

## Lipid Lowering Agents

Class of Drug	Actions	Uses	Side Effects	Nursing Implications
<p><b>Bile-acid sequestrants</b></p> <p>Questran, Colestid, Welchol</p>	<ul style="list-style-type: none"> <li>- Resins bind bile acids in the gut; liver then converts more cholesterol to bile</li> <li>- Decr. LDL (15-30% reduction)</li> <li>- Results seen in 2 weeks</li> </ul>	<ul style="list-style-type: none"> <li>- For younger populations and for moderately elevated cholesterol levels</li> <li>- Used w/ statin for severe hypercholesterolemia</li> </ul>	<ul style="list-style-type: none"> <li>- <b>GI</b>-constipation, bloating, nausea, flatulence</li> <li>- <b>Osteoporosis (long term)</b></li> <li>- May increase TG levels so not recommended for patients w/ TG's &gt; 200 mg/dl</li> </ul>	<ul style="list-style-type: none"> <li>- Decr. absorption of vit A, D, E, K, thiazides, beta blockers, Digoxin, Coumadin</li> <li>- Need high fluid consumption</li> <li>- Mix powder in liquid or food</li> <li>- Take other drugs 1h before meals or 4h after meals</li> <li>- Monitor PT, Digoxin levels</li> <li>- Check cholesterol levels (6-8 wks)</li> <li>- Report any unusual S/Sx</li> <li>- Monitor GI distress, esp. bowel elimination</li> </ul>
<p><b>Fibric acid derivatives</b></p> <p>Lopid (take 30 min ac am &amp; pm meal) Tricor (take w/ food)</p>	<ul style="list-style-type: none"> <li>- Incr. lipoprotein lipase (N-zyne) activity so incr. catabolism of VLDL &amp; LDL</li> <li>- Inhibits synthesis of cholesterol</li> <li>- Decr. <b>TG's up to 50%</b> &amp; decr. HDL up to 15%</li> </ul>	<ul style="list-style-type: none"> <li>- To treat elevated LDL levels; not absorbed systemically</li> <li>- Severe hyperlipidemia in persons w/ risk of CHD or pancreatitis (prevention)</li> <li>- In combo w/ niacin or statin for prevention of heart dx, elevated LDL, high TG &amp; low HDL</li> <li>- Used to tx familial hyperlipidemia</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Cholelithiasis</b></li> <li>- GI disturbances (N/V)</li> <li>- Bleeding tendencies</li> <li>- Skin rash w/ Lopid</li> <li>- Myositis if used with statin</li> <li>- Myalgias alone or w/ statins or niacin, soreness, weakness</li> <li>- Hepatotoxicity</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Short term use only</b></li> <li>- Monitor PT/INR if on coumadin (incr. effect)</li> <li>- Incr. toxicity of phenytoin</li> <li>- Assess for hx of gallbladder &amp; liver dx</li> <li>- Check LFT's q 6-8 wks initially</li> </ul>
<p><b>HMG-CoA reductase inhibitors</b></p> <p><b>"Statins"</b></p> <p>Mevacor, Zocor, Pravachol, Lipitor, Lescol</p>	<ul style="list-style-type: none"> <li>- Inhibit synthesis of cholesterol by the liver, so in number of cell LDL receptors; LDL is removed from plasma</li> <li>- Decr. <b>LDL by 40%</b></li> <li>- Incr. HDL by 15%</li> <li>- Decr. TG's 10-40%</li> <li>- Decr. cholesterol by 33%</li> </ul>	<ul style="list-style-type: none"> <li>- Hypercholesterolemia caused by elevated LDL</li> <li>- Prevention of 1<sup>st</sup> or 2<sup>nd</sup> MI in pts w/ CAD, DM or hyperlipidemia</li> <li>- Used more in older patients</li> </ul>	<ul style="list-style-type: none"> <li>- GI problems: dyspepsia, flatulence, constipation, abdomen pain &amp; cramps</li> <li>- <b>Rhabdomyolysis</b> if used with f.a. derivative or niacin (CPK levels)</li> <li>- Hepatotoxicity</li> <li>- Alteration of PT time (Zocor)</li> </ul>	<ul style="list-style-type: none"> <li>- Decr. absorption of ADEK vitamins</li> <li>- Incr. bleeding time if on Coumadin</li> <li>- Do not use in pregnancy</li> <li>- Do not use under age 18</li> <li>- Check LFT's q 6-8 wks for 1<sup>st</sup> yr</li> <li>- Report muscle aches; abdominal pain (RUQ)</li> </ul>
<p><b>Niacin</b></p> <p>Niaspan (sustained release)</p>	<ul style="list-style-type: none"> <li>- Decr. synthesis of VLDL by liver</li> <li>- Therapeutic dose is 100-200x the daily requirement</li> </ul>	<ul style="list-style-type: none"> <li>- Indicated for mixed hyperlipidemia</li> </ul>	<ul style="list-style-type: none"> <li>- Flushing, itching</li> <li>- Can aggravate peptic ulcer, diabetes (hyperglycemia), gout</li> <li>- Abnormal liver function</li> </ul>	<ul style="list-style-type: none"> <li>- Take w/ aspirin 30 min ac</li> <li>- Start doses slow then incr.</li> <li>- Do not chew tablets</li> <li>- Monitor blood glucose</li> <li>- Take w/ meals</li> </ul>

