**Testosterone, Free, Bioavailable and Total, MS**

**REFERENCE RANGES**

**Testosterone, Total, LC/MS/MS:**

**Male (ng/dL) Female (ng/dL)**

<1 year Not Established Not Established

1-5 years <=5 <=8

6-7 years <=25 <=20

8-10 years <=42 <=35

11 years <=260 <=40

12-13 years <=420 <=40

14-17.9 years <=1000 <=40

>18 years 250-1100 2-45

**Testosterone, Free: Male (pg/mL) Female (pg/mL)**

<1 year Not Established Not Established

1-11 years <=1.3 <=1.5

12-13 years <=64.0 <=1.5

14-17 years 4.0-100.0 <=3.6

18-69 years 46.0-224.0 0.2-5.0

70-89 years 6.0-73.0 0.3-5.0

>89 years Not Established Not Established

**Testosterone, Biovail: Male (ng/dL) Female (ng/dL)**

<1 year Not Established Not Established

1-11 years <5.5 <3.5

12-13 years <140.1 <3.5

14-17 years 8.0-210.0 <7.9

18-69 years 110.0-575.0 0.5-8.5

70-89 years 15.0-150.0 0.5-8.8

>89 years Not Established Not Established

**Sex Hormone Binding Globulin:**

**Female:**

20-46 years of age, non pregnant: 18-136 nmol/L

47-91 yers of age, post menopausal: 17-125 nmol/L

Reference ranges are not available for females under the age of 20 years or over

The age of 91 years.

**Male:**

>=20 years of age: 13-90 nmol/L

Reference ranges are not available for males under the age of 20 years.

**Albumin:**

Adults 18 years and older: 3.5-5.2 g/dL