ENDOCRINE SPECIALTY LABORATORY

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THYROID FUNCTION & VITAMIN TEST REPORT

Report Date: January 20, 2024 | Accession #: T2024-005678

Patient Name: Jane Smith (Test Patient)
DOB: 03/15/1985
Medical Record #: MR-2024-002
Age: 39 years
Date of Collection: January 20, 2024
Time of Collection: 09:15 AM
Physician: Dr. Robert Johnson
Department: Endocrinology
Specimen Type: Venous Blood
Collection Site: Left Antecubital
Fasting Status: 12 hours
Medications: None reported

THYROID FUNCTION TESTS

Test	Result	Reference Range	Units	Status
TSH (Thyroid Stimulating Hormone)	2.1	0.4 - 4.0	mIU/L	Normal
Free T4 (Thyroxine)	1.3	0.8 - 1.8	ng/dL	Normal
Free T3 (Triiodothyronine)	3.2	2.3 - 4.2	pg/mL	Normal
Total T4	7.8	5.1 - 14.1	µg/dL	Normal
Total T3	125	80 - 200	ng/dL	Normal
Reverse T3	18	9 - 27	ng/dL	Normal
Anti-TPO Antibodies	< 10	< 35	IU/mL	Normal
Anti-Thyroglobulin Antibodies	< 20	< 40	IU/mL	Normal
Thyroglobulin	15	1.5 - 30.0	ng/mL	Normal

VITAMIN & NUTRITIONAL PANEL

Test	Result	Reference Range	Units	Status
Vitamin D (25-OH)	28	30 - 100	ng/mL	Low
Vitamin D (1,25-OH)	45	18 - 78	pg/mL	Normal
Vitamin B12	450	200 - 900	pg/mL	Normal
Folate (Folic Acid)	12	> 3.0	ng/mL	Normal
Vitamin A	65	20 - 80	µg/dL	Normal
Vitamin E	12	5.7 - 19.9	mg/L	Normal
Vitamin K	2.1	0.2 - 3.2	ng/mL	Normal
Vitamin C	0.8	0.4 - 2.0	mg/dL	Normal

IRON STUDIES & ANEMIA WORKUP

Test	Result	Reference Range	Units	Status
Iron	85	60 - 170	µg/dL	Normal
TIBC (Total Iron Binding Capacity)	320	250 - 450	µg/dL	Normal
Transferrin Saturation	27	20 - 50	%	Normal
Ferritin	45	15 - 150	ng/mL	Normal
Transferrin	280	200 - 400	mg/dL	Normal
Haptoglobin	120	30 - 200	mg/dL	Normal

ADDITIONAL METABOLIC MARKERS

Test	Result	Reference Range	Units	Status
Calcium	9.6	8.5 - 10.5	mg/dL	Normal
Phosphorus	3.8	2.5 - 4.5	mg/dL	Normal
Magnesium	2.1	1.5 - 2.5	mg/dL	Normal
Zinc	85	60 - 120	µg/dL	Normal
Copper	95	70 - 140	µg/dL	Normal
Selenium	120	70 - 150	µg/L	Normal

CLINICAL INTERPRETATION:

• **Thyroid Function:** All thyroid parameters are within normal reference ranges. TSH, Free T4, and Free T3 levels indicate euthyroid state. No evidence of autoimmune thyroid disease.

• **Vitamin D:** 25-OH Vitamin D level is low at 28 ng/mL, indicating vitamin D insufficiency. This may contribute to bone health concerns and immune function.

• **Other Vitamins:** B12, folate, and other vitamin levels are within normal ranges.

• **Iron Studies:** All iron parameters are normal, ruling out iron deficiency anemia.

• **Mineral Status:** Calcium, phosphorus, magnesium, and trace minerals are within normal limits.

RECOMMENDATIONS:

• **Vitamin D Supplementation:** Recommend vitamin D3 supplementation (1000-2000 IU daily) for 3 months

• **Dietary Modifications:** Increase dietary sources of vitamin D (fatty fish, egg yolks, fortified dairy)

• **Sun Exposure:** Moderate sun exposure (15-20 minutes daily) when possible

• **Follow-up:** Repeat vitamin D level in 3 months after supplementation

• **Bone Health:** Consider calcium supplementation if dietary intake is insufficient

• **Annual Monitoring:** Continue annual thyroid function screening

Report generated by: Endocrine Laboratory System | Verified by: Dr. Lisa Chen, MD

Report Date: January 20, 2024 16:45 | Next Review: January 20, 2025