Good Health Geek

FIRST RESPONDER PERFORMANCE BRIEFING

EMERGENCY SERVICES EDITION

Exploring the Human Factors Behind Readiness & Performance

WHEN SECONDS MATTER, BIOLOGY MATTERS

THE JOB DOESN’T WAIT FOR RECOVERY

THE COST CAN ACCUMULATE

A DIFFERENT APPROACH TO PERFORMANCE & WELLNESS

HEALTHIER RESPONDERS.
SAFER COMMUNITIES.
STRONGER TOMORROWS.

GOOD HEALTH GEEK

CHEMISTRY AT WORK™

REAL BIOLOGY. REAL PERFORMANCE.

THE BIOLOGY BEHIND EVERYDAY PERFORMANCE

Chemistry at Work™ helps people understand the biological factors that influence how they feel, function, and perform.

WHAT WE HELP ADDRESS

- **Energy & Stamina**
- **Mood & Emotional Regulation**
- **Focus & Cognitive Function**
- **Sleep Quality & Recovery**
- **Stress Response & Resilience**
- **Nutritional & Metabolic Health**

LET'S CONNECT

Learn more about Chemistry at Work™ for first responders and other demanding professions.

Scan to explore the program

Email: connect@goodhealthgeek.com

Phone: 1-866-446-4335

Website: goodhealthgeek.com/first-responders

Healthier People. Stronger Performance. Better Tomorrows.

GOOD HEALTH GEEK
CHEMISTRY AT WORK™

Table of Contents

Exploring the human factors behind first responder readiness and performance.

Responder Readiness Has a Biological Foundation

When seconds matter, biology matters.

The Job Doesn't Wait for Recovery

First responder work can challenge the same biology it depends on.

The Cost Can Accumulate

The impact of chronic stress, disrupted sleep, and other biological demands.

A Different Approach to Performance & Wellness

Connecting biological insight to real-world performance.

Education Drives Change

Engaging video experiences, tools, and practical strategies for real work and real challenges.

What Our Tests Evaluate

Functional assessments that provide meaningful, personalized insight.

Support Beyond the Program

Access to registered dietitians for ongoing, individualized nutritional guidance.

FIRST RESPONDERS
PEOPLE I READINESS | STRONGER TOMORROWS

Responder Readiness Has a Biological Foundation

WHEN SECONDS MATTER, BIOLOGY MATTERS.

First responders train for judgment, situational awareness, physical response and decision-making under pressure.

But when a situation changes in an instant, training is being executed by a living biological system.

During acute stress, physiological changes can occur rapidly. Heart rate and respiration change. Stress mediators are released. Attention can narrow.

Perception and cognitive processing can change as the body prepares to respond.

For first responders, this matters because some decisions cannot wait for ideal conditions.

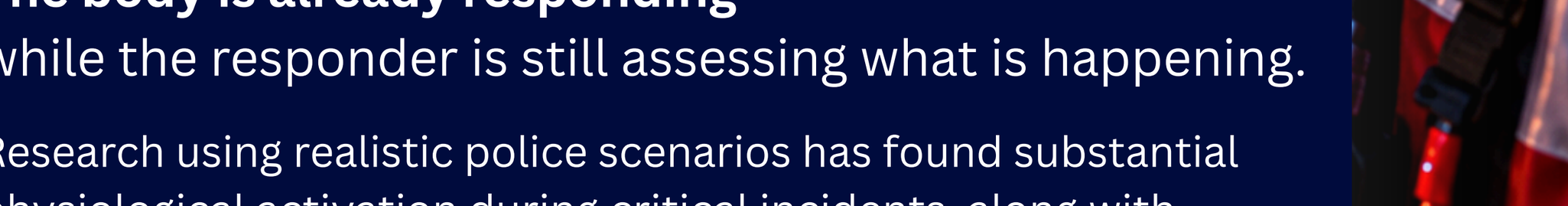


The body is already responding
while the responder is still assessing what is happening.

Research using realistic police scenarios has found substantial physiological activation during critical incidents, along with changes in perception and cognition. Importantly, greater physiological stress reactivity has also been associated with poorer performance and more lethal-force errors in experimental scenarios. [1]

But the response doesn't start at zero.

Every responder enters that moment with a biological starting point shaped by the hours and days before it:



A critical incident may last seconds.

The biology responding to it has been building all day.

1. *Baldwin S, Bennell C, Blaskovits B, et al. Front Psychol. 2022;12:759132. doi:10.3389/fpsyg.2021.759132.*

GOOD HEALTH GEEK



CHEMISTRY AT WORK
REAL BIOLOGY. REAL PERFORMANCE.

The Job Doesn't Wait for Recovery

First responder work can challenge the same biology it depends on.

Emergency response requires around-the-clock readiness. Night shifts, rotating schedules, long hours and disrupted recovery can place repeated demands on the systems responsible for alertness, energy, physical response and cognitive function.

40.4%

screened positive for at least one sleep disorder

In a study of 4,957 North American police officers, most who screened positive had not previously been diagnosed. [1]

95.3%

of firefighters fell below the vitamin D benchmark.

Among 150 firefighters, 94% also fell below magnesium and 98.7% below potassium intake benchmarks.

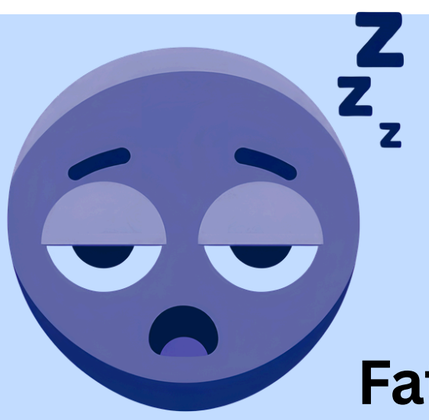
2.2X

Higher odds of reported medical errors among fatigued EMS providers.

2.2 times the adjusted odds of reporting medical errors or adverse events.[3]

This Isn't Only About Feeling Tired.

Police officers screening positive for a sleep disorder were more likely to report:



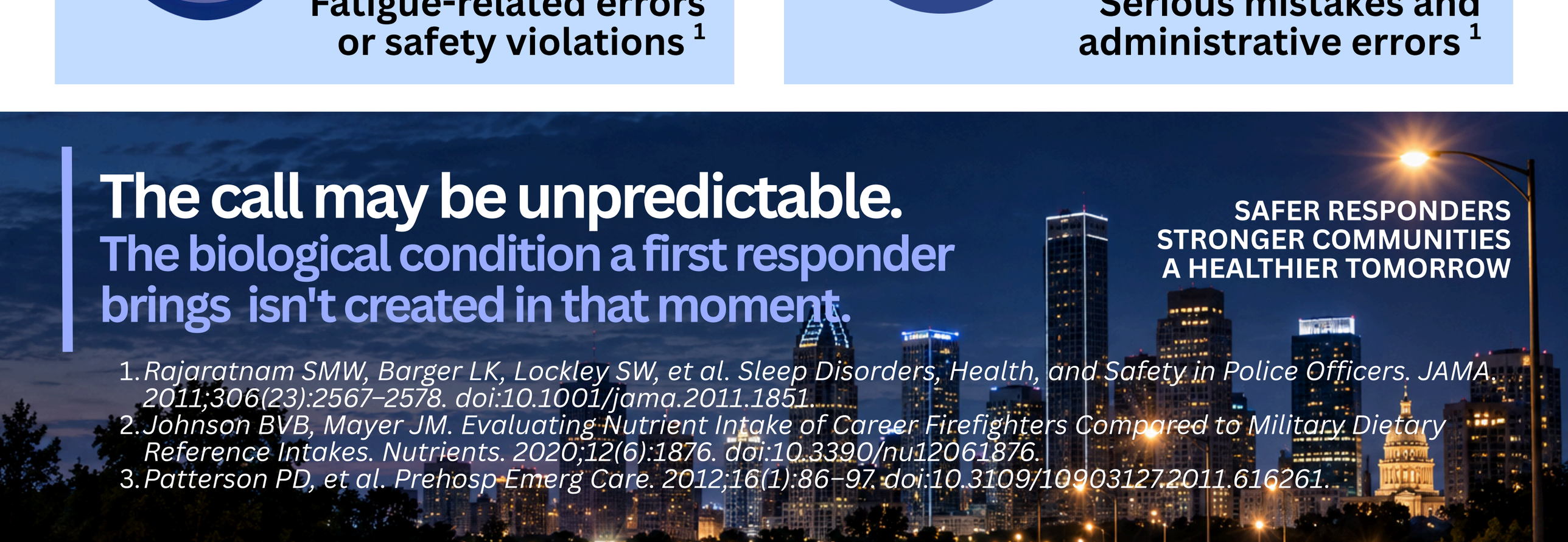
23.7%
vs. 15.5%

Fatigue-related errors or safety violations [1]



17.9%
vs. 12.7%

Serious mistakes and administrative errors [1]



The call may be unpredictable.

The biological condition a first responder brings isn't created in that moment.

SAFER RESPONDERS
STRONGER COMMUNITIES
A HEALTHIER TOMORROW

1. *Rajaratnam SMW, Barger LK, Lockley SW, et al. Sleep Disorders, Health, and Safety in Police Officers. JAMA. 2011;306(23):2567–2578. doi:10.1001/jama.2011.1851.*
2. *Johnson BVB, Mayer JM. Evaluating Nutrient Intake of Career Firefighters Compared to Military Dietary Reference Intakes. Nutrients. 2020;12(6):1876. doi:10.3390/nu12061876.*
3. *Patterson PD, et al. Prehosp Emerg Care. 2012;16(1):86–97. doi:10.3109/10903127.2011.616261.*

The Cost Can Accumulate

The same biology has to carry them home.

First responder work doesn't place demands on the body only during critical incidents. Shift work, repeated stress activation, disrupted sleep and inadequate recovery can place cumulative demands on the body across months and years.

PHYSICAL HEALTH

26.7%

of officers had metabolic syndrome vs. 18.7% of the U.S. employed comparison population.[1]

PSYCHOLOGICAL HEALTH

20%

Pooled 12-month PTSD prevalence across 41 study samples involving 17,045 paramedics, compared with 3.1% in a separately pooled population without systematic trauma exposure.[2]

HYPERTENSION PREVALENCE

39.1%

Pooled hypertension prevalence across 11 firefighter studies involving 2,836 participants in a larger meta-analysis.

Different systems. The same biology.

PHYSICAL AND PSYCHOLOGICAL HEALTH INTERSECT.

3x

Severe PTSD symptoms were associated with approximately three times the prevalence of metabolic syndrome compared with officers reporting the fewest PTSD symptoms.[4]

Supporting first responder health isn't only about responding when something goes wrong.

It is also about giving responders better ways to understand and support the biology they rely on every day.

1. Hartley TA, et al. Int J Emerg Ment Health. 2011;13(4):211–220.
2. Hoell A, Kourmpeli E, Dressing H. Front Public Health. 2023;11:1151248. doi:10.3389/fpubh.2023.1151248.
3. Beckett A, Scott JR, Chater AM, et al. Int J Environ Res Public Health. 2023;20(19):6814. doi:10.3390/ijerph20196814.
4. Violanti JM, et al. Int J Emerg Ment Health. 2006;8(4):227–237.

A Different Approach to Performance & Wellness

Support the biology behind every response.

First responders don't need another checklist. They need practical, science-based support that fits the realities of emergency response work and respects their privacy. Chemistry at Work™ helps organizations give responders the knowledge and tools to understand and support the biology they rely on every day.

PRACTICAL LEARNING

Short, science-based lessons on sleep, stress resilience, nutrition, hydration and more - designed for real life, not the classroom.

PERSONAL INSIGHTS

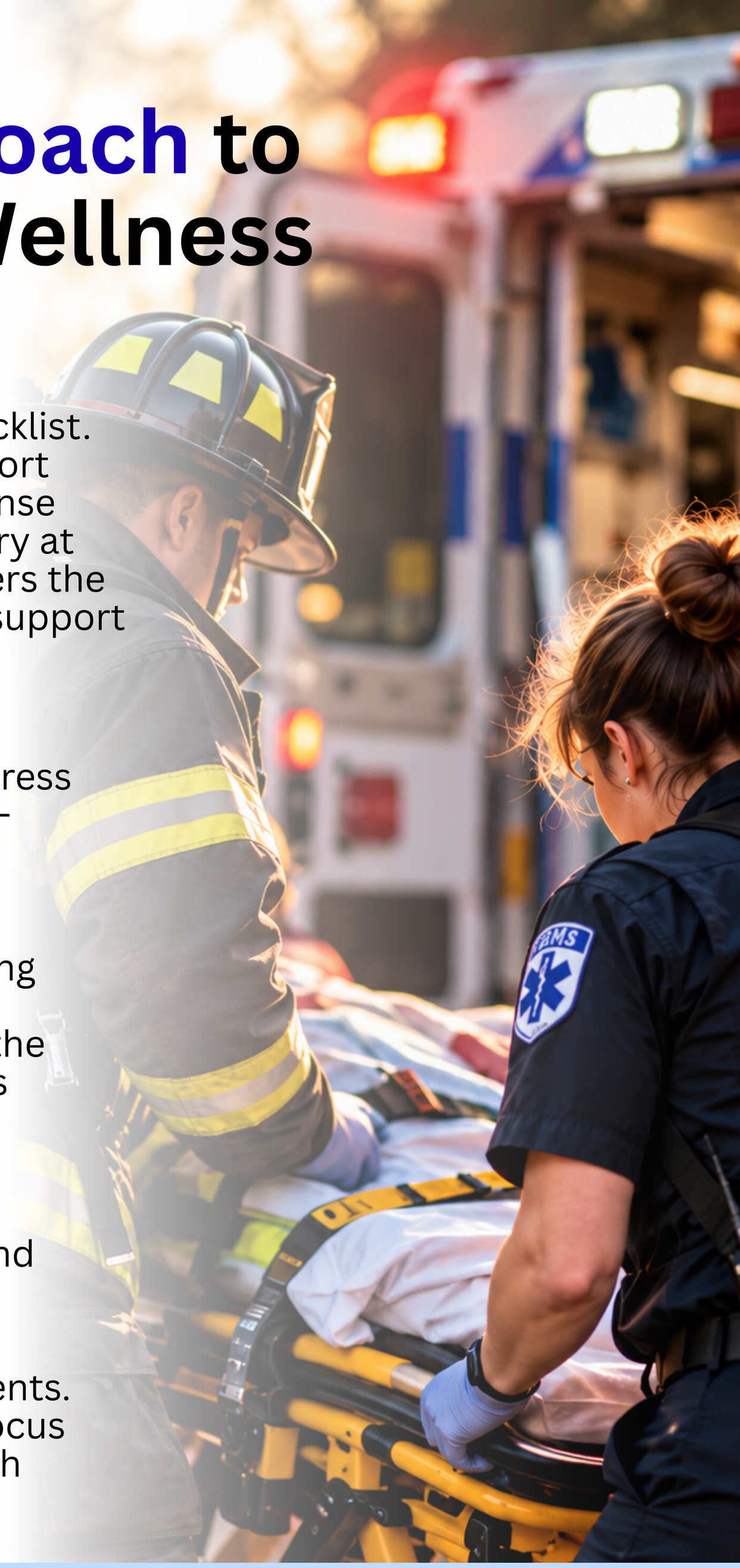
Voluntary nutritional and clinical screening provides first responders with personal health and nutritional insights based on the testing option selected. Individual results remain private.

EXPERT SUPPORT

Access to registered dietitians to help responders make sense of their results and create realistic, personalized strategies.

STRONGER OUTCOMES

Healthier responders. Stronger departments. Support for the biology behind energy, focus and resilience today, and long-term health throughout their careers.



It's a Strong Investment

PEOPLE
Greater well-being
Improved resilience
Longer, healthier careers

DEPARTMENTS
Reduced risk
Stronger performance
A culture of care

COMMUNITIES
Safer communities
More engaged responders
A stronger tomorrow

When first responders thrive, communities do too.

CHEMISTRY AT WORK

Chemistry at Work™ partners with employers to bring confidential testing, science-based education and registered dietitian support to the people who serve and protect.

REAL BIOLOGY. REAL PEOPLE.
A STRONGER TOMORROW.

CHEMISTRY AT WORK™

Education Drives Change

Turn biological insight into knowledge employees understand, remember and use. Our education experience brings the science to real life, connects it to the demands of the job and gives every responder practical tools to support better energy, focus, mood and recovery.



INTERACTIVE MODULES

A science-based learning experience.

Visually engaging, interactive modules bring the biology of performance to life. Employees explore key concepts, make real-world connections and build practical skills they can use on and off duty.



DISCOVERY VIDEOS

A cinematic look at the biology behind performance.

3-5 min educational clips connect real people and real jobs to the science of energy, focus, stress, sleep and recovery. They set the stage for the learning experience and make the science memorable and relevant.

EVERYTHING YOU NEED

A Complete Education Experience

Each program includes a full set of educational resources designed to make implementation easy and keep employees engaged throughout the year.

Discovery Videos
Engaging video experiences that connect the science of human biology to serious demands, challenges, and approachable solutions.

Interactive Modules
Engaging, visually rich modules that teach the biology of performance and show how everyday choices affect energy, mood, focus and recovery.

Companion Guide
A 16-page guide that reinforces the key lessons and gives employees a practical reference they can use every day.

Manager Insight Module
Helps managers understand the biological side of performance and learn practical ways to support their teams.

Monthly Boost Modules
Short, focused modules released throughout the year to keep learning active and support long-term behavior change.

Monthly Boost Articles
Easy-to-read, evidence-based articles that build core knowledge and reinforce key concepts.

Rollout Kit
A step-by-step implementation outline with sample communications, timelines and best practices to make launch simple and successful.

Workplace Materials
Posters, banners, clings and other visual tools that reinforce key concepts in the workplace and keep the conversation going.

KNOWLEDGE BUILDS AWARENESS.

Education makes change.

When first responders understand the biological processes behind how they think, feel and perform, they are more likely to make informed choices.

CHEMISTRY AT WORK™| FIRST RESPONDERS

WHAT OUR TESTS EVALUATE

Different screening approaches provide different types of findings.

PEOPLE.
SCIENCE.
STRONGER TOMORROWS.

1 FUNCTIONAL NUTRITIONAL ASSESSMENT

At-home sample collection / Metabolic biomarker testing

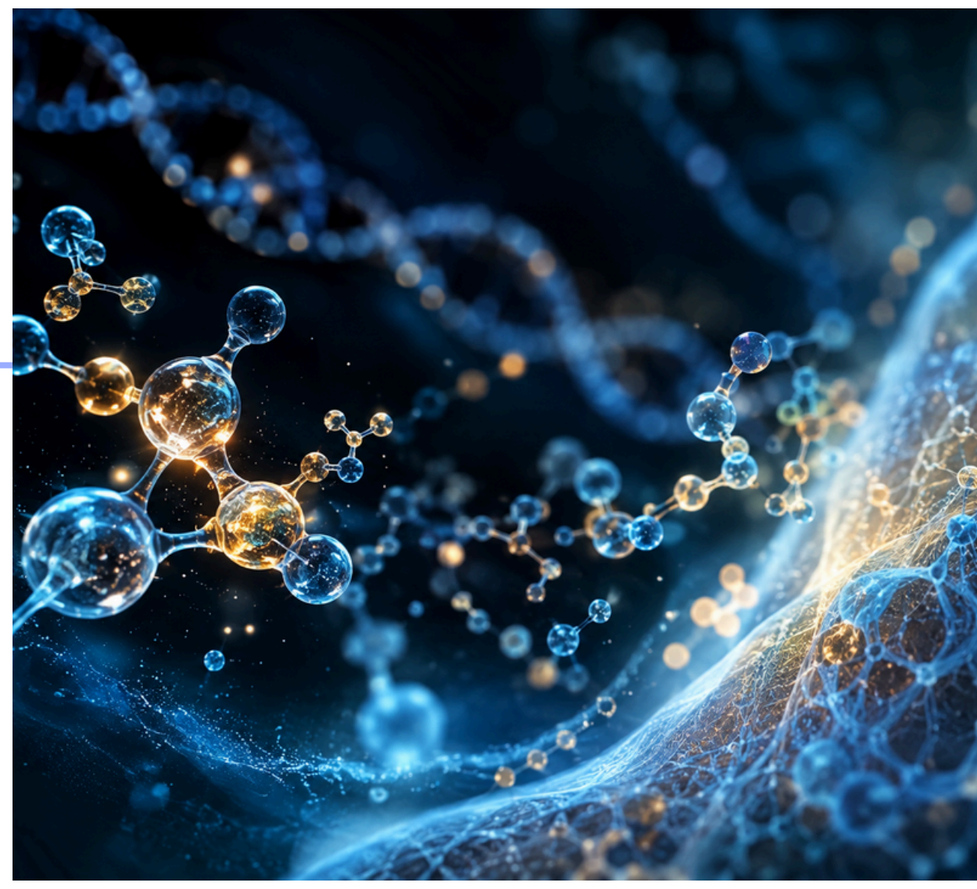
WHAT IS EVALUATED

Biochemical byproducts associated with nutrient utilization, amino-acid metabolism, energy-production pathways and related biochemical processes.

WHAT THE FINDINGS INDICATE

Metabolic patterns that may suggest areas for further nutritional evaluation.

OPTIONAL ADD-ONS AVAILABLE



2 CELLULAR FUNCTIONAL ASSESSMENT

Professional blood draw / Immune-cell response testing

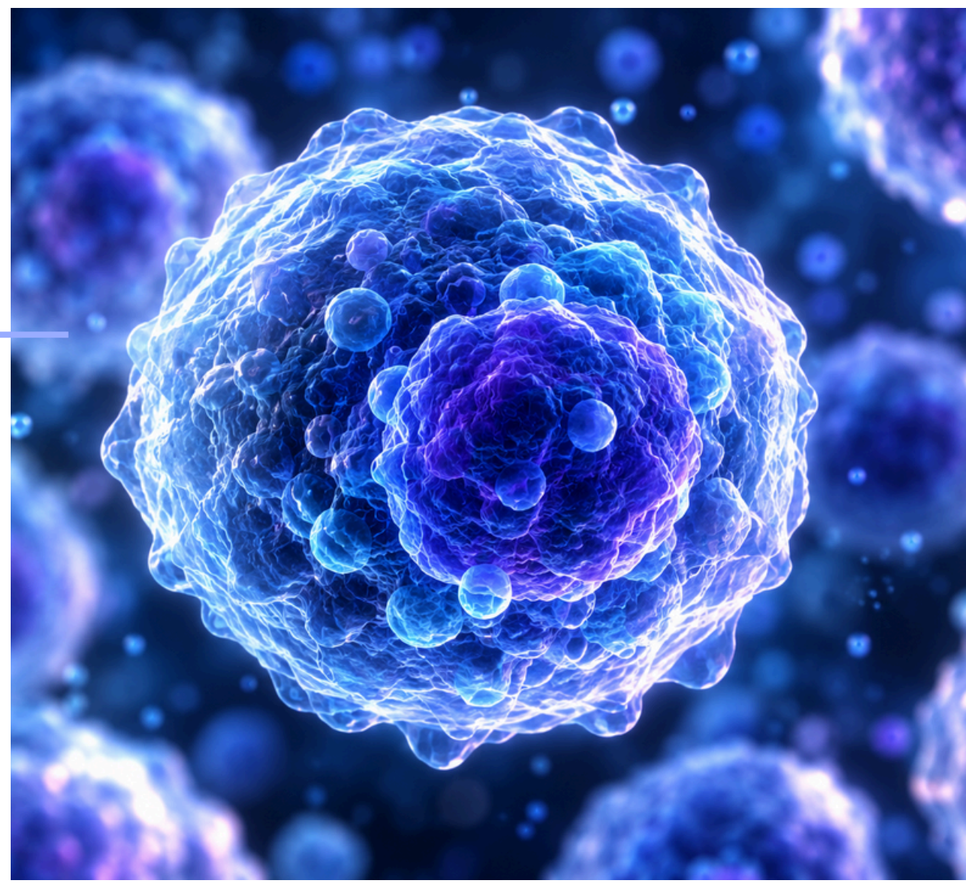
WHAT IS EVALUATED

Growth responses of immune cells to 55 individual micronutrients: vitamins, minerals, amino acids and additional nutrients.

WHAT THE FINDINGS INDICATE

Which nutrients improve cell growth in the laboratory assay.

OPTIONAL ADD-ONS AVAILABLE



ADDITIONAL SCREENING OPTIONS

BLOOD-BASED BIOMARKERS

Glucose, A1c, lipids, electrolytes, thyroid, blood-cell and kidney markers; panel dependent.

BIORESONANCE

Hair-sample energetic imbalance reports; not a validated measurement of nutrient status

REAL BIOLOGY. REAL PERFORMANCE.
Exact analytes depend on the selected panel. Screening is not a diagnosis.

GOOD HEALTH GEEK

Support Beyond the Program



Professional nutritional guidance when it's needed.

Chemistry at Work™ connects personal screening and education with access to registered dietitians, offering an additional layer of individualized nutritional support.

HOW DIETITIAN SUPPORT HELPS

This optional service extends beyond interpreting screening results. Registered dietitians can assist with a broad range of health concerns and personal goals, including weight management, blood sugar regulation, cardiovascular health, digestive concerns, and nutritional strategies for demanding work schedules.

PRIVATE, INDIVIDUALIZED CARE



Consultations take place directly between the individual and the healthcare professional. Personal health information, screening results, and consultation details remain confidential and are not shared with employers through Chemistry at Work™.

SUPPORT THAT CAN CONTINUE



Registered dietitian consultations are available as an optional service, offering personalized nutritional guidance for a wide range of health needs and goals. Support can extend beyond the initial visit.

AN ADDITIONAL LAYER OF SUPPORT



Screening provides personal insight. Education builds understanding. Access to a registered dietitian offers an opportunity to translate that knowledge into practical nutritional decisions, with professional guidance tailored to individual circumstances.

Ongoing registered dietitian consultations may be covered by health insurance, depending on individual plan benefits and eligibility, allowing nutritional support to continue beyond the initial Chemistry at Work™ experience.



PERSONAL INSIGHT.
PRIVATE CARE.
CONTINUED SUPPORT.



You protect us.

Let us protect you!

GOOD HEALTH GEEK

THE CRITICAL MOMENT BEGINS BEFORE THE CALL

Every call is answered by a human biological system shaped by sleep, nutrition, recovery, stress, physical health and the demands of the job.

That system depends on chemistry. Vitamins, minerals and other nutrients help power the processes behind energy, cognition, nervous-system function, stress response and recovery. Giving first responders the opportunity to understand that biology is a different kind of investment in readiness, health and the people who answer the call.

https://goodhealthgeek.com/first-responders