

Key Facts:

- Lipid Management should always be seen in the context of overall cardiovascular risk.
- Manage patients cardiovascular risk holistically.
- Consider lifestyle changes and manage other risk factors.
- Statins have the strongest evidence of all lipid reducing medication with regards to reducing cardiovascular mortality.
- Patients do not need to routinely fast prior to having their lipid levels checked.

Why are you interested in this patients lipid level?

Primary Prevention.

No evidence of target end organ damage

- **Step 1:** Calculate the patients overall cardiovascular risk **prior** to checking Lipid levels.
 - Consider QRISK 3 calculator - <https://qrisk.org/>
 - Alternatively use WHO non-laboratory chart on the next page.
- **Step 2:** Look at lifestyle interventions
- **Step 3:** Optimal management of other risk factors such as hypertension and diabetes (these have a bigger impact on mortality than taking a statin).
- **Step 4:** Shared decision with patient what level of risk they would consider intervention with medication based on their preferences and affordability. Can utilise risk tools with patients.
 - Kijabe Hospital Recommends consider medication if >20% risk over 10 years and/or diabetic > 40 years.
- **Step 5:** Measure patients lipid levels **ONLY** if close to threshold and would change management decision to treat with medication.
- **Step 6:** If commencing medication start on Atorvastatin 20mg once daily.
 - Check baseline creatinine, eGFR and HBA1c
- **Step 7:** Review at 3 months.
 - DO NOT routinely recheck ALT or Lipids
- **Step 8:** Annual reviews - concentrate holistically on cardiovascular risks.

Secondary Prevention

Existing target end organ damage e.g. Known CAD, PVD, CVD or CKD

- Patients with proven cardiovascular disease always benefit from statins if tolerated. They have proven they are high risk and there is no benefit in routinely checking their lipid levels.
- **Step 1.** Look at lifestyle modification.
 - **Step 2.** Optimal management of other risk factors such as diabetes and hypertension.
 - **Step 3.** Commence the patient on Atorvastatin 40mg. *If secondary prevention for CKD then Atorvastatin 20mg.*
 - Check baseline creatinine, eGFR and HBA1c
 - **Step 4.** Review at 3 months.
 - DO NOT routinely recheck lipid levels
 - If bloods ok and tolerating the medication then increase dose to 80mg. *In CKD can stay on 20mg.*
 - **Step 5:** Review after further 3 months
 - **Step 6:** Annual reviews - concentrate holistically on cardiovascular risks.
- Note: If patient cannot tolerate or afford a high dose their is still benefit in being on a lower dose of atorvastatin.*

Familial Hypercholesterolaemia

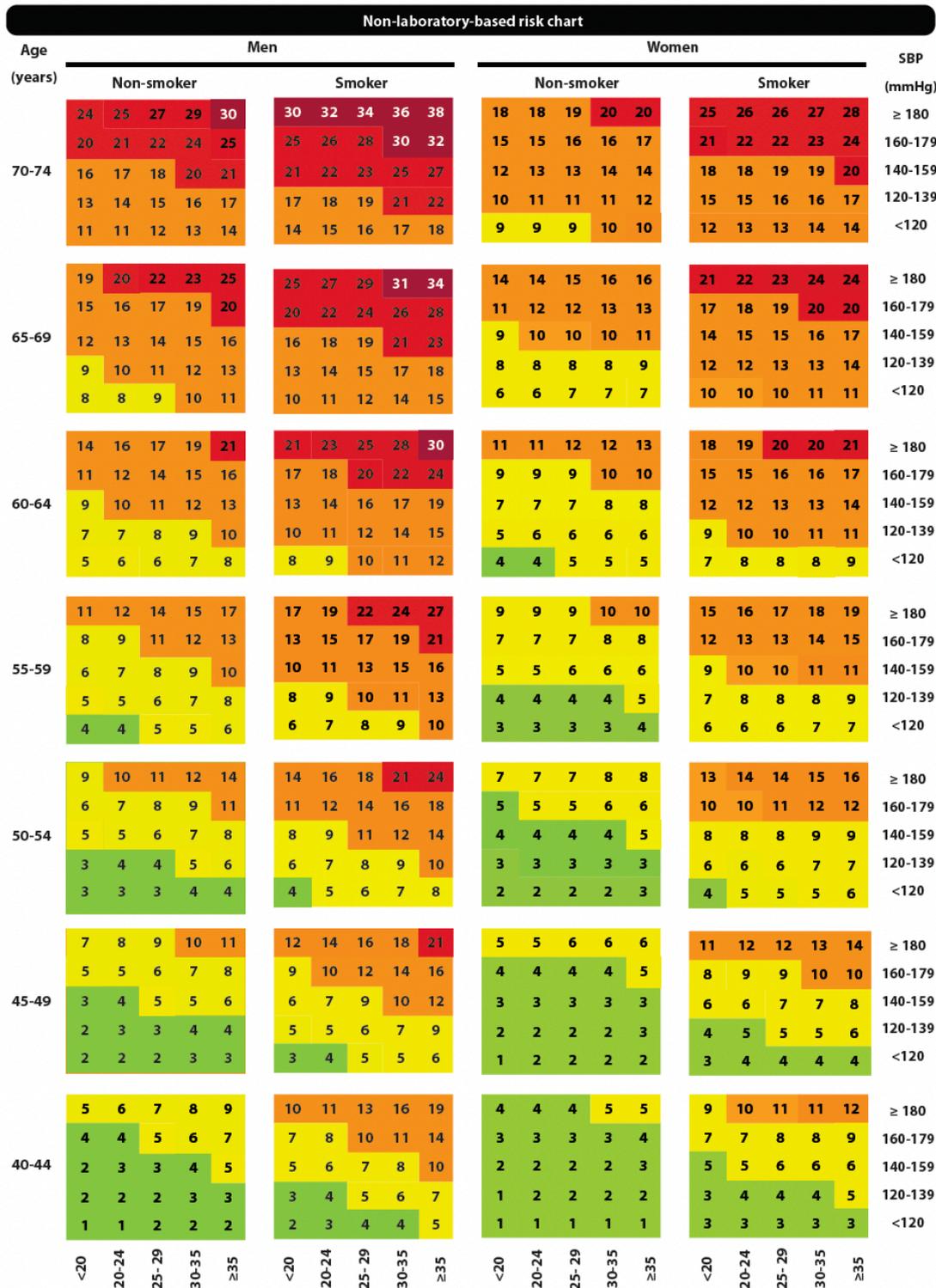
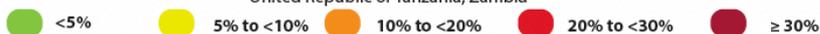
Consider if Total Cholesterol > 9mmol/L and over 30 or >7.5 if under 30 **and/or** have a first degree relative with CHD <60 years.

- **Step 1:** All Patients with suspected familial Hypercholesterolaemia should be **discussed with a consultant.**
- **Step 2.** Look at lifestyle modification..
- **Step 3.** Optimal management of other risk factors such as diabetes and hypertension.
- **Step 4.** Commence the patient on Atorvastatin 40mg.
 - Check baseline creatinine, eGFR, Lipids and HBA1c if not recently performed.
- **Step 4.** Review at 3 months and repeat Lipids.
 - Target a LDL reduction of >50% from pre-treatment levels.
- **Step 5:** Annual reviews - concentrate holistically on cardiovascular risks.

WHO Cardiovascular disease risk non-laboratory-based charts

Eastern Sub-Saharan Africa

Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Rwanda, Somalia, Uganda, United Republic of Tanzania, Zambia



Body Mass index kg/m²

Eastern Sub-Saharan Africa

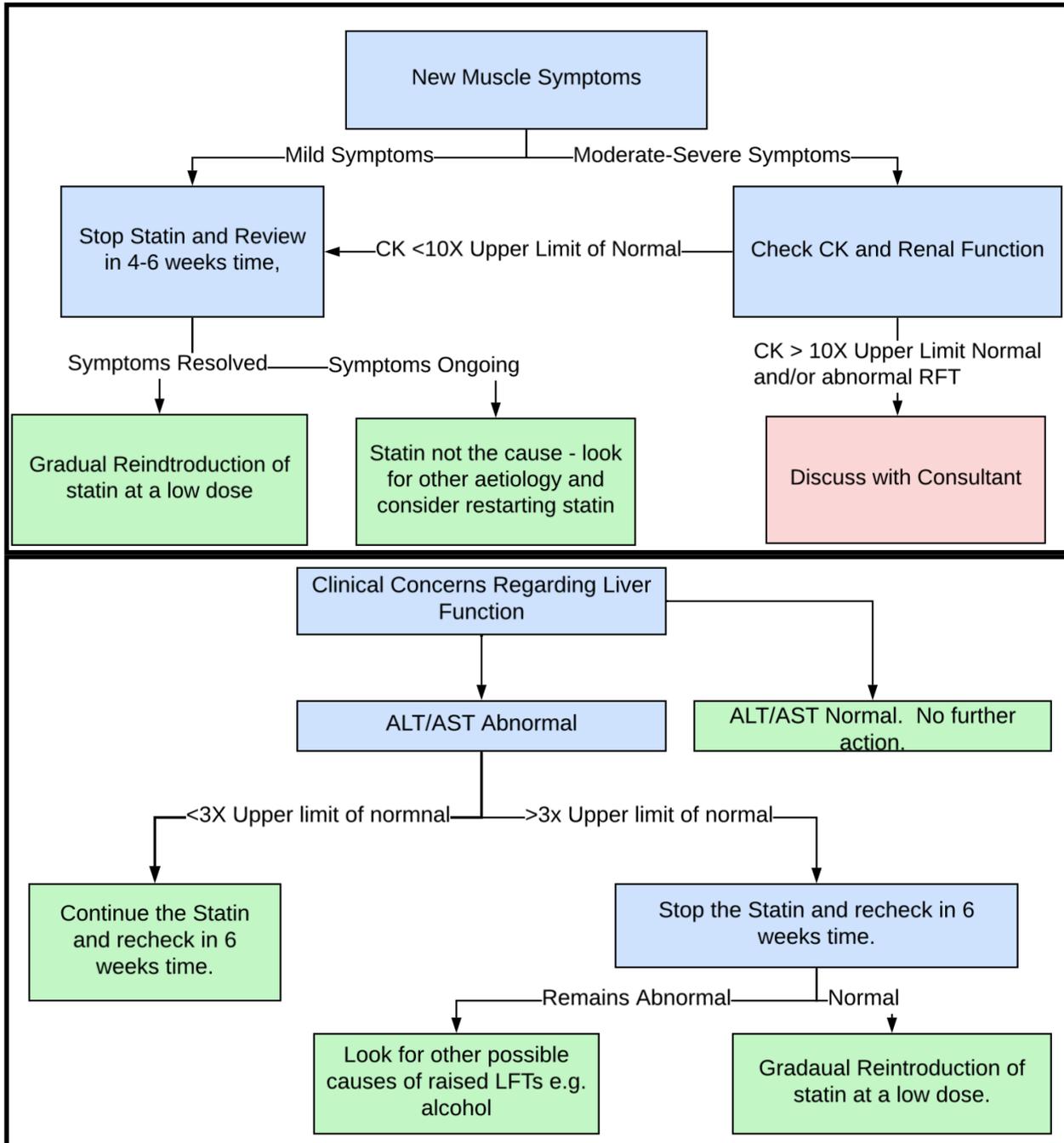
Lifestyle Interventions:

- **Smoking Cessation**
- **Healthy Diet** - Eat a diet low in fat and refined carbohydrates; high in fruit and vegetables.
- **Reduce Alcohol**
- **Exercise**- Moderate exercise everyday for 30 minutes if possible. This is anything that makes you a bit short of breath or sweaty.
- **Reduce Salt Intake** - no more than 1 teaspoon per day. This includes hidden salts. Avoid processed foods.
- **Sleep** - Try to sleep for 7-8 hours each night.

Diet and Exercise can reduce a persons cholesterol by between 10-20%

Statin Contraindications, Side Effects and Monitoring

- Statins are contraindicated in Pregnancy.
- Women of child bearing age should usually also be on contraceptives.
- Statins should be used with caution in patients with significant liver disease and/or history of muscular disorders - **Discuss with consultant.**
- Statins may increase the risk of diabetes - however, the benefit still outweighs the risk and therefore should be continued.
- Muscle pains and altered LFT's are the other common side effects (see below)



Alternative Lipid Lowering Medication

- There are other medications that have also been shown to reduce cholesterol in patients who cannot tolerate statins and/or fail to reach target reduction e.g. Ezetimibe, Evolocumab, Bempedoic acid.
- These drugs DO NOT have nearly as strong evidence with regards to reducing mortality.