

LIPIDS

**NO NEED TO FAST
BEFORE BLOOD TESTS**

Prephlebotomy fasting is common practice when measuring blood lipid levels. Fasting was originally introduced to reduce variability between samples. A newly published study from Davinder Sidhu and Christopher Naugler suggests that fasting is unnecessary for the measurement of total-cholesterol and HDL-cholesterol levels.

Fasting before a routine blood test is inconvenient for patients and clinicians alike. This practice can discourage patients from participating in routine screening programmes, and means that phlebotomy clinics are very busy in the mornings. Patients with diabetes mellitus, in particular, might struggle with the fasting protocol. "We were looking for ways to avoid turning nonfasting patients away from our phlebotomy sites," says Naugler.

The investigators examined the levels of cholesterol (total, HDL, and LDL) and triglycerides from 209,180 patients scheduled to undergo a screening blood test. After adjusting for age and sex, the total-cholesterol and HDL-cholesterol levels varied by <2% (not statistically significant) in fasting durations ranging from 1 to 16 h.

More variability was found within the LDL-cholesterol and triglyceride measurements. Triglyceride levels were higher and calculated LDL-cholesterol levels were lower in patients who had fasted for ≤ 5 h when compared with those who had fasted for ≥ 8 h. Triglyceride levels varied by up to 20%, and LDL-cholesterol levels, which are calculated using values from the other three measurements, varied by up to 10%.

Previous work has suggested that nonfasting triglyceride levels correlate strongly with subsequent cardiovascular events as well as with insulin resistance. Performing routine blood tests when triglyceride levels are high (within 4 h of a meal) could provide diagnostic information about postprandial lipid and lipoprotein clearance. However, in order to compare measurements throughout a patient's history, the time between a meal and a blood sample would have to be controlled. Although fasting might still be the easiest option for obtaining consistent and comparable measurements of triglyceride levels, for measurement of total-cholesterol and HDL-cholesterol nonfasting patients need not be turned away.

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Original article Sidhu, D. & Naugler, C. Fasting time and lipid levels in a community-based population: a cross-sectional study. *Arch. Intern. Med.* doi:10.1001/archinternmed.2012.3708