Supporting the Cycle: Solutions to Manage Stress and Improve Sleep

Alex Smolokoff
Editorial Coordinator, Informa Markets

Jennifer Cooper
Chief Science Officer, Savant Science

Gene Bruno MS, MHS, RH (AHG)
Senior Director of Product Innovation, Twinlab Consolidation Group

Susan J. Hewlings, Ph.D., RD
Co-Founder Substantiation Sciences, Director of Scientific Affairs, Nutrasource

Matthew Oster
Head of Consumer Health, Euromonitor International
Formulating Cutting-Edge Products to Address Stress

Helping millions get their health back
Stress by the Numbers

- 75% of adults reported experiencing moderate to high levels of stress in the past month and nearly half reported that their stress has increased in the past year – *American Psychological Association*.

- One-third of adults report that stress has a very strong impact on their physical and mental health – *American Psychological Association*.

- 6 in 10 workers in major global economies experiencing increased workplace stress. With China (86%) having the highest rise in workplace stress – *The Regus Group*.

- Approximately 13.7 million working days are lost each year in the UK as a result of work-related illness at a cost of £28.3 billion per year – *National Institute for Health and Clinical Excellence*.
Stress = Health Challenges

- Cardiovascular Disease
- Immune System
- Endocrine Diseases
- Gastrointestinal Disease
- Nervous System Disorders
- Respiratory System
- Obesity
- Headaches
- Chronic Pain
Beneath the Surface

What stress is doing to the body

Stress

Adrenal Fatigue

Neurotransmitter Imbalance

Nutrient Depletion

Hormone Imbalance
Command Center: Brain
Where it All Begins
Flight or Fight Mechanism

- Survival & Evolution
- Cerebral Cortex-Hypothalamus-Adrenal cascade
- What needs to be amped up?
  - Heart rate
  - Blood pressure
  - Blood volume
  - Blood sugar
  - Cortisol
What Don’t We Need?

- Digestive system
- Kidney function
- Immune system
- Sex hormones
- Sleep
- Body doesn’t distinguish between Saber Tooth Tiger and Life
  - Rushing around
  - Job stresses
  - Stuck in traffic
  - Busy schedules
Effects of Stress on Every Day Life

- Body makes sugar by dumping triglycerides
  - Contributes to higher prevalence of elevated blood fats in people who don’t eat much fat
  - Contributes to higher prevalence of diabetes
    - Making all this sugar sitting at a desk, and not going to the gym afterwards to work it off.

- Hypothalmus-Pituitary-Adrenal cascade is a free radical making machine

- Stress also increases cytokine release, which increases inflammation in the body
Foods that Add to the Chaos

- Caffeine
- Refined sugars
- White Carbs
- Processed foods in general

Refined carbohydrates increase the inflammatory load.

Stress Friendly Foods

- Omega-3s
- Chamomile/Green Tea
- Dark Chocolate
- Nuts: Walnuts/Cashews/Almonds
- Greens
- Oranges
- Oats
- Avocado
- Asparagus
- Berries
Brain: Limbic System

- L-Theanine
- Hemp Oil / CBD
L-Theanine

- Several human clinical studies.
- 50-200 mg used
- Results:
  - Increased brain alpha waves
  - Improved relaxation
  - Induced feelings of tranquility
  - Anti-stress effect
  - Effects in as little as 15 minutes (with 200 mg)
CBD
Cannabidiol derived from full-spectrum hemp oil

- A few clinical studies
- 25 mg/day CBD study
  - Results
    - Maintained high levels of endocannabinoids
    - Decreased anxiety scores
    - Improved sleep
- 15 mg/day CBD study
  - Results
    - Improved sleep
    - Improved quality of life
Adrenal Support

- Rhodiola
- Ashwagandha
**Rhodiola rosea**
root extract

Standardized for 3% rosavins, 1% salidrosides

- Adaptogen
- Several clinical studies
- 100, 170 & 340 mg used
- Results
  - Anti-stress
  - Anti-hypoxia (protection and damage from O2 deprivation)
  - Performance enhancement – physical and mental
  - Increased physical work capacity
Ashwagandha

*Withania somnifera* root extract

- **Adaptogen**
- **Several clinical studies**
  - **KSM-66 Ashwagandha® – 600 mg/day used**
    - **Results**
      - Reduced cortisol levels
      - Reduced stress scores
      - Reduced stress-induced eating
      - Improved quality of life scores
  - **Sensoril® Ashwagandha -125-500 mg/day used**
    - **Results**
      - Helped body cope w/stress
      - Promoted calm
      - Enhanced feelings of well-being
      - Reduced sleeplessness
Neurotransmitter Support

- Saffron
- Venetron®
- Lemon Balm Extract
Saffron extract
Standardized for 2% safranal

- Multiple clinical studies
- MOAs: increase serotonin, dopamine, glutamate; decrease oxidative damage and neurotoxicity; prevent increase in inflammation
- 15 mg/twice daily used (30 mg/day)
- Results
  - Significant reduced symptoms of mild-to-moderate depression
  - Similar efficacy to medication in reducing depression
Venetron®

*Apocynum venetum* leaf extract

- Several human clinical studies
- 50 mg/day used
- MOAs: Increase dopamine, norepinephrine and serotonin

**Results**
- Decreased anxiety
- Increase calmness
- Reduced depression
- Combined with 100 mg GABA, reduced
  - Wakefulness in the middle of the night
  - The effects of stress
Lemon Balm Extract

Cyracos®

- Human clinical study
- 300-600 mg/day used
- MOA: Acetylcholine receptor activity
- Results:
  - 600 mg - improved the negative mood effects of the stress, with significantly increased self-ratings of calmness
  - 300 - significant increase in the speed of mathematical processing, with no reduction in accuracy
Formulating for Success

- **Take care of Limbic System**
  - L-Theanine, Hemp Oil, etc.

- **Adrenal Support**
  - Rhodiola, Ashwagandha, etc.

- **Neurotransmitter Support**
  - Saffron, Venetron®, Lemon Balm Extract, etc.
Thank You
Gene Bruno, MS, MHS, RH(AHG)

Professor of Nutraceutical Science

www.huhs.edu
gene.bruno@huhs.edu

Senior Director of Product Innovation

https://twinlab.tlcchealth.com/
gbruno@twinlab.com
The Evolving Marketplace for Sleep Products

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Matthew Oster, Head of Consumer Health
Thank You

Matthew Oster, Head of Consumer Health

Matthew.Oster@Euromonitor.com
Linkedin.com/in/matthew-oster-39815a82
@Euromonitor
Facebook.com/Euromonitor
Jennifer Cooper
Chief Science Officer

Jennifer Cooper has spent over 25 years in consumer healthcare, including supplement, food and over-the-counter drug companies. Jennifer has held senior technical roles in the US and Europe, including Chief Scientific Officer at Savant Science; Vice President of R&D and Quality at TCC Holding Corporation; Vice President of R&D and Quality at Dynova Labs; General Manager of Nutrition Business at Icon Health and Fitness; and, Director of Product and Business Development and Quality at US Zdrowie whose primary business interests are in Eastern Europe. Jennifer owns healthcare consulting and market testing company, Lead Point Solutions, that has developed novel products for companies in more than a dozen countries. Jennifer has consulted on products and business development projects in North America, Europe, Mexico and Asia and has lectured all over the world at supplement and drug conferences. Jennifer’s consulting work includes several Fortune 500 and multinational healthcare corporations. Jennifer has developed over 300 new products in the areas of OTC, dermo-cosmetics, medical devices, medical foods and dietary supplements.