TSH between 0.01 and 0.5 mIU/L) evaluated changes in TSH and FT₄ when changing oral levothyroxine administration in relationship to meals. Patients completed 3 different 8-week timing regimens in a 3-period crossover design, acting as their own controls. The timing regimens entailed the following: thyroxine taken after an overnight fast and at least 1 hour before breakfast (fasting protocol), thyroxine taken within 20 minutes after breakfast (breakfast protocol), and thyroxine taken at bedtime at least 2 hours after the individual’s last meal (bedtime protocol).

Over a 24-week period, the mean serum TSH concentrations were 2.9 mIU for the breakfast protocol, 2.2 mIU/L for the bedtime protocol, and 1.1 mIU/L for the fasting protocol (P < .001 for all 2-way comparisons). The serum FT₄ was lowest with the breakfast protocol (FT₄ 1.2 ng/dL; 95% CI, 1.2–1.3) and highest in the fasting protocol (1.4 ng/dL; 95% CI, 1.3–1.4). No significant differences were detected with the serum FT₃ concentrations against baseline. The authors concluded that nonfasting levothyroxine administration resulted in higher serum TSH concentration and lower serum FT₄ concentration. This study was limited by small sample size.


What is the upper limit of normal for an amniotic fluid index for a 41-week fetus?

**Evidence-Based Answer**

The upper limit of normal (95th percentile) for the amniotic fluid index (AFI) at 41 weeks ranges between 13 and 24 cm depending on the patient population studied. (SOR: B, based on cohort studies.)

A prospective cross-sectional study examined 2,868 low-risk pregnant Brazilian women at 20 to 42 weeks’ gestation to generate population-based normative values for the AFI. The 90th percentile AFI at 41 weeks was 17.9 cm. The AFI at the 95th percentile was not given.¹

A 2-year, prospective longitudinal study evaluated 117 Vietnamese women with normal singleton pregnancies at 28 to 42 weeks’ gestation to generate population-based normative upper and lower AFI boundaries. A normal AFI was defined as any value between the 5th and 95th percentiles. The upper limit of normal for the AFI at 41 weeks in this study was 13.7 cm.²

Another prospective cross-sectional study was undertaken to analyze AFI values among 517 Indian women with a normal pregnancy at 16 to 42 weeks’ gestation. The median, 5th, and 95th percentile values were calculated for each gestational week. The upper limit of normal AFI at 41 weeks was 15 cm.³

Another prospective cross-sectional study involved 750 Bulgarian women with uncomplicated singleton pregnancies at 16 to 43 weeks’ gestation. The means and the 90%, 95%, and 98% confidence limits for the entire population and subgroups (preterm, term, and postterm) were calculated. The 95th percentile for AFI at 41 weeks was 24 cm.⁴

A prospective cross-sectional study investigated gestational age-specific boundaries of normal AFI in 791 urban Californian women with normal singleton pregnancies at 16 to 44 weeks’ gestation. The boundaries for normal at each gestational week were established at the 5th and 95th percentiles. The upper limit of normal at 41 weeks was 19.4 cm.⁵