

Fasting blood tests for lipids? Not anymore.

By Dr David Deam

Recent evidence is challenging the need to have patients fast for blood tests when assessing for risk of cardiovascular disease.

It has now been shown that non-fasting triglycerides are superior to fasting in predicting cardiovascular risk. Patients usually eat regularly during the day with the fasting state only occurring shortly before breakfast; a lipid profile measured during this time may not accurately reflect the lipid concentration during the day. In addition, lipids and lipoproteins only change minimally in response to normal food intake; for instance, in four large prospective studies, there was minimal change in triglyceride levels in patients who had a non-fasting versus a fasting blood test.^(1, 2) Further, in results from a population of 108,602, patients who had non-fasting random blood tests and had the highest lipid results (including triglycerides) had the highest risk of ischaemic heart disease (IHD).⁽³⁾ Finally, results from studies assessing the effectiveness of lipid-lowering agents, using non-fasting samples, show that reducing the levels of non-fasting lipids reduced the risk of cardiovascular disease.⁽⁴⁾

There is no sound scientific evidence as to why fasting should be superior to non-fasting when evaluating a lipid profile for cardiovascular risk prediction. Non-fasting tests simplify blood tests in the laboratory, avoid the inconvenience of fasting tests and prevent the clinical risk associated with fasting blood tests in patients with diabetes who may be at risk of iatrogenic hypoglycaemia. The scientific evidence suggests that we should move away from fasting blood tests, despite the fact that this is the way it has always been done; fortunately, guidelines are being modified to reflect these changes.^(5, 6)

In Summary

1. Lipids only differ slightly in fasting versus non-fasting tests
2. Non-fasting triglycerides are better at predicting cardiovascular risk
3. Studies of lipid-lowering agents using non-fasting tests showed reducing levels of non-fasting lipids correlated with reduced risk of cardiovascular disease
4. Non-fasting lipids are more convenient and safer for patients (particularly for diabetics)
5. Guidelines are currently being updated to reflect

References

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