Drug: ATORVASTATIN  
  
# Available Drug Strengths  
ATORVASTATIN 10MG TAB;  
ATORVASTATIN 20MG TAB;  
ATORVASTATIN 40MG TAB  
  
# Mechanism of Action & How it Works / Helps  
Atorvastatin is a type of Statin that lowers the amount of 'bad cholesterol' (low density lipoprotein or LDL-cholesterol) and 'fat' (triglyceride) in the blood as well as increases the amount of 'good cholesterol' (high density lipoprotein or HDL-cholesterol). This reduces risk of fatty deposit build up in your blood vessels and thus reduces risk for heart attack and stroke.   
  
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# Indication Information for Atorvastatin  
  
## Indication 1: Hyperlipidemia (HLD)  
  
### Summary Of Disease Condition  
Hyperlipidemia which is also known as high blood cholesterol, occurs when there is high cholesterol present in the blood. This causes a buildup of fatty deposits on the inside walls of the blood vessels (atherosclerotic plaques), resulting in blockage and restricted blood flow through these blood vessels. It is is one of the main risk factors for coronary heart disease and stroke.  
  
### Additional Information On Disease  
Cholesterol is carried in the bloodstream by lipoproteins. The two main types of lipoproteins are the low-density lipoprotein and high-density lipoprotein. The low-density lipoprotein (LDL) carries cholesterol from the liver to different parts of the body where they are needed. It has the tendency to deposit cholesterol onto the walls of the blood vessels, leading to the formation of atherosclerotic plaques. LDL-cholesterol is known as the "bad" cholesterol. Lowering the level of LDL cholesterol can reduce our risk of coronary heart disease and stroke. However, the high-density lipoprotein (HDL) carries excess cholesterol from the different parts of the body to the liver and is known as the "good" cholesterol. High levels of HDL cholesterol may help to reduce our risk of heart disease or stroke.  
  
### Disease Aetiology  
Our liver produces 80% of our body's cholesterol. The other 20% comes from the food that we eat. Cholesterol is found in foods of animal origin (egg yolk, poultry, seafood and whole milk dairy products). Food of plant origin (vegetable, fruits, grains, cereals) contains no cholesterol. Increased dietary intake of cholesterol and fat may affect your blood cholesterol levels. Besides diet, other factors that affect cholesterol levels are hereditary metabolic disorders, certain Illnesses, obesity, lack of physical activity or a sedentary lifestyle.  
  
### Non Pharmacological Counselling  
Here are some lifestyle tips if you have hyperlipidemia or high cholesterol:  
1. Eat Less Fat  
- Cut down on the amount of fat in your diet in general.  
- Cut down on the amount of saturated fat. This is found mainly in animal products such as meat, fat, poultry skin, full cream milk, milk products, butter and ghee, and in plant products such as coconut milk, palm oil and certain types of non-dairy creamer.  
- Read food labels to watch out for saturated fat in the ingredients.  
- Eat skinless poultry, fish, lean meats and low-fat dairy products.  
- Choose monounsaturated oils such as olive oil, canola oil, peanut oil or polyunsaturated oils such as corn oil, sunflower oil, soybean oil in cooking.  
2. Eat Less High Cholesterol Food  
- Eat smaller quantities of foods containing cholesterol, which is found in foods of animal origin.  
- Avoid organ meats (liver, kidney, brain and innards) or eat them in small portions as these have high cholesterol content.  
- Replace meat with bean curds, peas and beans on some days.  
- Eat less seafood such as squid.  
- Limit to 3-5 egg yolks a week if your blood cholesterol level is normal. If it is high, you should not take -more than 3 egg yolks a week.  
3. Eat More Fibre  
-Eat more fruits, vegetables, grains, cereals, and legumes.  
-Foods containing soluble fibres like oats, barley, beans, peas are good in reducing cholesterol.  
4. Do not smoke as smoking harms your blood vessels and lowers your HDL-cholesterol.  
5. Lose weight if you are overweight. Aim for a healthy weight range of Body Mass Index (BMI) from 18.5 to 23kg/m2  
6. Adopt a active lifestyle which helps to increase HDL-cholesterol. Aim for 150minutes per week of moderate-intensity activity e.g. brisk walking, cycling, jogging, swimming, dancing or as advised by your doctor  
  
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# Administration Instructions  
- You may take this medication before food or after food.   
- Dosage form: tablet  
- Can it be crushed: Yes  
None  
  
# Medication Storage  
Store your medication in a cool, dry place away from heat, moisture and direct sunlight, such as in a cupboard  
  
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# Pregnancy & Breastfeeding Considerations  
- Pregnancy: Statins can cause harm to the fetus and should not be used in pregnancy. Please inform your healthcare professional if you are pregnant, planning to become pregnant or breastfeeding  
- Breastfeeding: Statins should not be used during breastfeeding. Please inform your healthcare professional if you are pregnant, planning to become pregnant or breastfeeding  
  
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# Side Effects of Atorvastatin  
  
## Side Effect 1: Headache  
  
### Likelihood of side effect  
Common  
  
### Side effect symptoms  
Headache  
  
### Management of side effects  
Symptoms may be temporary, discuss with your doctor if symptoms are troublesome or persistent  
  
## Side Effect 2: Myalgia  
  
### Likelihood of side effect  
Common  
  
### Side effect symptoms  
Mild muscle pain or ache  
  
### Management of side effects  
Symptoms may be temporary, discuss with your doctor if symptoms are troublesome or persistent  
  
## Side Effect 3: Arthalgia  
  
### Likelihood of side effect  
Common  
  
### Side effect symptoms  
MIld joint pain or stiffness  
  
### Management of side effects  
Symptoms may be temporary, discuss with your doctor if symptoms are troublesome or persistent  
  
## Side Effect 4: Diarrhoea  
  
### Likelihood of side effect  
Common  
  
### Side effect symptoms  
Diarrhoea  
  
### Management of side effects  
Taking the medication with of after food may reduce the side effects. Avoid food that is too rich, spicy or has strong smells  
  
## Side Effect 5: Nausea / Vomitting  
  
### Likelihood of side effect  
Common  
  
### Side effect symptoms  
Nauseau / Vomitting  
  
### Management of side effects  
Taking the medication with of after food may reduce the side effects. Avoid food that is too rich, spicy or has strong smells  
  
## Side Effect 6: Stomach Discomfort / Abdominal Pain  
  
### Likelihood of side effect  
Common  
  
### Side effect symptoms  
Stomach Discomfort  
  
### Management of side effects  
Taking the medication with of after food may reduce the side effects. Avoid food that is too rich, spicy or has strong smells  
  
## Side Effect 7: Rhabdomyolysis  
  
### Likelihood of side effect  
Rare but severe  
  
### Cause of side effect  
Breakdown of muscles  
  
### Side effect symptoms  
Unexplained, severe muscle pain that does not go away, muscle weakness/ cramps all over your body or dark brown, tea-coloured urine  
  
### Management of side effects  
Seek immediate medical attention at the hospital emergency department  
  
## Side Effect 8: Hepatotoxicity  
  
### Likelihood of side effect  
Rare but severe  
  
### Cause of side effect  
Liver injury  
  
### Side effect symptoms  
Dark coloured urine, light coloured stools, nausea, vomiting, loss of appetite, yellowing of skin or eyes  
  
### Management of side effects  
Seek immediate medical attention at the hospital emergency department  
  
## Side Effect 9: Allergy Reaction  
  
### Likelihood of side effect  
Rare but severe  
  
### Side effect symptoms  
Swelling of eyes and/or lips; rashes throughout the body; difficulty breathing; faintness  
  
### Management of side effects  
Seek immediate medical attention or visit the emergency department if symptoms are severe  
  
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# Drug Interactions of Atorvastatin  
  
## Interaction 1: Grapefruit Juice - Augment drug activity  
  
### Impact of interaction  
Grapefruit, or grapefruit juice may interact with your medication and increase the risk of side-effects.  
  
### Management of interaction  
Avoid taking grapefruit, or grapefruit juice  
  
## Interaction 2: Red Yeast Rice  
  
### Drug interaction class specificity  
Statins  
  
### Impact of interaction  
Red yeast rice can increase the risk of side effects of your cholesterol medication  
  
### Management of interaction  
Avoid taking red yeast rice supplement  
  
## Interaction 3: Alcohol  
  
### Drug interaction class specificity  
Statins  
  
### Impact of interaction  
Drinking too much alcohol may raise your chance of liver disease.  
  
### Management of interaction  
Avoid or limit drinking alcohol to less than 3 drinks a day  
  
## Interaction 4: Antibiotics and antifungals  
  
### Drug interaction class specificity  
Statins  
  
### Impact of interaction  
Should not be taken together with certain antibiotics. and antifungals  
  
### Management of interaction  
Please inform your doctor that you are on cholesterol medications should you be prescribed antibiotics or antifungals. You may have to pause your cholesterol medications temporarily  
  
## Interaction 5: Colchicine  
  
### Drug interaction class specificity  
Statins  
  
### Impact of interaction  
Colchicine may interact with your medication and increase the risk of side-effects.  
  
### Management of interaction  
Please inform your doctor that you are on cholesterol medications should you be treated for gout and/or prescribed cplchicine. You may have to pause your cholesterol medications temporarily  
  
## Interaction 6: Charcoal, Kaolin and Smecta  
  
### Impact of interaction  
These anti-diarrhoeal medication may reduce the absorption of other medication  
  
### Management of interaction  
Take these medication at least 2 hours apart from other medications/.  
  
## Interaction 7: Traditional Medicines  
  
### Impact of interaction  
Traditional medicines, such as traditional chinese medication, may lead to certain, unexpected interactions that could be harmful.   
  
### Management of interaction  
In general, it is always check with your doctor or pharmacist if it is ok to take particular traditional medicine.