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ENDOCRINOLOGY

# Blood Chemistry: Vitamins

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**Medical Disclaimer:** The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, [drritamarie.com](http://drritamarie.com), and the experts who have contributed. We encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.



# Vitamin D: Important in Prevention and Treatment of:

- ✓ Autoimmune disease: T regulatory cells
- ✓ Muscle pain (fibromyalgia)
- ✓ Diabetes
- ✓ Osteoporosis
- ✓ Cancer
- ✓ Neurodegenerative disease
- ✓ Depression
- ✓ Fatigue



# Vitamin D Testing

91	<b>VITAMINS</b>							
92	Vitamin D, 25-Hydroxy	ng/mL	32.0	100.0	70.0	110.0		
93	Vitamin B12	pg/mL	211.0	911.0	800.0	1500.0		
94	Folate	ng/mL	5.4	-	5.4	-		

**Form Tested:** Vitamin D, 25-Hydroxy ng/mL

- ❖ **Lab Range:** 32.0 - 100.0
- ❖ **Optimal Range** 55.0 - 100.0

**Deficiencies From:** lack of sunlight, excess stress (cortisol)



# Conditions That Affect Vitamin D Requirement

- ✓ Body weight
- ✓ Skin color
- ✓ Age
- ✓ Where you live
- ✓ Sun exposure
- ✓ Do you use sunscreen
- ✓ Chronic illness
- ✓ Autoimmune disease



# Vitamin D Action Plan



**Optimal Range: 60.0 -100.0**

*Rough guidelines - if in doubt be sure to consult primary provider.*

- ✓ **Vitamin D <20:** Take 20,000 IU every day for a week or up to a month, then 10,000 IU for 2 months, then retest
- ✓ **Vitamin D 20 - 30:** Take 10,000 IU for 3 months, then retest
- ✓ **Vitamin D 30 - 40:** Take 6,000 IU for 3 months, then retest
- ✓ **Vitamin D 40 - 60:** Take 2,000 - 4,000 IU per day for 3 months, then recheck
- ✓ **Vitamin D 60 or above:** If you live in a northern climate, take 1000 - 2000 until spring and on days that you don't get out in the sun for at least 30 minutes. Retest in 4 - 6 months. If you get regular sun exposure in a warm climate throughout the winter, continue what you're doing and retest in 3 months.



# Vitamin B12 / Folic Acid

- ✓ MCV +
- ✓ MCH +
- ✓ MCHC +
- ✓ Iron +
- ✓ RDW +
- ✓ WBC -
- ✓ RBC -
- ✓ Hematocrit -
- ✓ Hemoglobin -
- ✓ Homocysteine +
- ✓ Uric Acid -

## Methylmalonic Acid

The best way to determine Vitamin B12 levels. If high, there is insufficient Vitamin B12 to break down this neurotoxin.



# Vitamin B6

- ✓ AST -
- ✓ MCHC -
- ✓ Alt -
- ✓ RDW +
- ✓ GGT -
- ✓ RBC -
- ✓ Iron +
- ✓ Hematocrit -
- ✓ MCV -
- ✓ Hemoglobin -
- ✓ MCH -
- ✓ Alkaline Phosphatase



# Vitamin C

- ✓ Hematocrit -
- ✓ Alkaline Phosphatase +
- ✓ RBC +
- ✓ Hemoglobin -
- ✓ Hematocrit -
- ✓ MCV +
- ✓ MCH +
- ✓ MCHC +

