

# MEDICATION FACT SHEET

## *Bile Acid Resins*

### **Names of Bile Acid Resins:**

colesevelam HCL (Welchol®), cholestyramine (Questran®, Questran® light, Prevalite®, Lo CHOLEST®, Lo CHOLEST® light), colestipol (Colestid®, Colestid® flavored)

### **General Information:**

Bile acid resins work in the intestines by binding cholesterol rich bile and preventing its reabsorption, leading to the lowering of cholesterol in the bloodstream.

These medicines are found in powder and tablet forms. Both forms are equally effective at lowering blood cholesterol 15-25% and have been shown to prevent and reverse heart disease. Tablet forms should be taken with water or other liquids. The powder form is mixed with water or fruit juice or sprinkled over applesauce or yogurt. Mix 2 scoops of powder into 8 ounces of fluid.

### **Common Side Effects:**

Bile acid resins are generally very well tolerated. Side effects which may occur are: larger stools, constipation, gas, bloating, and stomach cramps. Larger stools are a sign that the medication is working. If you get constipated, increase the amount of fluid that you drink and add fiber to your diet. You may also consider adding psyllium (Metamucil®, Fibercon®) according to package directions. Bloating and gas may be relieved by the use of non-constipating medications such as simethicone, Riopan Plus®, or Mylanta®. You may also try another liquid to mix the powder and avoid carbonated beverages.

### **Drug Interactions:**

Vitamins, supplements and other medications should be taken one hour before or four hours after taking powders. The powders can interfere with your body's ability to absorb certain medicines, such as beta blockers, thyroid replacement, diuretics, digoxin, anticoagulants (warfarin), and others. The combination of sustained relief verapamil and colesevelam requires close monitoring by your health care professional.

The safety of colesevelam in patients with severe swallowing or motility problems has not been established; however, cholestyramine and colestipol have been used in patients to help severe diarrhea. People with severe constipation or hemorrhoids might also need to avoid resins or take stool softeners to blunt the constipation.

Please make sure your health care provider and pharmacists know all the medications you take.

### **Directions:**

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times/day.

### **Additional Directions:**

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PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

## Nicotinic Acid (Niacin-Vitamin B3)

### Names of Nicotinic Acid products:

Nicotinic acid (niacin) is vitamin B3 and can be purchased over-the-counter (OTC). Large doses of niacin (500 mg or greater) should only be taken under the supervision of your health care provider. Both time-release and short-acting niacin are available OTC, but only short acting (crystalline) niacin is recommended. Niacinamide has no effect on cholesterol and other lipids and should not be used. Extended release niacin (Niaspan®) is available by prescription.

### General Information:

Nicotinic acid is a very effective medicine that decreases the liver's secretion of triglyceride containing proteins. This results in lowering triglyceride and LDL cholesterol levels. It also raises HDL cholesterol. Generally LDL cholesterol is reduced by 15-30%, triglyceride is reduced by 40%, and HDL is increased by 20%. Nicotinic acid has also been shown to slow progression or reverse the process of atherosclerosis.

OTC niacin is usually taken 2 or 3 times a day, with or immediately after meals. It must be started in small doses (100 mg) and increased gradually over several weeks to avoid side effects. The usual effective dose is 1500 to 3000 mg per day.

Prescription Niaspan should be taken at bedtime with a low-fat snack. Avoid taking with hot food or drink as this may increase flushing. Unless you are told otherwise, or have an allergy, it is recommended that you take an aspirin (81 - 325 mg) 30 minutes prior to taking Niaspan. Begin at 500 mg once a day for the first month and then gradually increase the dose over several months as recommended by your health care provider. Do not split or crush prescription Niaspan.

### Common Side Effects:

Facial redness (flushing) and itching may occur, but usually decreases after 1 to 2 weeks on a specific dose. Flushing is reduced by taking niacin with food and aspirin and by taking doses on a regular schedule. If you do miss a dose, do not take the dose late on an empty stomach; either take it with food or wait for your next scheduled dose. If you miss several doses, you may need to return to a lower dose and build back up to your regular strength.

Other side effects include a minor rise in blood sugar (especially in diabetics), an increase in uric acid levels which may lead to gout, abnormalities in liver blood tests, itching of the skin, skin rashes, abdominal pain, nausea, and loss of appetite. A somewhat uncommon side effect includes darkening of the skin around the neck.

### Drug Interactions:

Avoid heavy alcohol use as this may increase the above side effects when taking niacin.

Please make sure your health care provider and pharmacists know all the medications you take. *Should not be taken if you are pregnant, breastfeeding, or have active ulcers.*

### Directions:

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times per day.

### Additional Directions:

PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

## *Fibric Acid Derivatives (Fibrates)*

### **Names of Fibrates:**

gemfibrozil (Lopid® or generic), fenofibrate (TriCor®, Lofibra®, Antara®, Triglide™, Lipofen®, Fenoglide®)

### **General Information:**

Fibrates are a class of drugs used to treat high triglycerides. They cause the liver to produce fewer triglycerides and also help clear them from the blood stream. The fibrates may also raise HDL (good) cholesterol and slightly lower LDL (bad) cholesterol. These medicines have been shown to prevent heart attacks.

### **Common Side Effects:**

The fibrates are normally well tolerated. Mild stomach bloating, nausea, or gas may occur early in taking this drug. These symptoms usually go away in 1 to 2 weeks. Overall side effects are rare. Report the following symptoms to your health care provider: stomach pain, diarrhea, severe nausea or vomiting, and muscle weakness and pain. Routine blood tests to monitor your liver and kidney function are important while taking this medicine.

### **Special Consideration:**

The dose may be decreased in small persons or those with other health problems. The dose needs to be decreased in patients with kidney or liver disease. If you are prescribed this medicine, please alert your health care provider if you have gallbladder disease.

### **Drug Interactions:**

- **Warfarin (Coumadin®)**; fibrates may increase the effect of this blood thinner; careful monitoring of pro-time and INR is recommended.
- There is an increased risk of side effects when fibrates and **statins** are taken together. Your health care provider may prescribe these two medications in combination if you have a complex cholesterol disorder. Regular monitoring of side effects and blood tests is recommended.
- **Cyclosporine** may decrease the effect of fibrates. When cyclosporin is combined with fenofibrate, it may increase the risk of developing or worsening kidney problems. Kidney function should be monitored closely.

Please make sure your health care provider and pharmacists know all the medications you take. *Should not be taken if pregnant or breastfeeding.*

### **Directions:**

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times per day.

### **Additional Directions:**

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PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

## HMG CoA Reductase Inhibitors (Statins)

### Names of HMG CoA Reductase Inhibitors (Statins):

atorvastatin (Lipitor®), fluvastatin (Lescol®), pravastatin (Pravachol®), lovastatin (Mevacor®), simvastatin (Zocor®), rosuvastatin (Crestor®)

### General Information:

Statins lower total and LDL cholesterol and mildly lower triglycerides and raise HDL cholesterol. They block production of cholesterol and increase cholesterol uptake, thus lowering blood cholesterol levels. The statins have been studied in several large research studies, where they were shown to reduce coronary disease rates by 25-30%.

### Common Side Effects:

Side effects with these medications are rare. Less than 3 out of 100 people taking these medications will have any of these side effects. However, if you experience any of these symptoms, report them to your health care provider: severe muscle soreness or weakness (myopathy), nausea or abdominal discomfort, rash, general fatigue, and insomnia. Statin use rarely causes an increase in liver enzymes. Your provider will monitor liver enzyme levels with occasional blood tests.

### Drug Interactions:

The following increases blood levels of statins and may increase the risk of muscle pain:

- **Erythromycin and clarithromycin**
- **Cyclosporin**
- **Amiodarone**
- Some **protease inhibitors**
- **Niacin**, when taken with some statins
- **Verapamil and diltiazem**
- **Antifungal medicines**
- Large amounts of **grapefruit juice**

### Other Drug Interactions:

- **Fenofibrate and gemfibrozil** increases the risk of muscle pain when taken alone or with a statin.
- **Nefazodone** may increase the risk of myopathy with atorvastatin, simvastatin, and lovastatin.
- **Warfarin** and the use of statins may increase warfarin blood levels. Protime (INR) should be monitored.
- **Digoxin** levels in the blood may be increased while taking statins. Monitor digoxin levels.

Please make sure your health care provider and pharmacists know all the medications you take. *Should not be taken if pregnant or breastfeeding.*

### Directions:

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times per day.

### Additional Directions:

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PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

## *Cholesterol Absorption Inhibitors*

### **Names of Cholesterol Absorption Inhibitors:**

ezetimibe (Zetia®)

### **General Information:**

Zetia is the first in a new class of cholesterol-lowering medications called cholesterol absorption inhibitors. It works by reducing the amount of cholesterol your body absorbs from your intestine. A decrease in the cholesterol stores in the liver leads to an increase in clearance of cholesterol from the blood. When used alone, ezetimibe can lower LDL cholesterol (bad cholesterol) by about 19%. It is commonly used in combination with statins. Ezetimibe can also lower total cholesterol and triglycerides as well as increase HDL cholesterol (good cholesterol).

### **Common Side Effects:**

Side effects of this medication are very uncommon. However, if you experience any of these symptoms, report them to your health care provider: fatigue (tiredness), stomach pain or diarrhea, or severe muscle soreness.

### **Drug Interactions:**

- **Cyclosporine** increases the blood levels of **ezetimibe** and **cyclosporine**.
- **Gemfibrozil or fenofibrate** may increase levels of ezetimibe.
- **Cholestyramine or colestipol** may severely decrease the effectiveness of ezetimibe.
- Take ezetimibe 2 hours before or at least 4 hours after **cholestyramine** or **colestipol** medications.

Please make sure your health care provider and pharmacists know all the medications you take. *Should not be taken if pregnant or breastfeeding.*

### **Directions:**

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times per day.

### **Additional Directions:**

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PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

## ***Cholesterol Absorption Inhibitor/HMG CoA Reductase Inhibitor (statin) Combination Therapy***

### **Name of Cholesterol Absorption Inhibitors/HMG CoA Reductase Inhibitor combination:**

Vytorin® (ezetimibe (Zetia®)/simvastatin (Zocor®))

### **General Information:**

Vytorin is the first cholesterol-lowering medication that combines a cholesterol absorption inhibitor with a statin. It works by reducing the amount of cholesterol your body absorbs from your intestine and blocks the production of cholesterol within cells. A decrease in the cholesterol stores in the liver and an increase in the number of LDL receptors leads to an increase in clearance of cholesterol from the blood. This combination of ezetimibe and simvastatin can lower LDL cholesterol levels by 46-59%. This combination may also result in an 8-12% increase in HDL cholesterol and a 26-35% decrease in triglycerides.

### **Common Side Effects:**

Side effects of this medication are very uncommon. However, if you experience any of these symptoms, report them to your health care provider: fatigue, stomach pain or diarrhea, or severe muscle soreness.

### **Drug Interactions:**

The following increases blood levels of statins and may increase the risk of muscle pain:

- **Erythromycin** and **clarithromycin**
- **Niacin**
- **Fenofibrate** and **gemfibrozil**
- **Cyclosporin**
- **Amiodarone**
- Some **protease inhibitors**
- **Nefazodone**
- **Verapamil** and **diltiazem**
- **Antifungal medicines**
- Large amounts of **grapefruit juice**

### **Other Drug Interactions:**

- Take Vytorin 2 hours before or at least 4 hours after **cholestyramine** or **colestipol** medications.
- **Warfarin** levels may increase when taking statins. Protime (INR) should be monitored.
- **Digoxin** levels in the blood may be increased while taking statins. Monitor digoxin levels.

Please make sure your health care provider and pharmacists know all the medications you take. *Should not be taken if pregnant or breastfeeding.*

### **Directions:**

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times per day.

### **Additional Directions:**

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PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

## *Nicotinic Acid and HMG CoA Reductase Inhibitor Combination Therapy*

### **Names of nicotinic acid and HMG CoA reductase inhibitor combinations:**

Niaspan/lovastatin (Advicor®), Niaspan/simvastatin (Simcor®)

### **General Information:**

Nicotinic acid is a very effective medicine that decreases the liver's secretion of triglyceride. This results in lowering triglyceride and LDL cholesterol levels and raising HDL (good) cholesterol. Statins lower total and LDL cholesterol and mildly lower triglycerides and raise HDL cholesterol.

Advicor should be taken at bedtime with a low fat snack. Avoid taking with hot food or drink. Unless you are told otherwise or have an allergy, it is recommended that you take an aspirin (81-325 mg) 30 minutes prior to taking Advicor. Begin at 500/20 mg once a day for the first month and then gradually increase the dose over several months as recommended by your health care provider.

### **Common Side Effects:**

Facial redness (flushing) and itching may occur, but usually decreases after 1 to 2 weeks on a specific dose. Flushing is reduced by taking niacin with food and aspirin as described above. Other side effects include a minor rise in blood sugar (especially in diabetics), an increase in uric acid levels which may lead to gout, abnormalities in liver blood tests, itching of the skin, skin rashes, abdominal pain, nausea and loss of appetite. An uncommon side effect includes darkening of the skin around the neck. If you experience any of these symptoms, contact your health care provider: severe muscle soreness or weakness (myopathy), nausea or abdominal discomfort, rash, fatigue, and insomnia.

### **Drug Interactions:**

The following increases blood levels of statins and may increase the risk of muscle pain:

- **Erythromycin** and **clarithromycin**
- **Nefazodone**
- **Fenofibrate** and **gemfibrozil**
- **Cyclosporin**
- **Amiodarone**
- **Protease inhibitors**
- **Verapamil** and **diltiazem**
- **Antifungal medicines**
- Large amounts of **grapefruit juice**

### **Other Drug Interactions:**

- Avoid heavy **alcohol** use as this may increase the above side effects.
- **Warfarin** levels may increase when taking statins. Protime (INR) should be monitored.
- **Digoxin** levels in the blood may be increased while taking statins. Monitor digoxin levels.

Please make sure your health care provider and pharmacists know all the medications you take. *Should not be taken if you are pregnant, breastfeeding, or have active ulcers.*

### **Directions:**

You are taking \_\_\_\_\_ Dose \_\_\_\_\_.

Please take this \_\_\_\_\_ times per day.

### **Additional Directions:**

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PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

# MEDICATION FACT SHEET

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## *Fish Oil (Omega-3 Fatty Acids)*

### **General Information:**

In high doses, fish oil capsules are powerful nutritional supplements that reduce levels of triglycerides and raise HDL (good) cholesterol levels in the blood. They may increase or decrease LDL (bad) cholesterol levels, depending on your cholesterol profile. In low doses, fish oil reduces the stickiness of blood cells (platelets), reduces inflammation in the blood vessels, and may reduce irregular beats in the heart. For these reasons, a low-dose fish oil supplement is recommended after a heart attack. Most fish oils are available in a non-prescription capsule. There is one FDA-approved prescription fish oil capsule called Lovaza®. Because of its high potency, most patients require fewer capsules of Lovaza daily when compared to the non-prescription fish oils.

### **Common Side Effects:**

The following side effects may occur while you take fish oil capsules: gas (belching, flatulence), abdominal discomfort, loose stools, weight gain (each capsule contains 10 calories), and easy bruising or bleeding. Most of these side effects are mild and will decrease over time. Taking fish oil capsules with food can help minimize gas and other gastrointestinal side effects.

### **Dosing Information:**

For lipid-lowering therapy, daily use of at least 4 grams of eicosapenaenoic acid (EPA) + docosahexaenoic acid (DHA) is recommended. Following a heart attack, daily use of 1 gram of omega-3 fatty acids is recommended.

Please make sure your health care provider and pharmacists know all the medications you take.

### **Directions:**

**Recommended Brands:** \_\_\_\_\_

**Please take** \_\_\_\_\_ **capsules** \_\_\_\_\_ **times a day.**

### **Additional Directions:**

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\_\_\_\_\_  
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**PRACTICE NAME** \_\_\_\_\_ **PHONE** \_\_\_\_\_

# NON-PHARMACOLOGICAL (OVER-THE-COUNTER) AGENTS

## *Plant Stanol and Sterol Esters*

### General Information:

These are natural substances derived from plants that may reduce your blood cholesterol levels. These supplements should not be used in place of a heart-healthy diet or cholesterol-lowering medication, but can provide an additional beneficial reduction in LDL (bad) cholesterol levels. Your doctor may recommend regular use of stanol or sterol esters instead of prescribing or increasing the dose of a cholesterol-lowering medicine.

These supplements are derived from plants like corn and beans. They reduce blood cholesterol by interfering with absorption of dietary cholesterol from the small intestine. The supplements themselves are usually not absorbed into the body, and therefore, side effects from or reactions to them are very uncommon. A total of 2-3 grams of stanol or sterol ester daily can reduce LDL cholesterol levels by 6-15%<sup>1</sup>. These supplements do not affect triglyceride or HDL cholesterol levels. Please make sure your health care provider and pharmacists know all the medications you take.

### Common Side Effects:

A very small number of people suffer from a condition (sitosterolemia) in which their body absorbs too much sterol from their intestine. People with this rare condition should not use the sterol products, but the stanols can be safely and effectively used. Most people tolerate both plant sterols and stanols without side effects and can be safely used by pregnant women.

### Examples of products containing plant stanols and sterols:

	Promise activ Spread, 1 Tbsp	Promise activ Light, 1 Tbsp	Benecol, Regular 1 Tbsp	Benecol, Light 1 Tbsp	Minute Maid Heart Wise OJ, 8 oz	Promise Activ Super Shots, 1 bottle	Benecol Smart Chews, 1 chew
Calories	70	45	70	50	110	70	20
Total Fat	8 gm	5 gm	8 gm	5 gm	0 gm	3.5 gm	0 gm
Saturated Fat	1 gm	1 gm	1 gm	0.5 gm	0 gm	0 gm	0 gm
Trans fat	0 gm	0 gm	0 gm	0 gm	0 gm	0 gm	0 gm
Monounsaturat Fat	4 gm	2.5 gm	4.5 gm	2.5 gm	0 gm	0 gm	0 gm
Polyunsaturat Fat	2.5 gm	1.5 gm	2 gm	2 gm	0 gm	0 gm	0 gm
Cholesterol	<5 mg	<5 mg	0 mg	0 mg	0 mg	0 mg	0 mg
Sodium	85 mg	85 mg	110 mg	110 mg	20 mg	25 mg	15 mg
Stanol/Sterol	1 gm sterol	1 gm sterol	.85 gm stanol	.85 gm stanol	1 gm sterol	2 gm sterol	.85 gm stanol

® Promise activ products are registered trademarks of Unilever

® Benecol is a registered trademark of McNeil Consumer Healthcare

® Minute Maid is a registered trademark of Coca-Cola

PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_

1. Reference: ATP III

# NON-PHARMACOLOGICAL (OVER-THE-COUNTER) AGENTS

## *Psyllium*

### General Information:

Psyllium contains a soluble fiber that lowers cholesterol by preventing it from re-entering your body's circulation through the intestines. A dose of 5-12 grams of psyllium produces an average decrease in total cholesterol of 5%-10%. Psyllium is the main ingredient of several commercial stool softeners. It is usually less expensive to buy in bulk, and can be bought as psyllium husks or powder, or a combination of the two. Either form is effective. ***This medicine is not a substitute for a diet that is low in saturated fat and cholesterol!***

### Common Side Effects:

Common side effects include: bloating, gas, large or loose stools. Psyllium rarely causes any serious side effects. Allergy or bowel obstruction are rare side effects. Because psyllium is a stool softener, you may notice larger stools and more regularity. ***Drinking plenty of fluids*** (at least eight 8 oz. glasses per day) will help prevent side effects, such as mild nausea and intestinal gas.

### Dosing Information:

- Mix psyllium powder with at least 8 oz. of fruit juice, sugar-free fruit drink, or water.
- Take powder with meals, or as recommended by your health care provider.
- Start low and go slow to allow your body to adjust to psyllium.

Please make sure your health care provider and pharmacists know all the medications you take.

Date: \_\_\_\_\_

Directions: \_\_\_\_\_  
\_\_\_\_\_

Recommended Brands: \_\_\_\_\_

Dosing schedule:

Week	Breakfast	Supper
1	1 teaspoon in 8 oz liquid	
2	1 teaspoon in 8 oz liquid	1 teaspoon in 8 oz liquid
3	2 teaspoons in 8 oz liquid	2 teaspoons in 8 oz liquid
4	3 teaspoons (1 tablespoon) in 8 oz liquid	3 teaspoons (1 tablespoon) in 8 oz liquid
5	Increase if recommended by your health care provider.	

**Note:** *If using sugar-sweetened psyllium, the dose should be tablespoons rather than teaspoons.*

*1 tsp. of unsweetened product is 1 serving = 3 grams psyllium; 1 tbsp. of sweetened product is 1 serving = 3 grams psyllium*

PRACTICE NAME \_\_\_\_\_ PHONE \_\_\_\_\_