“We aimed to examine the influence of prolonged fasting and mild physical activity on routine laboratory tests” Supak-Smolčić et al (2014).

Reference:

Effect of prolonged fasting and mild activity on routine laboratory tests http://ctt.ec/53i8G+
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Abstract:
OBJECTIVES: Despite the standardization of the phlebotomy procedure, blood analysis is occasionally requested after recommended hours with the excuse that the patient is still fasting. We aimed to examine the influence of prolonged fasting and mild physical activity on routine laboratory tests.

DESIGN AND METHODS: The study was conducted on 30 volunteers (27 female) median age 40y (20-59). Blood samples were taken in the morning (7:00-8:00a.m.) and early afternoon (1:00-2:00p.m.) after prolonged fasting and usual daily activities. Serum glucose (GLU), urea, creatinine, triglyceride, uric acid (UA), iron and electrolytes were analyzed on Roche cobas 6000 c501 and complete blood count on Siemens ADVIA 2120i. Statistical significance between the two measurements was tested using paired t-test or Wilcoxon test according to data distribution. Clinical significance was judged against calculated reference change values (RCV).

RESULTS: A statistically significant decrease was found for red blood cell count, hemoglobin, hematocrit, mean corpuscular volume (MCV), GLU, urea, creatinine, triglycerides and electrolytes, whereas white blood cell count and iron were significantly increased. Judging against desirable bias derived from biological variation, a significant change was found for all the analytes except MCV, platelet count, UA and triglycerides. A clinically significant change was not found for any of the tested analytes when compared to RCV.

CONCLUSIONS: Prolonged fasting and mild activity will not influence the medical decision
for healthy subjects with normal results. Despite the present statistically significant change, the clinically significant change was not shown. However, the study did not include pathological results which have to be interpreted more carefully.

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