

COMPLIMENTARY WEBINAR PRESENTATION **EARN 1.5 CEUs FREE**

Sleep, Stress and Nutrient Gaps

Wednesday, May 13 at 2 PM EDT

PRESENTED BY
Christopher Mohr, PhD, RD



This activity is accredited through Pharmavite.

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Dr. Chris Mohr, PhD, RD

- PhD – exercise physiology
- RDN
- Men's Health Advisory Board Member
- International speaker
- Author
- Dad of 2
- Disclosures: Pharmavite, Clif Bar, Men's Health, NOW Foods



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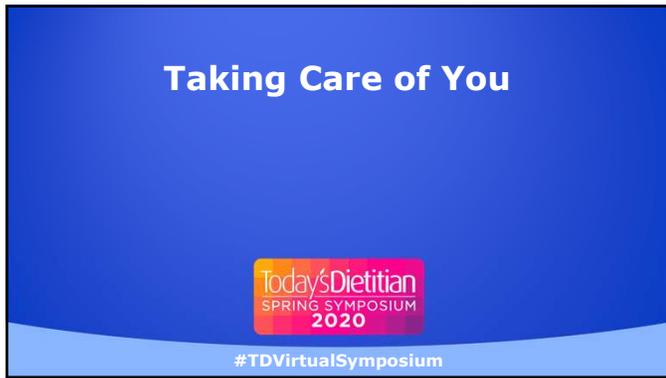
Learning Objectives

- 1 Understand**
how nutrient gaps can impact individuals throughout their lifespan
- 2 Discover**
how to integrate approaches for improved nutrient intake to maximize health
- 3 Learn**
key strategies around dosing to optimize sleep and reduce stress

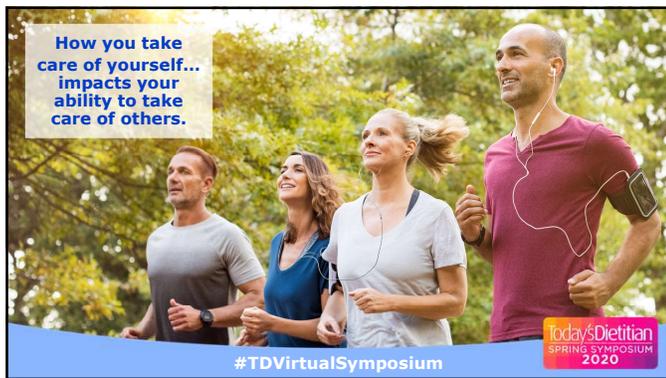
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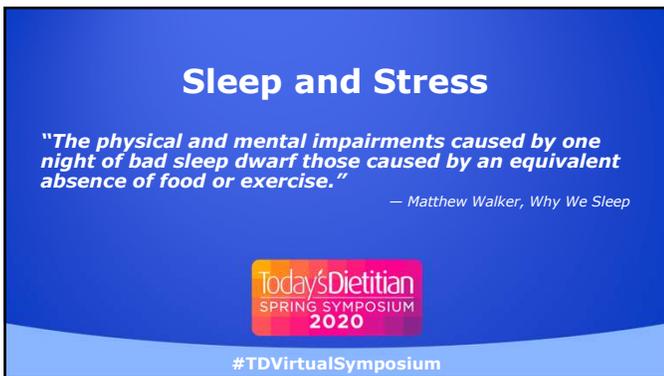
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How many hours of sleep do you average per night?

- A. Less than 4
- B. 5-6
- C. 7-8
- D. 9+

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National Sleep Foundation

	AGE	SLEEP DURATION	SLEEP TIMING
NEWBORNS	Up to 3 months	14 to 17 hours	
INFANTS	4 to 11 months	12 to 15 hours	
TODDLERS	1 to 2 years	11 to 14 hours	Most sleep occurs at night; Includes napping 1 to 3.5 hours
PRESCHOOLERS	3 to 5 years	10 to 13 hours	Age 3: many are still napping Age 4: some are still napping Age 5: most give up napping
SCHOOL-AGE	6 to 13 years	9 to 11 hours	All sleep should occur at night
TEENS	14 to 17 years	8 to 10 hours	
ADULTS	18 to 65 years	7 to 9 hours	
OLDER ADULTS	65 years +	7 to 8 hours	

National Sleep Foundation Recommendations: New Sleep Trends. National Sleep Foundation. <https://www.sleepfoundation.org/news-releases/national-sleep-foundation-recommends-new-sleep-trends>. Published February 15, 2019; Accessed April 4, 2020.

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US Prevalence of Short Sleep Duration (<7 hours)

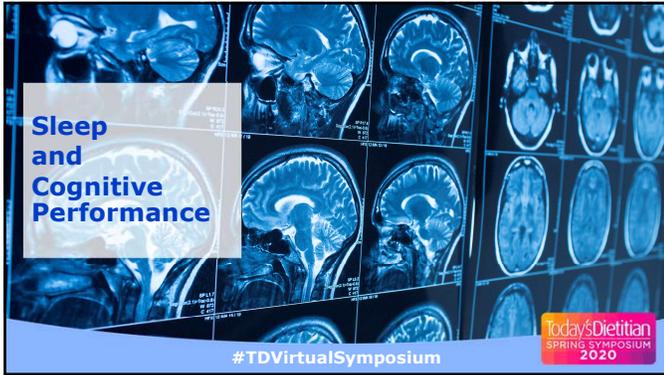
Percent (%)

- 24.3 - 30.8
- 30.9 - 34.6
- 34.7 - 38.4
- 38.5 - 42.2
- 42.3 - 46.0
- 46.1 - 49.8
- 49.9 - 53.6
- 53.7 - 57.4
- 57.5 - 61.2
- 61.3 - 65.0
- 65.1 - 68.8
- 68.9 - 72.6
- 72.7 - 76.4
- 76.5 - 80.2
- 80.3 - 84.0
- 84.1 - 87.8
- 87.9 - 91.6
- 91.7 - 95.4
- 95.5 - 99.2
- 99.3 - 103.0
- 103.1 - 106.8
- 106.9 - 110.6
- 110.7 - 114.4
- 114.5 - 118.2
- 118.3 - 122.0
- 122.1 - 125.8
- 125.9 - 129.6
- 129.7 - 133.4
- 133.5 - 137.2
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- 205.7 - 209.4
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- 676.9 - 680.6
- 680.7 - 684.4
- 684.5 - 688.2
- 688.3 - 692.0
- 692.1 - 695.8
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- 699.7 - 703.4
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- 992.3 - 996.0
- 996.1 - 1000.0

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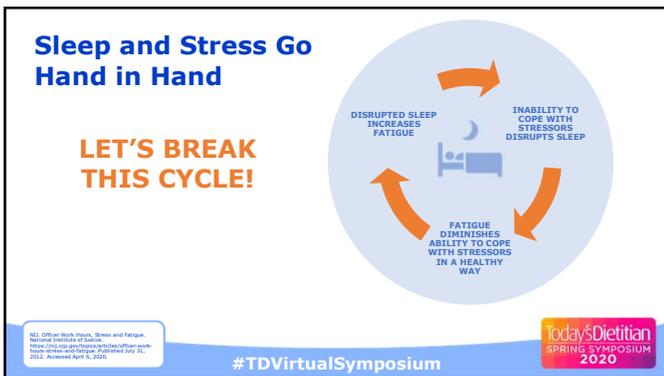
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Recognizing the Symptoms of Stress

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Physical Symptoms of Stress

Adrenal glands secrete:

Cortisol

- Primary stress hormone
- Fine-tunes our response to the stresses of everyday living

DHEA

- One of the most abundant hormones in the body
- Precursor to estrogens and testosterone

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Stress / Sleep Connection: Hormones

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Who may have trouble meeting vitamin D requirements? (select all that apply)

- A. Those who wear sunscreen daily
- B. Those who live in colder climates
- C. Older individuals
- D. Darker skinned individuals
- E. Those who work inside

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Vitamin D Functions



- IMPORTANT FOR LUNG HEALTH
- IMPORTANT FOR BRAIN HEALTH
- IMPORTANT FOR HEART HEALTH
- CONTROLS INFLAMMATION
- SUPPORTS MUSCLE HEALTH
- REGULATES IMMUNITY
- REGULATES INSULIN SECRETION
- PROMOTES BONE HEALTH
- URNS CELLS ON & OFF

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Improve Nutrient Intake for Maximum Health

1500 – 2000 IU (37.5 – 50 mcg) / day = Optimal Intake



15 minutes
FULL sun exposure



3 oz trout
16.2 mcg / 645 IUs

3 oz salmon
14.2 mcg / 570 IUs



1/2 cup wild mushrooms
exposed to UV light
9.2 mcg / 366 IUs



1 cup fortified milk
2.9 mcg / 120 IUs



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Vitamin D Dosing

REGULAR	Supports daily requirement for adults with normal vitamin D needs	Up to 2,000 IU
EXTRA	Supports daily requirement for adults with higher vitamin D needs	Above 2,000 IU up to 6,000 IU
MAXIMUM	For short-term use by adults diagnosed as vitamin D deficient by a health care professional to help restore healthy levels.	Above 6,000 IU up to 10,000 IU

SHOCK PE, DOHNEY SC, BARNETT-FORREST HA, et al. Evaluation, Treatment, and Prevention of Vitamin D Deficiency: An Endocrine Society Clinical Practice Guideline. The Journal of Clinical Endocrinology & Metabolism. 2012;104(7):1811-1830. doi:10.1210.2011-0348

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Magnesium



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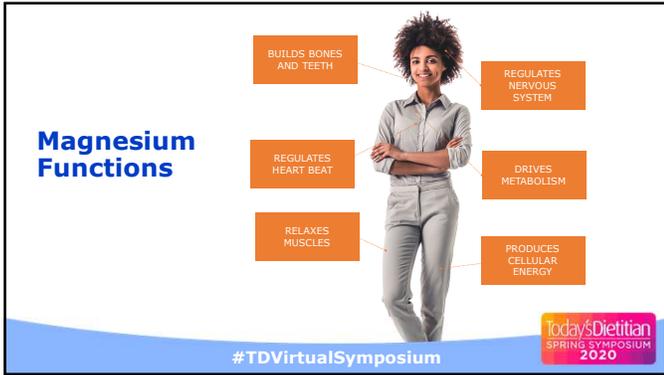
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What is the best food source of magnesium on this list?

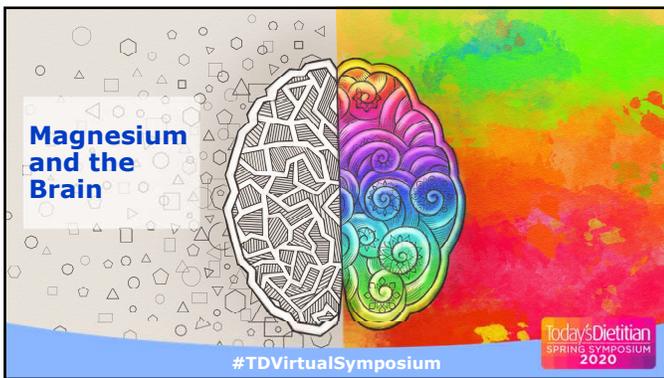
- A. Milk
- B. Bananas
- C. Spinach
- D. Beans
- E. Almonds

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PROMOTES EYE HEALTH

SUPPORTS BRAIN HEALTH

MAINTAINS HEALTHY TRIGLYCERIDES

SUPPORTS HEART HEALTH

MAINTAINS HEALTHY BLOOD PRESSURE

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Role of PUFAs in Mental Health Pathology

WHEN THERE IS A HIGH CONCENTRATION OF OMEGA 6 (AA) COMPARED TO OMEGA-3 (EPA+DHA)

LOW GRADE INFLAMMATION

- Increased production of pro-inflammatory eicosanoids and cytokines
- Increased cortisol production
- Decreased serotonin

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Proposed Mechanisms

ANTI-INFLAMMATORY ACTIVITY

ENDOCANNABINOID SYSTEM

SEROTONIN PATHWAY

OMEGA-6
Arachidonic Acid (AA) (20:4n-6)

OMEGA-3
Eicosapentaenoic Acid (EPA) (20:5n-3)
Docosahexaenoic Acid (DHA) (22:6n-3)

Prostaglandins, Leukotriens, Lipoxins, AT-LXs, E-series Resolvins, Protection 1, Maresin 1, D-series Resolvins

Pro-inflammatory, Anti-inflammatory / Pro-resolving

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What is another common name for Ashwagandha?

- A. Indian winter cherry
- B. Black cohosh
- C. Goatweed
- D. Bearberry
- E. Garden Heliotrope

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Ashwagandha



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Aditya, Srinivas R, Hama, Suran, & Pitta, Ashwaga & Ashwin, Bina & Ghosh, Siddhanta. (2018). A Systematic Review on Ashwagandha (Withanolide) in Various Health Parameters in Chronically Stressed Subjects: A Double-Blind, Randomized, Placebo-Controlled Study. Journal of Alternative and Complementary Medicine, 11, 20-26.
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Doshi, B, Bhargava, S, Jagan, P, Ghosh, B, & Ghosh, S. Ashwagandha: A Review of Its Pharmacology, Therapeutic Applications, and Adverse Reactions. 2013;36(10): doi:10.4236/jcm.2013.9

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Improve Nutrient Intake for Maximum Health

125 mg = Optimal Intake

- Take day or night
- Extracts have different potencies
- Traditionally mixed into hot water or warm milk
- Mix with smoothies to mask taste



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L-theanine



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Research indicates that L-theanine promotes:

- A. Deep sleep
- B. Relaxation without drowsiness
- C. Quick reflexes
- D. Digestive health



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L-theanine



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Improve Nutrient Intake for Maximum Health

200 mg = Optimal Intake

 1 cup green or black tea 25-60 mg	 Boletus mushrooms
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Melatonin



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Melatonin is found naturally in foods.

A. True
B. False

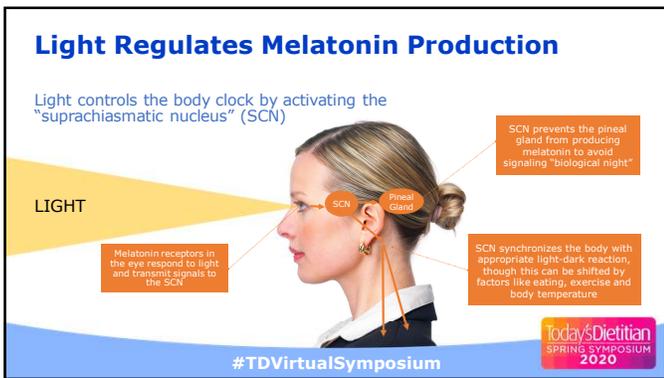


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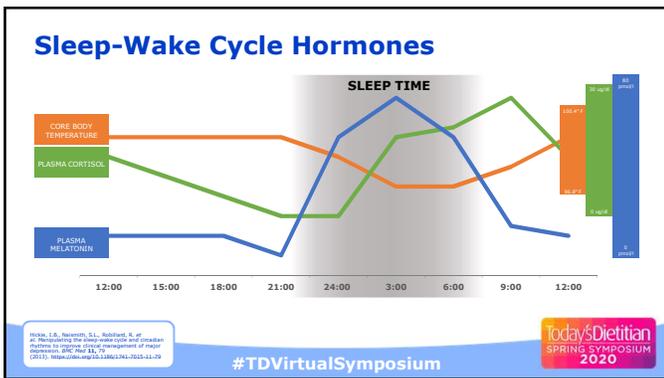
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