL Suspension (Cherry)
- Tylenol Pain + Fever 160mg/5mL Suspension (Cherry)
- Tylenol PM Extra Strength 500mg-25mg Caplet
- Tylenol Regular Strength 325mg Caplet
- TYLENOL SINUS + HEADACHE DAY 325mg-5mg CAPLET
- Tylenol Sinus Severe Day 325mg-200mg-5mg Caplet
- Tylenol with Codeine No.3 Tablet
- Unisom PM Pain 325mg-50mg Caplet
- up & up Acetaminophen Extra Strength 500mg Gelcap
- up & up Children's Acetaminophen 160mg/5mL Solution (Grape)
- ValueMeds Pain Relief Acetaminophen 500mg Extra Strength Caplet
- VANQUISH 250mg-250mg-65mg Extra Strength Caplet
- Vicks DayQuil Cold & Flu 325mg-10mg-5mg Liquicap
- Vicks DayQuil Cold & Flu Multi-Symptom 325mg-10mg-5mg Liquicap
- Vicks DayQuil Cold & Flu Relief Liquid
- Vicks DayQuil LiquiCap/NyQuil Liquid Cold & Flu Relief Combo Pack
- Vicks DayQuil Severe Cold & Flu Caplet
- Vicks DayQuil Severe Cold & Flu Solution
- Vicks DayQuil/NyQuil Cold & Flu Liquicap
- Vicks DayQuil/NyQuil Cold & Flu Relief Liquicap Combo Pack
- Vicks DayQuil/NyQuil Severe Cold & Flu Twin Pack Solution
- Vicks DayQuil/NyQuil Sinex Sinus Relief Liquicap Combo Pack
- Vicks Formula 44 Custom Care Cough & Cold PM Solution (Berry Burst)
- Vicks NyQuil Cold & Flu Nighttime 325mg-15mg-6.25mg LiquiCap
- Vicks NyQuil Cold & Flu Nighttime LiquiCap
- Vicks NyQuil Cold & Flu Nighttime Relief Liquid
- Vicks NyQuil Cold & Flu Nighttime Relief Liquid (Cherry)
- Vicks NyQuil Cold & Flu Relief 650mg-30mg-12.5mg/30ml Liquid
- Vicks NyQuil Cold & Flu Relief Liquid (Berry)

- Vicks NyQuil Cold & Flu Relief Liquid (Cherry)
- Vicks NyQuil Cold & Flu Relief Liquid (Vanilla Cherry Swirl)
- Vicks NyQuil Severe Cold & Flu Max Strength 325mg-10mg-6.25mg-5mg Caplet
- Vicks NyQuil Severe Cold & Flu Solution
- Vicks NyQuil Severe Cold & Flu Solution (Berry)
- Vicks Sinex Daytime Congestion Pressure & Pain 325mg-5mg LiquiCap
- Vicks Sinex Daytime/Nighttime Congestion Pressure & Pain LiquiCap Combo Pack
- Vicks Sinex Nighttime Congestion Pressure & Pain 325mg-6.25mg-5mg LiquiCap
- Vicks Sinex Severe Congestion 325mg-200mg-5mg LiquiCap
- Wal-Dryl Severe Allergy & Sinus Headache Maximum Strength 325mg-25mg-5mg Caplet
- Wal-Flu Daytime Flu & Severe Cold/Nighttime Flu & Severe Cold Powder for Solution
- Wal-Flu Severe Cold & Cough Daytime/Nighttime Powder for Solution
- Wal-Flu Severe Cold & Cough Nighttime Powder for Solution
- Wal-Flu Severe Cold & Cough Powder for Solution (Honey Lemon)
- Wal-Flu Severe Cold Multi-Symptom Powder for Solution
- Wal-Flu Severe Cold Nighttime 650mg-20mg-10mg Powder for Solution
- Wal-Phed PE Day/Night Cold Caplet
- Wal-Phed PE Pressure + Pain + Cold Caplet
- Wal-phed PE Severe Cold 325mg-12.5mg-5mg Caplet
- Wal-phed PE Sinus Headache 325mg-5mg Caplet
- Wal-Tussin Cold Multi-Symptom Cold & Flu Softgel
- Walgreens 8 Hour Arthritis Pain Reliever 650mg Extended-Release Caplet
- Walgreens 8-Hour Pain Reliever 650mg Extended-Release Caplet
- Walgreens Acetaminophen 325mg Tablet
- Walgreens Acetaminophen 500mg Caplet
- Walgreens Acetaminophen 8 Hour 650mg Extended-Release Caplet
- Walgreens Acetaminophen 8-Hour 650mg Extended-Release Caplet
- Walgreens Acetaminophen Extra Strength 500mg Caplet
- Walgreens Acetaminophen Extra Strength 500mg Cool Ice Caplet
- Walgreens Acetaminophen Extra Strength 500mg Easy Tab Tablet
- Walgreens Acetaminophen Extra Strength 500mg Gelcap
- Walgreens Acetaminophen Extra Strength 500mg Geltab
- Walgreens Acetaminophen Extra Strength 500mg Rapid Release Gelcap
- Walgreens Acetaminophen Extra Strength 500mg Tablet
- Walgreens Acetaminophen PM Extra Strength 500mg-25mg Caplet
- Walgreens Acetaminophen PM Extra Strength 500mg-25mg Gelcap
- Walgreens Acetaminophen PM Extra Strength 500mg-25mg Geltab
- Walgreens Adult Pain Reliever 500mg/15mL Extra Strength Liquid
- Walgreens Allergy Multi-Symptom 325mg-2mg-5mg Gelcap

- Walgreens Allergy Multi-Symptom Daytime Cool Caplet
- Walgreens Allergy Multi-Symptom Daytime Gelcap
- Walgreens Allergy Multi-Symptom Night/Day Caplet Combo Pack
- Walgreens Allergy Multi-Symptom Nighttime Cool Caplet
- Walgreens Arthritis Pain Relief 650mg Extended-Release Caplet
- Walgreens Arthritis Pain Relief Extended-Release Caplet
- Walgreens Arthritis Pain Reliever 650mg Extended-Release Caplet
- Walgreens Arthritis Pain Reliever 650mg Extended-Release Geltab
- Walgreens Arthritis Pain Reliever Acetaminophen 8 Hour 650mg Extended-Release Tablet
- Walgreens Chest Congestion Daytime Caplet (Cool Blast)
- Walgreens Children's Acetaminophen 160mg/5mL Suspension (Cherry)
- Walgreens Children's Acetaminophen 80mg Rapid Tab (Bubble Gum)
- Walgreens Children's Acetaminophen 80mg Rapid Tab (Grape)
- Walgreens Children's Cold, Cough & Runny Nose 160mg-1mg-5mg/5mL Suspension
- Walgreens Children's Cough & Runny Nose Suspension (Cherry)
- Walgreens Children's Cough, Cold & Sore Throat Solution (Berry)
- Walgreens Children's Daytime/Nighttime Multi-Symptom Cold Combo Pack
- Walgreens Children's Dye-Free Pain & Fever 160mg/5mL Suspension (Bubble Gum)
- Walgreens Children's Dye-Free Pain & Fever 160mg/5ml Suspension (Cherry)
- Walgreens Children's Dye-Free Pain & Fever 160mg/5mL Suspension (Grape)
- Walgreens Children's Fever Reducer 120mg Rectal Suppository
- Walgreens Children's Multi-Symptom Cold Suspension (Grape)
- Walgreens Children's Non-Aspirin 160mg/5ml Suspension (Cherry)
- Walgreens Children's Non-Aspirin 160mg/5ml Suspension (Grape)
- Walgreens Children's Non-Aspirin Plus Cold & Cough Chewable Tablet
- Walgreens Children's Pain & Fever 160mg Chewable Tablet (Bubblegum)
- Walgreens Children's Pain & Fever 160mg Chewable Tablet (Grape)
- Walgreens Children's Pain & Fever 160mg/5mL Suspension (Bubble Gum)
- Walgreens Children's Pain & Fever 160mg/5mL Suspension (Cherry)
- Walgreens Children's Pain & Fever 160mg/5mL Suspension (Grape)
- Walgreens Children's Pain & Fever 160mg/5mL Suspension (Strawberry)
- Walgreens Children's Pain Relief 160mg/5mL Suspension
- Walgreens Children's Pain Reliever/Fever Reducer 120mg Suppository
- Walgreens Cold & Flu Daytime High Blood Pressure 650mg-20mg/30mL Solution
- Walgreens Cold & Flu Daytime Multi-Symptom Capsule
- Walgreens Cold & Flu Daytime Multi-Symptom LiquidCap
- Walgreens Cold & Flu Daytime/Nighttime Multi-Symptom Liquid
- Walgreens Cold & Flu Daytime/Nighttime Pack Softgel
- Walgreens Cold & Flu Maximum Strength Softgel

- Walgreens Cold & Flu Nighttime Multi-Symptom 325mg-15mg-6.25mg LiquidCap
- Walgreens Cold & Flu Nighttime Multi-Symptom 650mg-30mg-12.5mg/30mL Liquid (Cherry)
- Walgreens Cold & Flu Nighttime Multi-Symptom Capsule
- Walgreens Cold & Flu Nighttime Multi-symptom Liquid
- Walgreens Cold & Flu Nighttime Multi-Symptom LiquidCap
- Walgreens Cold Head Congestion Nighttime Cool Caplet
- Walgreens Cold Head Congestion Severe Daytime Non-Drowsy Caplet
- Walgreens Cold Multi-Symptom Daytime Cool Caplet (Cool Blast)
- Walgreens Cold Multi-Symptom Daytime Gelcap
- Walgreens Cold Multi-Symptom Daytime/Nighttime Pack Tablet
- Walgreens Cold Multi-Symptom Tablet
- Walgreens Cold, Flu & Sore Throat Maximum Strength Softgel
- Walgreens Cold/Flu Relief Daytime Capsule
- Walgreens Cold/Flu Relief Daytime Liquid
- Walgreens Cold/Flu Relief Night/Day Combo Pack Softgel
- Walgreens Cold/Flu Relief Nighttime Liquid
- Walgreens Cold/Flu Relief Nighttime Liquid (Cherry)
- Walgreens Cough & Cold Nighttime Liquid (Mixed Berry)
- Walgreens Day Cold & Flu & Night Severe Cold & Flu Maximum Strength Caplet
- Walgreens Daytime Mucus Relief Severe Cold Maximum Strength Solution
- Walgreens Daytime Multi-Symptom Non-Drowsy Cold & Flu 325mg-10mg-5mg/15mL Liquid
- Walgreens Daytime/Nighttime Cold & Flu Maximum Strength Softgel
- Walgreens Daytime/Nighttime Cold & Flu Maximum Strength Softgel
- Walgreens Daytime/Nighttime Cold & Flu Multi-Symptom Softgel
- Walgreens Daytime/Nighttime Multi-Symptom Cold/Flu Relief Combo Pack
- Walgreens Daytime/Nighttime Severe Cold & Flu Maximum Strength Caplet
- Walgreens Daytime/Nighttime Severe Cold & Flu Maximum Strength Combo Pack
- Walgreens Daytime/Nighttime Severe Cold & Flu Maximum Strength Day & Night Pack
- Walgreens Daytime/Nighttime Severe Congestion & Cough/Cold & Flu Maximum Strength Combo Pack
- Walgreens Daytime/Nighttime Severe Sinus Congestion & Cough Softgel
- Walgreens Daytime/Nighttime Sinus & Cold Softgel
- Walgreens Daytime/Nighttime Sinus & Congestion Combo Pack Liquid Capsule
- Walgreens Dual Back Pain Reliever 250mg-125mg Caplet
- Walgreens Dual Pain Reliever 250mg-125mg Caplet
- Walgreens Extra Strength Headache Relief Tablet
- Walgreens Flu BP Maximum Strength 500mg-2mg-15mg Tablet

- Walgreens Flu HBP Maximum Strength Decongestant-Free 325mg-2mg-10mg Caplet
- Walgreens Headache Relief Extra Strength 250mg-250mg-65mg Caplet
- Walgreens Headache Relief Extra Strength 250mg-250mg-65mg Geltab
- Walgreens Headache Relief Extra Strength Geltab
- Walgreens Headache Relief Extra-Strength 250mg Caplet
- Walgreens Headache Relief PM Caplet
- Walgreens Headache Relief PM Tablet
- Walgreens Infant's Pain & Fever 160mg/5mL Suspension (Cherry)
- Walgreens Infants Dye-Free Pain & Fever 160mg/5mL Suspension (Grape)
- Walgreens Infants' Dye-Free Pain & Fever 160mg/5mL Suspension (Cherry)
- Walgreens Infants' Dye-Free Pain & Fever 160mg/5mL Suspension (Grape)
- Walgreens Infants' Non-Aspirin 80mg/0.8ml Drops (Cherry)
- Walgreens Infants' Non-Aspirin 80mg/0.8ml Drops (Grape)
- Walgreens Infants' Pain & Fever 160mg/5mL Suspension (Cherry)
- Walgreens Infants' Pain & Fever 160mg/5mL Suspension (Grape)
- Walgreens Junior Acetaminophen 160mg Rapid Tab (Bubble Gum)
- Walgreens Junior Acetaminophen 160mg Rapid Tab (Grape)
- Walgreens Junior Pain & Fever 160mg Fast Dissolving Tablet (Bubblegum)
- Walgreens Menstrual Complete Pain Relief 500mg-60mg-15mg Gelcap
- Walgreens Menstrual Relief Caplet
- Walgreens Menstrual Relief Gelcap
- Walgreens Migraine Relief 250mg-250mg-65mg Geltab
- Walgreens Migraine Relief Caplet
- Walgreens Mucus Relief Cold & Sinus 650mg-400mg-10mg/20mL Maximum Strength Liquid
- Walgreens Mucus Relief Cold Flu & Sore Throat Maximum Strength Liquid
- Walgreens Mucus Relief Cold Flu & Sore Throat Maximum Strength Liquid (Mint)
- Walgreens Mucus Relief Cold Flu & Sore Throat Maximum Strength Solution
- Walgreens Mucus Relief Plus Caplet
- Walgreens Mucus Relief Severe Cold Daytime/Cold & Flu Nighttime Maximum Strength Softgel
- Walgreens Nighttime Cold & Flu High Blood Pressure 650mg-30mg-12.5mg/30mL Solution
- Walgreens Nighttime Cold & Flu Maximum Strength Liquid
- Walgreens Nighttime Multi-Symptom Cold & Flu 650mg-30mg-12.5mg/30mL Liquid
- Walgreens Nighttime Multi-Symptom Cold & Flu 650mg-30mg-12.5mg/30mL Liquid (Cherry)
- Walgreens Nighttime Severe Cold & Flu Maximum Strength Solution
- Walgreens Nighttime Severe Cold & Flu Maximum Strength Solution (Honey)
- Walgreens Nighttime Severe Cold & Flu Maximum Strength Solution (Mixed Berry)

- Walgreens Nighttime Severe Cold & Flu Maximum Strength Solution (Original)
- Walgreens Nighttime Severe Cold & Flu Maximum Strength Solution (Vapor Ice)
- Walgreens Pain Reliever Extra Strength 500mg Caplet
- Walgreens Pain Reliever Extra Strength 500mg Softgel
- Walgreens Pain Reliever Extra Strength 500mg Tablet
- Walgreens Pain Reliever PM 500mg-25mg Tablet
- Walgreens Pain Reliever PM Extra Strength 500mg-25mg Caplet
- Walgreens Pain Reliever PM Extra Strength 500mg-25mg Geltab
- Walgreens Pain Reliever/Fever Reducer 120mg Suppository
- Walgreens Rest Easy Cold/Flu Relief Nighttime LiquidCap
- Walgreens Severe Allergy & Sinus Headache Maximum Strength 325mg-25mg-5mg Caplet
- Walgreens Severe Allergy 500mg-12.5mg Caplet
- Walgreens Severe Cold & Flu Day Maximum Strength Caplet
- Walgreens Severe Cold & Flu Day/Night Combo Caplet
- Walgreens Severe Cold & Flu Daytime Maximum Strength Softgel
- Walgreens Severe Cold & Flu Daytime/Nighttime Maximum Strength Softgel
- Walgreens Severe Congestion & Cough Daytime/Cold & Flu Nighttime Pack Caplet
- Walgreens Severe Congestion Sinus Relief Maximum Strength Liquid
- Walgreens Severe Daytime Cold & Flu Maximum Strength Solution
- Walgreens Severe Daytime Cold & Flu Maximum Strength Solution (Vapor Ice)
- Walgreens Severe Nighttime Cold & Flu Maximum Strength Softgel
- Walgreens Severe Nighttime Cold & Flu Maximum Strength Solution (Vapor Ice)
- Walgreens Sinus Congestion and Pain Day/Night Caplet Combo Pack
- Walgreens Sinus Congestion and Pain Daytime Caplet (Cool Blast)
- Walgreens Sinus Congestion and Pain Daytime Gelcap
- Walgreens Sinus Congestion and Pain Severe Daytime Cool Caplet
- Walgreens Sinus Daytime Non-Drowsy Maximum Strength Caplet
- Walgreens Sinus Relief Daytime/Nighttime Maximum Strength Softgel
- Walgreens Sinus Relief Daytime/Nighttime Maximum Strength Softgel
- Walgreens Sinus Relief Maximum Strength Softgel
- Walgreens Tension Headache Aspirin-Free Caplet
- Walgreens Wal-Flu Multi-Symptom Cold & Cough Daytime/Nighttime Powder for Solution
- Walgreens Wal-Flu Multi-Symptom Severe Cold Powder for Solution (Green Tea & Honey Lemon)
- Walgreens Wal-Flu Severe Cold & Cough Nighttime Powder for Solution (Honey Lemon)

Dosage Adjustment Guidelines

Hepatic Impairment

Use with caution in patients with hepatic dysfunction. In patients with chronic hepatic disease, acetaminophen can be used safely; use the smallest dose for the shortest duration necessary.

Renal Impairment

For patients with a CrCl of 30 mL/minute or less, reduced dosing and prolonged intervals are recommended for IV dosing; however no quantitative recommendations are available. For patients with a CrCl less than 10 mL/minute, administer acetaminophen (all dosage forms) at a minimum interval of every 8 hours. Chronic use should be discouraged in patients with underlying renal disease.

Intermittent hemodialysis

Administer acetaminophen every 8 hours.

Peritoneal dialysis

Administer acetaminophen every 8 hours.

Continuous renal replacement therapy (CRRT)

No dosage adjustment necessary.

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