Laboratory diagnosis of lipid disorders

1. After finding high lipid concentrations in the serum, what tests would you employ to confirm or exclude the secondary causes of hyperlipidemia?

2. The laboratory parameters of a male person having normal blood pressure, BMI 23 kg/m^2 are:
   serum TG: 1.5 mmol/l
   serum LDL-cholesterol: 4.4 mmol/l
   serum CRP: 5 mg/l
   What is the risk of CHD for this person? What are the risk factors of atherosclerosis?

3. A 45-year-old man has the following parameters:
   waist circumference: 110 cm
   BP: 140/90 mmHg
   HDL-C: 0.9 mmol/l
   fasting blood glucose: 6.3 mmol/l
   What is your opinion about the risk of CHD for this person?

4. A 35-year-old man wanted to be screened for possible ischemic heart disease because his father died early from a heart attack. The patient was not obese and was a non-smoker. On examination his blood pressure was normal and the only abnormality was tendon xanthomata arising from the Achilles tendons. An ECG taken at rest was normal but ischemic changes developed on exercise. Fasting lipids: serum cholesterol 8.7 mmol/l, triglyceride 1.1 mmol/l.
   What is the most likely diagnosis and how can you confirm it?

5. A middle-aged man saw his family doctor, because he got rashes. On examination he was found to have extensive yellowish papules, with an erythematous base, on his buttocks and elbows and orange-yellow discoloration of the palmar creases. Fasting lipids: serum cholesterol 7.6 mmol/l, triglyceride 8.1 mmol/l.
   What is your diagnosis?