

## MedInfo Finder LLC Sample Report, October 21, 2024

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#### **Disclaimer**

The information provided in this report is intended for general informational purposes only and does not constitute professional medical advice, diagnosis, treatment, or recommendations. It is not a substitute for consulting a qualified healthcare professional. The data provided should not be used to make decisions about your health or any specific medical condition without seeking proper medical advice from your doctor, pharmacist, or other qualified healthcare provider.

Medications being analyzed: Crestor (Rosuvastatin), Nebilet (Nebivolol), Nexium (Esomeprazole), Aspirin, Prolia

MedInfo Finder generated your medications analysis sourcing from the following websites:

- 1. Crestor (Rosuvastatin) MedlinePlus Crestor; Cleveland Clinic; Mayo Clinic (statins)
- 2. Nebilet (Nebivolol) MedlinePlus Nebivolol
- 3. Nexium (Esomeprazole) MedlinePlus Nexium
- 4. Aspirin MedlinePlus Aspirin
- 5. Prolia (Denosumab) MedlinePlus Prolia

MedlinePlus is an official website of the United States government and part of the National Institutes of Health (NIH).

Crestor is made by AstraZeneca. Please click here for the official manufacturer drug insert.

**Inactive Ingredients:** Inactive ingredients may cause or contribute to side effects of medications, especially with long term use. Also be aware that generic drugs are not required to use the same inactive ingredients as their brand-name equivalents. While this may seem like a minor difference, it can sometimes result in unexpected side effects or allergic reactions, particularly for individuals sensitive to ingredients like lactose, gluten or aspartame. If concerned, please ask your pharmacist for the specific inactive ingredients in your medication.

# I: Individual Drugs

# Medication purpose and duration

Medication	Intended Use	Recommended Duration
Crestor (Rosuvastatin)	Lowers cholesterol and triglycerides, reduces the risk of heart attack or stroke.	Long-term treatment, usually lifelong unless otherwise advised.
Nebilet (Nebivolol)	Lowers blood pressure and treats heart failure.	Long-term treatment, dependent on blood pressure and heart health.
Nexium (Esomeprazole)	Treats acid reflux, GERD, and prevents stomach ulcers caused by NSAIDs.	Typically used for 4-8 weeks; may be extended for certain conditions.
Aspirin	Reduces pain, fever, inflammation, and prevents blood clots (low-dose aspirin).	Short-term for pain/inflammation; long-term for heart disease prevention.
Prolia (Denosumab)	Treats osteoporosis in postmenopausal women to prevent bone fractures.	Long-term, with injections every 6 months as prescribed.

**Contraindications:** Things that may cause harm or prevent the safe use of a specific drug.

Medication	Pre-existing Conditions to Watch	Food & Substances to Avoid	Be Careful with These Medications
Crestor (Rosuvastatin)	Liver issues, pregnancy, breastfeeding, muscle problems.	Limit alcohol (no more than 2 drinks a day), avoid antacids with aluminum or magnesium.	Blood thinners (e.g., warfarin), antiviral meds, other cholesterol drugs.
Nebilet (Nebivolol)	Severe liver problems, heart issues (slow heartbeat, shock).	Avoid alcohol (can make you dizzy), stimulants (increase heart risks).	Be cautious with other blood pressure medications.
Nexium (Esomeprazole)	Severe liver disease, allergy to PPIs.	Avoid alcohol (can reduce the medicine's effect).	Antiretroviral meds, blood thinners (warfarin), antifungal medications.
Aspirin	Stomach ulcers, clotting problems, bleeding issues.	Avoid alcohol (increases the risk of stomach bleeding).	Other NSAIDs (like ibuprofen), blood thinners (anticoagulants).
Prolia (Denosumab)	Low calcium levels, pregnancy.	Avoid too much alcohol (it weakens your bones).	Immunosuppressants, corticosteroids (higher risk of infections).

## **II. Your Symptoms Tracking Table**

This Symptoms Tracker is designed to help you identify and monitor symptoms that may be linked to side effects or interactions from your medications, and share this information with your healthcare professional. For each symptom, indicate its frequency and severity by entering a number (0-3) in the provided columns, and use the "Notes" section to add details such as triggers, timing, or relief methods.

Frequency Scale (0-3): 0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often

Severity Scale (0-3): 0 = No discomfort, 1 = Mild, 2 = Moderate, 3 = Severe

#	Symptom	Associated Drug(s)	Frequency (0-3)	Severity (0-3)	Notes (e.g., triggers, timing, relief methods)
1	Headache	Crestor, Nebilet, Nexium			
2	Dizziness	Nebilet, Prolia			
3	Nausea	Aspirin, Nexium, Crestor			
4	Muscle Pain	Crestor, Prolia			
5	Joint Pain	Prolia			
6	Fatigue	Nebilet, Crestor			
7	Sleep Issues	Nebilet, Nexium			
8	Insomnia	Aspirin, Nebilet			
9	Stomach Pain	Nexium, Aspirin			

#	Symptom	Associated Drug(s)	Frequency (0-3)	Severity (0-3)	Notes (e.g., triggers, timing, relief methods)
10	Diarrhea	Nexium			
11	Constipation	Nexium, Crestor			
12	Heart Palpitations	Nebilet, Aspirin			
13	Shortness of Breath	Nebilet, Prolia			
14	Rash or Itching	Prolia, Nebilet			
15	Swelling (Edema)	Aspirin, Prolia			
16	Blurred Vision	Nebilet			
17	Chest Pain	Aspirin, Nebilet			
18	Tremors or Shaking	Nebilet			
19	Difficulty Swallowing	Nexium			
20	Fever or Chills	Prolia			
21	Loss of Appetite	Aspirin, Prolia			
22	Numbness or Tingling	Prolia, Crestor			
23	Weight Gain or Loss	Nebilet, Prolia			
24	Frequent Urination	Nebilet			
25	Anxiety or Depression	Nebilet, Crestor			

## **III: Potential Side Effects or Adverse Reactions**

### 1. Manufacturer Side Effects:

Medication	Manufacturer-reported Side Effects		
Crestor (Rosuvastatin)	Muscle pain, headache, nausea, constipation, memory issues, confusion, liver problems, kidney damage, rhabdomyolysis (severe muscle breakdown), increased blood sugar.		
Nebilet (Nebivolol)	Dizziness, fatigue, nausea, bradycardia (slow heart rate), rash, decreased libido, heart failure, allergic reactions, worsening of psoriasis.		
Nexium (Esomeprazole	Headache, diarrhea, stomach pain, nausea, constipation, flatulence, dry mouth, dizziness, low magnesium levels, fractures, and C. difficile infection.		
Aspirin	Stomach pain, heartburn, nausea, vomiting, gastrointestinal bleeding, ulcers, increased bleeding risk, tinnitus, liver toxicity (at high doses).		
Prolia (Denosumab)	Back pain, joint pain, bone pain, constipation, low calcium levels, osteonecrosis of the jaw (rare), unusual thigh bone fractures, skin rash, infection risk.		

## 2. Common Adverse Effects

Frequency Category	Crestor (Rosuvastatin)	Nebilet (Nebivolol)	Nexium (Esomeprazole)	Aspirin	Prolia (Denosumab)
Very Common (≥ 10%)	Muscle pain and weakness, headache.	Headache, dizziness.	Headache, diarrhea.	Nausea, indigestion.	Back pain, joint pain, muscle pain.
Common (1% - 10%)	Nausea, constipation, sleep disturbances, memory issues.	Fatigue, nausea, bradycardia.	Constipation, dry mouth.	Heartburn, stomach pain.	Constipation, low calcium levels, rash.
Uncommon (0.1% - 1%)	Confusion, increased blood sugar, kidney damage.	Rash, decreased libido.	Dizziness, flatulence.	Vomiting, increased bleeding risk.	Osteonecrosis of the jaw, unusual fractures.
Rare (0.01% - 0.1%)	Liver problems, rhabdomyolysis (severe muscle breakdown).	Worsening of psoriasis, allergic reactions.	C. difficile infection, bone fractures.	Tinnitus (ringing in the ears), ulcers.	Infections, serious skin reactions.
Very Rare (< 0.01%)	Severe liver/kidney failure, life- threatening muscle pain.	Severe allergic reactions.	Severe magnesium deficiency, pancreatitis.	Liver toxicity (at high doses).	Severe infections, life-threatening reactions.

## 3.1 Immediate, Short-Term, and Medium-Term Adverse Effects

Medication	Immediate Adverse Effects (within hours to 1 day)	Short-Term Adverse Effects (2 days to 4 weeks)	Medium-Term Adverse Effects (1 month to 6 months)
Crestor (Rosuvastatin)	Muscle pain, headache, nausea, dizziness, weakness.	Constipation, memory issues, mild confusion.	Elevated blood sugar, liver function changes, muscle breakdown (rhabdomyolysis).
Nebilet (Nebivolol)	Fatigue, dizziness, nausea, headache.	Bradycardia (slow heart rate), shortness of breath, reduced exercise tolerance.	Rash, worsening of heart failure, sexual dysfunction.
Nexium (Esomeprazole )	Headache, diarrhea, nausea, flatulence.	Constipation, dry mouth, dizziness.	Low magnesium levels, fractures (with long-term use).
Aspirin	Stomach pain, heartburn, nausea, vomiting.	Gastrointestinal bleeding, ulcers, increased risk of bruising or bleeding.	Tinnitus (ringing in the ears), kidney impairment.
Prolia (Denosumab)	Back pain, joint pain, muscle pain, skin rash.	Low calcium levels, increased risk of infection.	Osteonecrosis of the jaw (rare), unusual femur fractures.

# **3.2** Long-Term and Chronic Adverse Effects

Medication	Long-Term Adverse Effects (6 months to 1 year)	Chronic Adverse Effects (1 year and beyond)
Crestor (Rosuvastatin)	Muscle damage (myopathy), liver damage (rare but serious).  Rhabdomyolysis (severe muscle breakdown), incrediabetes in some individuals, kidney stress/damage disorders.	
Nebilet (Nebivolol)	Bradycardia, heart block (in susceptible individuals).	Worsening of heart failure, bronchospasm in asthmatic patients.
Nexium (Esomeprazole)	Increased risk of bone fractures, persistent low magnesium levels.	Kidney damage (interstitial nephritis), vitamin B12 deficiency with prolonged use.
Aspirin	Peptic ulcers, gastrointestinal bleeding, worsening of kidney function.	Chronic kidney disease (with long-term high-dose use), potential for Reye's syndrome in children.
Prolia (Denosumab)	Increased risk of serious infections (e.g., skin infections), low calcium levels.	Osteonecrosis of the jaw (with extended use), atypical femur fractures.

## **IV: Drug Interactions Analysis**

#### A. Interactions Between the Medications

- 1. Crestor (Rosuvastatin) + Nebilet (Nebivolol)
- Increased Risk of Hypotension (Low Blood Pressure):
  - Both Crestor and Nebivolol can independently cause drops in blood pressure, especially when Nebivolol is combined with another cardiovascular medication. This combination could lead to excessively low blood pressure, resulting in symptoms such as dizziness, lightheadedness, or even fainting.
- Potential for Exacerbated Muscle Toxicity:
  - Crestor is known to cause muscle-related side effects such as myopathy (muscle pain) and in rare cases, rhabdomyolysis (severe muscle breakdown). Although there is no direct amplification from Nebivolol, Nebivolol's impact on blood flow could theoretically worsen muscle pain in susceptible individuals.
- Potential effects on blood sugar:

Statins like Crestor can raise blood sugar and may trigger symptoms such as increased thirst, frequent urination, fatigue, or blurred vision. These signs may indicate elevated blood glucose levels, and over time, could point to the development of diabetes, especially in those already at risk.

Meanwhile, **Nebivolol**, a beta-blocker, can hide key symptoms of **hypoglycemia** (low blood sugar), such as a rapid heartbeat, making it harder to recognize low blood sugar episodes. Other signs of hypoglycemia, like shakiness, sweating, dizziness, or confusion, might still occur but may be less noticeable due to the medication's effects. Using both medications can complicate blood sugar management. It's essential for patients on both to monitor their levels closely and discuss these risks with their healthcare provider.

### 2. Crestor (Rosuvastatin) + Nexium (Esomeprazole)

Taking **Crestor (rosuvastatin)** and **Nexium (esomeprazole)** together may lead to some important interactions. Crestor is processed mainly by the liver, and Nexium can interfere with this process, causing Crestor to accumulate in the body. This raises the risk of **muscle toxicity**, which could result in muscle pain, cramping, and, in more severe cases, rhabdomyolysis, a condition where muscle tissue breaks down and can harm the kidneys

Nexium <u>Drugs.com</u>; Crestor <u>Drugs.com</u>

Nexium also reduces stomach acid, which affects your body's ability to absorb certain nutrients, particularly magnesium. Magnesium is essential for muscle and nerve function, and deficiencies could worsen Crestor's side effects. Over time, this interaction can cause liver issues, nutrient imbalances, and persistent deficiencies that may affect overall health.

Nexium: <u>Drugs.com</u>; Crestor <u>Drugs.com</u>

If you're on both medications, it's important to regularly monitor your liver function and nutrient levels, and to stay alert for symptoms like muscle pain or weakness. Be sure to discuss these risks with your healthcare provider. For more detailed information, you can check out sources on

### 3. Aspirin + Nebilet (Nebivolol)

Taking Aspirin alongside Nebivolol (Nebilet) over the long term can cause gastrointestinal (GI) damage, particularly ulcers and an increased risk of bleeding. Aspirin irritates the stomach lining by reducing protective mucus production, which can lead to chronic stomach ulcers. Over time, this damage may cause internal bleeding, which can become dangerous and result in anemia from the slow loss of blood.

### **ScienceDaily**

It's important to watch out for symptoms like stomach pain, black stools, or dizziness. Regular check-ups and discussions with your healthcare provider are key to managing these risks effectively.

## **B.** Interactions with Foods and Substances

Medication	Food/Beverage/ Substance	Negative Interaction
Crestor (Rosuvastatin)	Grapefruit juice	Increases Crestor levels in the body, raising the risk of muscle pain and liver damage.
	Alcohol	Increases the risk of liver damage, especially with heavy drinking.
	High-fat, high-cholesterol foods	Reduces the effectiveness of Crestor in lowering cholesterol.
Nebilet (Nebivolol)	Alcohol	Can lower blood pressure too much, causing dizziness or fainting.
	High-sodium foods	Excessive salt intake can counteract Nebilet's blood pressure-lowering effects.
	Licorice	Can raise blood pressure, counteracting Nebilet's effect.
Nexium (Esomeprazole)	Alcohol	Irritates the stomach lining, making Nexium less effective in treating acid reflux or ulcers.
	Spicy, fatty, or acidic foods	Increases stomach acid, reducing Nexium's effectiveness.
	St. John's Wort	Reduces Nexium's effectiveness by speeding up its breakdown in the body.
Aspirin	Alcohol	Increases the risk of stomach bleeding or ulcers, especially with regular aspirin use.
	Foods high in Vitamin K	Green leafy vegetables (like spinach, kale) reduce aspirin's ability to prevent blood clots.
	Caffeine	High caffeine intake can irritate the stomach and increase the risk of aspirin side effects.

Medication	Food/Beverage/ Substance	Negative Interaction
Prolia (Denosumab)	Alcohol	Weakens bones, reducing Prolia's effectiveness in preventing bone loss.
	High-sodium diet	Causes calcium loss, reducing Prolia's bone-strengthening effects.
	Low calcium and vitamin D intake	Not enough calcium or vitamin D can lead to low calcium levels, causing muscle cramps or spasms.

When taking medications like Crestor, Nebilet, Nexium, and Aspirin, there are certain foods and substances that should be completely avoided because they can interfere with how the medications work or worsen side effects. Grapefruit and grapefruit juice can raise the levels of drugs like Crestor in your system, increasing the risk of side effects. Alcohol is another major one to avoid, as it can increase liver damage with Crestor, irritate your stomach with Aspirin, and dangerously lower blood pressure when combined with Nebilet. You'll also want to steer clear of high-sodium foods, as they counteract the benefits of Nebilet, and trans fats found in fried and processed foods, which can raise your cholesterol and undo the effects of Crestor. Things like energy drinks, caffeinated beverages, and processed meats are also no-gos, as they can spike blood pressure or cholesterol, while NSAIDs (like ibuprofen) combined with Aspirin can increase the risk of stomach bleeding. Lastly, refined sugars, artificial sweeteners, and high-purine foods (like red meat) can lead to metabolic problems and inflammation.

There are also foods and substances you don't have to completely avoid, but you should limit. These include salt, which can raise blood pressure and counteract Nebilet, as well as saturated fats in fatty meats and full-fat dairy, which can raise cholesterol and work against Crestor. Fried foods and refined carbs like white bread and pasta should be eaten in moderation since they contribute to cholesterol issues and metabolic dysfunction. It's also a good idea to reduce sugar, processed snacks, red meat, and coffee to keep blood pressure and cholesterol levels in check. Even fruit juices, pastries, and chocolate should be consumed sparingly, as they're often high in sugar or caffeine, which can make managing your medications and health conditions more difficult.

## V. Beneficial Nutrients for Conditions Related to Crestor (Rosuvastatin), Nebilet (Nebivolol), Nexium, and Aspirin

Medication & Condition	Nutrient	Benefit	Food Sources
Crestor (Rosuvastatin) Cholesterol management, Statin- associated muscle pain (myopathy)  Coenzyme Q10 (CoQ10)		Reduces muscle pain associated with statin use, as statins lower CoQ10 levels in the body.	Organ meats (heart, liver), oily fish, spinach
	Omega-3 Fatty Acids	Helps lower triglycerides and provides cardiovascular protection.	Fatty fish (salmon, mackerel, sardines), flaxseeds, chia seeds, walnuts
Nebilet (Nebivolol) Hypertension (high blood pressure)	Magnesium	Supports blood pressure regulation by helping relax blood vessels.	Leafy greens (spinach, kale), nuts (almonds, cashews), legumes
	L-Arginine	Improves blood circulation and lowers blood pressure by increasing nitric oxide production, relaxing blood vessels.	Poultry, fish, dairy products, legumes
	Potassium	Balances sodium levels and supports healthy blood pressure.	Bananas, oranges, avocados, melons, apricots, kiwis, dates, prunes, potatoes, spinach, tomatoes, coconut water
	Hawthorn Berry	Improves heart function and circulation, lowers blood pressure, strengthens the heart muscle.	Available primarily as a supplement or tea

Medication & Condition	Nutrient	Benefit	Food Sources
Nexium (Esomeprazole) Acid reflux/GERD (Gastroesophageal Reflux Disease)	Probiotics	Helps maintain gut health by balancing the microbiome affected by PPIs like Nexium.	Yogurt, kefir, sauerkraut, kimchi, kombucha
	Slippery Elm	Forms a protective coating on the stomach lining, reducing acid reflux symptoms.	Supplement
Aspirin Cardiovascular protection, Anti- inflammatory support	Omega-3 Fatty Acids	Anti-inflammatory properties and support for heart health, complementing Aspirin's blood-thinning effects.	Fatty fish (salmon, mackerel, sardines), flaxseeds, chia seeds, walnuts
	Turmeric (Curcumin)	Reduces inflammation without the risk of gastrointestinal bleeding, unlike Aspirin.	Turmeric root (spices)
	Vitamin D	Supports bone health, calcium absorption, and immune function.	Sunlight, fortified dairy products, fatty fish
	Ginger	Reduces nausea, digestive discomfort, and supports heart health.	Fresh ginger root, ginger tea
	B-Complex Vitamins	Supports heart health, brain function, and energy production.	Whole grains, eggs, leafy greens, legumes

#### FOR MORE INFORMATION:

**Coenzyme Q10 (CoQ10)**: Study: Evidence supports CoQ10 supplementation in reducing statin-induced muscle pain. Source: PubMed - CoQ10 and statin-related myopathy

Omega-3 Fatty Acids: Omega-3s are effective in managing triglyceride levels in patients on statins. Source: PubMed - Omega-3 and triglycerides

**Magnesium**: Magnesium supplementation shows benefits in blood pressure management. <u>Source: PubMed - Magnesium</u> and <u>blood pressure</u>

**Potassium** Study: Increasing potassium intake is associated with improved blood pressure. <u>Source: PubMed - Potassium and blood pressure</u>

Sources: Bananas, oranges, avocados, melons, apricots, kiwis, dates, prunes, sweet potatoes, potatoes, spinach, tomatoes, beets, winter squash, Brussels sprouts, beans, yogurt, fish, mushrooms, nuts, coconut water, carrots, zucchini, pumpkin, artichokes, broccoli, peas, raisins, pomegranates, cantaloupe, clams, chicken, turkey, and milk are all examples of potassium-rich foods.

**Probiotics**: Study: Probiotics have shown to benefit gut health in patients with GERD. <u>Source: PubMed - Probiotics and GERD</u>

**Slippery Elm**: Study: Slippery elm has been found beneficial in soothing gastrointestinal symptoms. <u>Source: PubMed - Slippery elm and gut health</u>

**Omega-3 Fatty Acids**: Study: Omega-3 supplementation is beneficial in reducing cardiovascular events in high-risk individuals. Source: PubMed - Omega-3 and cardiovascular health

**Turmeric (Curcumin)**: Study: Curcumin has anti-inflammatory properties that can complement Aspirin's effects. <u>Source:</u> PubMed - Curcumin and anti-inflammatory benefits

**Vitamin D:** Study Role of Vitamin D in Health and Disease. source <u>PubMed - Role of Vitamin D</u>

- . Ginger: Ginger has anti-inflammatory and antioxidant properties **Source NIH Ginger Root**
- **. B-Complex Vitamins** B vitamins are crucial for heart health, brain function, and energy production. Statins like Crestor can sometimes affect energy levels, and Nexium may reduce the absorption of B vitamins, making supplementation beneficial for cardiovascular health and energy.

Study NIH: Dietary Vitamin B Complex: Orchestration in Human Nutrition:

### VI. Hydration with Water and Its Importance for the Conditions

For patients taking medications like Crestor (Rosuvastatin), Nebilet (Nebivolol), Nexium, and Aspirin, proper hydration is essential. These medications can affect metabolism, digestion, and cardiovascular function, making water intake crucial to support organ health and overall bodily functions.

- 1. Kidney Support: Medications like Aspirin and Nexium can stress the kidneys, and hydration helps flush out toxins, preventing kidney damage and supporting the elimination of drug metabolites.
- 2. Cardiovascular Health: Adequate hydration helps maintain blood pressure levels, which is especially important for those taking Nebilet to manage hypertension.
- **3.** Digestion: Nexium, a proton pump inhibitor, affects stomach acid levels. Drinking water can help aid digestion, promote regular bowel movements, and prevent constipation.
- **4.** Muscle Function: Crestor can increase the risk of muscle pain (myopathy), and dehydration can worsen muscle cramps. Staying hydrated supports muscle health.
- **5.** Liver Health: Crestor is metabolized by the liver, and water helps facilitate the liver's detoxification process.

How much to drink: Adults typically need around half an ounce to one ounce of water per pound of body weight per day. For instance, a 150-pound adult would require between 75 to 150 ounces of water daily.

When to drink: Drink water consistently throughout the day, especially before and after meals. Drinking water first thing in the morning and 30 minutes before meals can aid digestion and hydration. Avoid drinking large amounts of water during meals, as it may dilute stomach acid, especially important for individuals on Nexium.