MAYO CLINIC LABORATORIES

TEST STATUS

Notification Date: May 31, 2022
Effective Date: June 30, 2022

Testosterone, Total, Bioavailable, and Free, Serum

Test ID: TTFB

Explanation:
On the effective date, free testosterone will be performed with a new method that will result in changes in established reference ranges.

Current Method
Equilibrium Dialysis

New Method
Equilibrium Dialysis/ Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

Current Reference Range
TESTOSTERONE, FREE Males (adult): 20-<25 years: 5.25-20.7 ng/dL 25-<30 years: 5.05-19.8 ng/dL 30-<35 years: 4.85-19.0 ng/dL 35-<40 years: 4.65-18.1 ng/dL 40-<45 years: 4.46-17.1 ng/dL 45-<50 years: 4.26-16.4 ng/dL 50-<55 years: 4.06-15.6 ng/dL 55-<60 years: 3.87-14.7 ng/dL 60-<65 years: 3.67-13.9 ng/dL 65-<70 years: 3.47-13.0 ng/dL 70-<75 years: 3.28-12.2 ng/dL 75-<80 years: 3.08-11.3 ng/dL 80-<85 years: 2.88-10.5 ng/dL 85-<90 years: 2.69-9.61 ng/dL 90-<95 years: 2.49-8.76 ng/dL 95-100+ years: 2.29-7.91 ng/dL Males (children): <1 year: Term infants 1-15 days: 0.20-3.10 ng/dL* 16 days-1 year: Values decrease gradually from newborn (0.20-3.10 ng/dL) to prepubertal levels *J Clin Endocrinol Metab 1973;36(6):1132-1142 1-8 years: <0.04-0.11 ng/dL 9 years: <0.04-0.45 ng/dL 10 years: <0.04-1.26 ng/dL 11 years: <0.04-5.52 ng/dL

New Reference Range
TESTOSTERONE, FREE Males (adult): 20-<25 years: 5.25-20.7 ng/dL 25-<30 years: 5.05-19.8 ng/dL 30-<35 years: 4.85-19.0 ng/dL 35-<40 years: 4.65-18.1 ng/dL 40-<45 years: 4.46-17.1 ng/dL 45-<50 years: 4.26-16.4 ng/dL 50-<55 years: 4.06-15.6 ng/dL 55-<60 years: 3.87-14.7 ng/dL 60-<65 years: 3.67-13.9 ng/dL 65-<70 years: 3.47-13.0 ng/dL 70-<75 years: 3.28-12.2 ng/dL 75-<80 years: 3.08-11.3 ng/dL 80-<85 years: 2.88-10.5 ng/dL 85-<90 years: 2.69-9.61 ng/dL 90-<95 years: 2.49-8.76 ng/dL 95-100+ years: 2.29-7.91 ng/dL Males (children): <1 year: Term infants **1-15 days: 0.20-3.10 ng/dL*** 16 days-1 year: Values decrease gradually from newborn (0.20-3.10 ng/dL) to prepubertal levels *J Clin Endocrinol Metab 1973;36(6):1132-1142 **1-8 years: <0.13 ng/dL** **9 years: <0.13-0.45 ng/dL** **10 years: <0.13-1.26 ng/dL** **11 years: <0.13-5.52 ng/dL**

12 years: <0.04-9.28 ng/dL 13 years: <0.04-12.6 ng/dL 14 years: 0.48-15.3 ng/dL 15 years: 1.62-17.7 ng/dL 16 years: 2.93-19.5 ng/dL 17 years: 4.28-20.9 ng/dL 18 years: 5.40-21.8 ng/dL 19 years: 5.36-21.2 ng/dL	**12 years: <0.13-9.28 ng/dL** **13 years: <0.13-12.6 ng/dL** 14 years: 0.48-15.3 ng/dL 15 years: 1.62-17.7 ng/dL 16 years: 2.93-19.5 ng/dL 17 years: 4.28-20.9 ng/dL 18 years: 5.40-21.8 ng/dL 19 years: 5.36-21.2 ng/dL
Females (adult): 20-<25 years: 0.06-1.08 ng/dL 25-<30 years: 0.06-1.06 ng/dL 30-<35 years: 0.06-1.03 ng/dL 35-<40 years: 0.06-1.00 ng/dL 40-<45 years: 0.06-0.98 ng/dL 45-<50 years: 0.06-0.95 ng/dL 50-<55 years: 0.06-0.92 ng/dL 55-<60 years: 0.06-0.90 ng/dL 60-<65 years: 0.06-0.87 ng/dL 65-<70 years: 0.06-0.84 ng/dL 70-<75 years: 0.06-0.82 ng/dL 75-<80 years: 0.06-0.79 ng/dL 80-<85 years: 0.06-0.76 ng/dL 85-<90 years: 0.06-0.73 ng/dL 90-<95 years: 0.06-0.71 ng/dL 95-100+ years: 0.06-0.68 ng/dL	Females (adult): **20-<25 years: <0.13-1.08 ng/dL** **25-<30 years: <0.13-1.06 ng/dL** **30-<35 years: <0.13-1.03 ng/dL** **35-<40 years: <0.13-1.00 ng/dL** **40-<45 years: <0.13-0.98 ng/dL** **45-<50 years: <0.13-0.95 ng/dL** **50-<55 years: <0.13-0.92 ng/dL** **55-<60 years: <0.13-0.90 ng/dL** **60-<65 years: <0.13-0.87 ng/dL** **65-<70 years: <0.13-0.84 ng/dL** **70-<75 years: <0.13-0.82 ng/dL** **75-<80 years: <0.13-0.79 ng/dL** **80-<85 years: <0.13-0.76 ng/dL** **85-<90 years: <0.13-0.73 ng/dL** **90-<95 years: <0.13-0.71 ng/dL** **95-100+ years: <0.13-0.68 ng/dL**
Females (children): <1 year: Term infants 1-15 days: 0.06-0.25 ng/dL* 16 days-1 year: Values decrease gradually from newborn (0.06-0.25 ng/dL) to prepubertal levels *J Clin Endocrinol Metab 1973;36(6):1132-1142	Females (children): <1 year: Term infants **1-15 days: <0.13-0.25 ng/dL*** 16 days-1 year: Values decrease gradually from newborn (<0.13-0.25 ng/dL) to prepubertal levels *J Clin Endocrinol Metab 1973;36(6):1132-1142
1-4 years: <0.04 ng/dL 5 years: <0.04-0.07 ng/dL 6 years: <0.04-0.14 ng/dL 7 years: <0.04-0.23 ng/dL 8 years: <0.04-0.34 ng/dL 9 years: <0.04-0.46 ng/dL 10 years: <0.04-0.59 ng/dL 11 years: <0.04-0.72 ng/dL 12 years: <0.04-0.84 ng/dL 13 years: <0.04-0.96 ng/dL 14 years: <0.04-1.06 ng/dL 15-18 years: <0.04-1.09 ng/dL 19 years: 0.06-1.08 ng/dL	**1-4 years: <0.13 ng/dL** **5 years: <0.13 ng/dL** **6 years: <0.14 ng/dL** **7 years: <0.13-0.23 ng/dL** **8 years: <0.13-0.34 ng/dL** **9 years: <0.13-0.46 ng/dL** **10 years: <0.13-0.59 ng/dL** **11 years: <0.13-0.72 ng/dL** **12 years: <0.13-0.84 ng/dL** **13 years: <0.13-0.96 ng/dL** **14 years: <0.13-1.06 ng/dL** **15-18 years: <0.13-1.09 ng/dL** **19 years: <0.13-1.08 ng/dL**

Questions

Contact Joshua Yang, Laboratory Technologist Resource Coordinator at 800-533-1710.