

Improving Resilience with E.M.S. and a Dose of Reality

Presented by:

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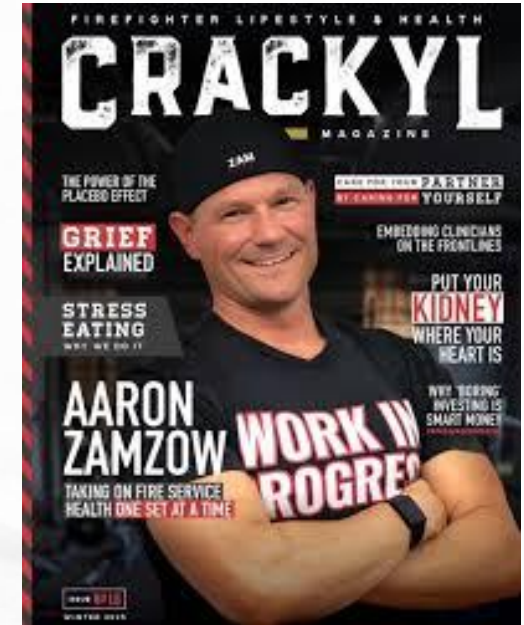


Performance and Resilience with E.M.S and a Dose of Reality



Aaron Zamzow

- Fire Lieutenant for the City of Madison, WI Fire Department. Firefighter/ EMT. (20 years).
- Certified (NASM, Ace – Peer Fitness, NSCA – CSCS, PN1) and degreed Personal Fitness Trainer with 30 years experience.
- Trained with elite athletes for the NBA, NHL, and NFL.
- Owner of Fire Rescue Fitness
- Contributing Writer for Firehouse Magazine, Firefighter International, Lexipol, FireRescue1...
- Host of the “Better Every Shift Podcast”
- Thank YOU! www.FireRescueFitness.com/seminar



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Not Your Normal Wellness Seminar

- No Burpees Required
- No “Bro-tein” Shakes to Drink
- No Bench Press Competitions
- I Got it Wrong for Years.
- All About Improving TOTAL Health and Resilience (Bounce Higher)
- PASS IT ON!



Let me tell you why I suck as a fitness presenter...



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What Do We Want to Learn.

- **What are the Health Issues We Face?**
- **What is Inflammation- Why should you care.**
- **What Causes Inflammation.**
- **What is Resilience.**
- **Changing the Mindset and Culture.**
- **E.M.S. = The "best" steps to building resilience**
- **Q and A**
- **PLEASE ASK QUESTIONS!**



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What are the health issues facing first responders?

- Heart attacks and strokes
 - Cancer
 - Obesity, diabetes
- Low T (low testosterone)
 - Sleep apnea
 - PTSD
- Mental Health
 - Depression
- Musculoskeletal Injury **
 - Suicide



What is Inflammation?

- Inflammation refers to your body's process of fighting against things that harm it, such as infections, injuries, and toxins (poor nutrition), and STRESS.
- Cortisol is produced to regulate the inflammatory and immune response
- Prolonged stress leads to hyper-physiological levels of cortisol and alters its effectiveness.
- The chronic state of inflammation can lead to a decrease in performance and numerous health problems, including heart disease, arthritis, depression, Alzheimer's disease, PTSD and even cancer (Pahwa et.al., 2023)



Responses to “Unmanaged” Stress

- Physical responses may include”
 - Fatigue
 - Extreme exhaustion
 - Headaches
 - Heartburn
 - Difficulty sleeping and nightmares
 - Digestion issues
 - Increased inflammation and joint pain
- Emotional and mental responses include:
 - Confusion
 - Anxiety
 - Depression
 - Anger and outrage
 - Feelings of helplessness
 - Substance Abuse

“Our minds think we respond one way, and our physiology says something different.”

–Dr. Kyle Ebersole (UW Milwaukee Study on the Physiological of Emergency Response)



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Fitness and Inflammation

- A lack of exercise leads to hormone imbalances, weight gain, increased body fat (which contains inflammation-promoting substances).
- Improper training can lead to injury and a lack of mobility.



Nutrition and Inflammation

- Diets that promote inflammation are high in refined starches, sugar, saturated and trans-fats, and low in omega-3 fatty acids, low in fiber, low in fruits and vegetables... (sound familiar)?
- Eating toxins cause an inflammatory response in the body.



Sleep and Inflammation

- Poor sleep is associated with higher levels of inflammatory biomarkers.
- When you don't get enough sleep blood pressure can't decline and triggers the cells in blood vessel walls to activate inflammation.
- Sleep deprivation interferes with the brain's cleaning system known as the glymphatic system.



Dzierzewski JM, Donovan EK, Kay DB, Sannes TS, Bradbrook KE. Sleep Inconsistency and Markers of Inflammation. *Front Neurol*. 2020 Sep 16;11:1042. doi: 10.3389/fneur.2020.01042. PMID: 33041983; PMCID: PMC7525126.



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“The expectation that we can be immersed in suffering and loss and not be touched by it is as unrealistic as expecting to be able to walk through water without getting wet.”

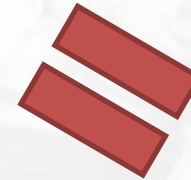
-Captain Frank Leto - FDNY



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Uncontrolled Inflammation



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How do we cope?



- Drugs
- Alcohol
- Social Media
 - Eating
- Avoidance
- Focus on everyone else!
- WE DON'T?

I used to work in a fire hydrant factory. You couldn't park anywhere near the place.

Compliments of Comedian Steven Wright



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Sound Familiar?

“I will sleep when I am dead.”

“I can’t workout because I need to work my other jobs to support my family.”

“Counseling is for the weak.”

“It doesn’t affect my relationship.”

Yes, it does- Dr. Zemlok



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Are YOU Dangerous To Your Crew?

- Don't exercise regularly.
- Don't train functionally.
- Eat a high-sugar, unhealthy diet.
- Don't get enough sleep.
- Don't see counselors.
- Don't get annual medicals.

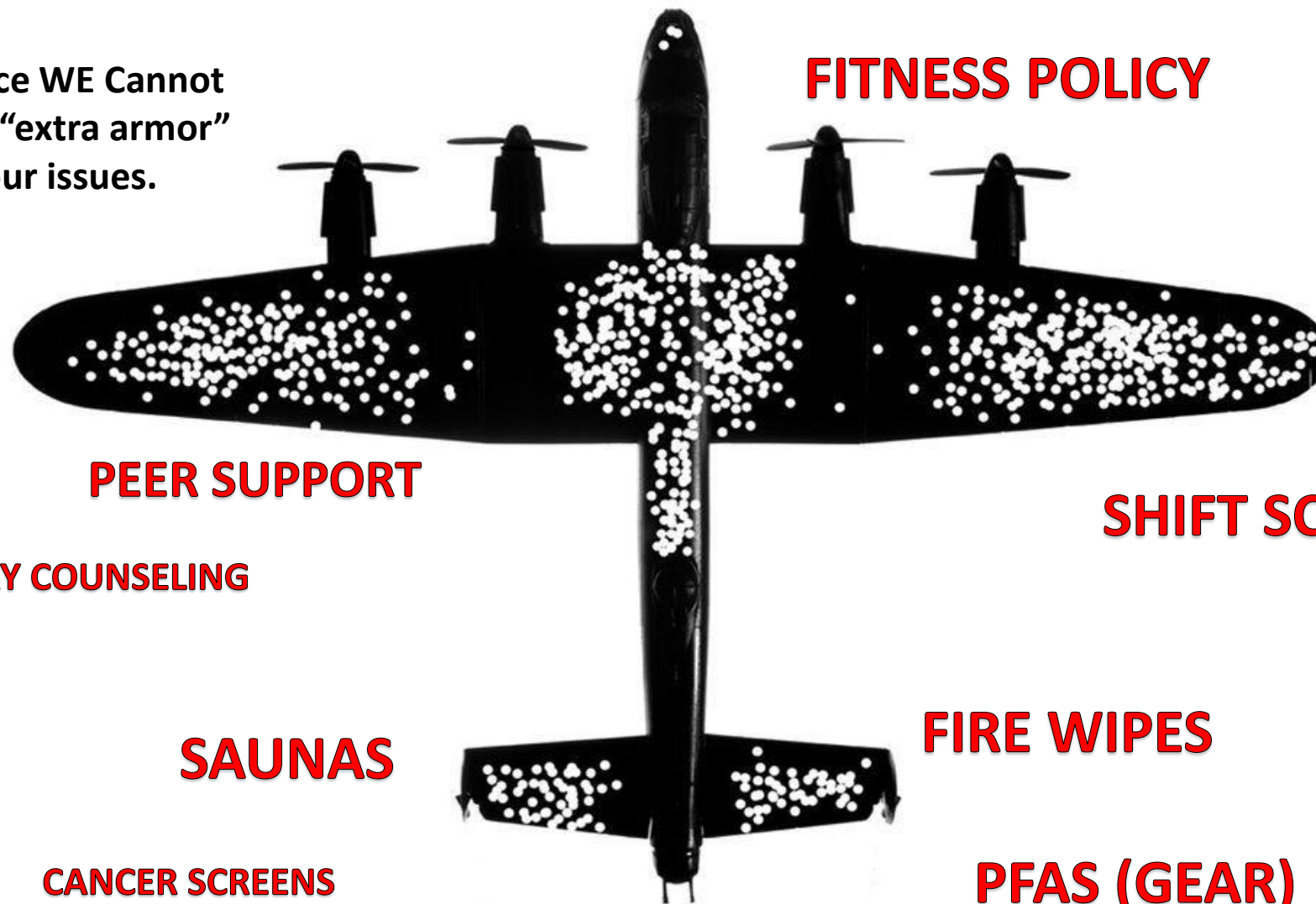
**Is this a good brother/
sister of the fire service?**



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In the Fire Service WE Cannot
continue to put “extra armor”
(band aids) on our issues.



FITNESS POLICY

NAP PODS

**MENTAL HEALTH
SCREENS**

PEER SUPPORT

SHIFT SCHEDULES

MANDATORY COUNSELING

SAUNAS

FIRE WIPES

CANCER SCREENS

PFAS (GEAR)



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START HERE!

**TAKE CARE OF YOURSELF,
SO YOU CAN TAKE CARE OF THEM.**



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TAKE ACTION- Get Up!

FRF 50 Rep Back and Hip Fix

Start your day or shift with these 50 reps
to improve hip and back mobility.

- 10- Pelvic Tilts
- 10- Hulas (5 each way)
- 10- Right Leg Forward Hulas (5 each)
- 10- Left Leg Forward Hulas (5 each)
- 10- Rotations (5 each way)



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What does it mean to be healthy?

- Fit or not fit: Shredded, works out 2 times per day, drinks 2 energy drinks per day, and needs alcohol to sleep...
- Fit or not fit: Workout 3 times per week, 10-15 pounds overweight, eats healthy, practices mindfulness...



Health and is a confluence of factors that work together.



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resilience

"The behaviors, thoughts, and actions that promote personal wellbeing and mental health. It refers to "a person's ability to withstand, adapt to, and recover from adversity and stressful situations. "



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THIS IS RESILIENCE...

"Life is not about how fast you go, or how high you climb.

It's about how you get knocked down, get up, and BOUNCE HIGHER."



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Improve Performance and Resilience



E

= Exercise (functionally)



M

= MIND YOUR NUTRITION



S

= SLEEP



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How to Control Stress/ Inflammation- Functional Fitness.

One moderate exercise session has a cellular response that may help suppress inflammation in the body.**

- Injury Reduction/Performance Improvement
 - Weight control
 - Lower instances of Cancer
- Decrease chances of sudden heart attack and stroke.
 - Improves cognitive thinking
- Improves mental health (lowers symptoms of depression)
 - Helps manage PTSD
 - Improves Cognitive Thinking
- Improves immune response (COVID)

[** Brain, Behavior, and Immunity](#)
[Volume 61](#), March 2017, Pages 60-68



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Improve Performance and Resilience (the Application)

- **EXERCISE (Functionally)**
 - At least 3x/ week for 30-45 minutes
 - Mobility exercises (at least 5 minutes)
 - Stretch and foam roll
 - Include full-body strength exercises
 - Include core movements -plank
 - Cardiovascular exercise
 - Long slow cardio
 - Intervals



Squat to Press





THIS IS “Functional”...

The main goal of a firefighter, EMT and/or medics workout should be to improve performance (fire/rescue ground movements), reduce injuries, and promote career longevity.

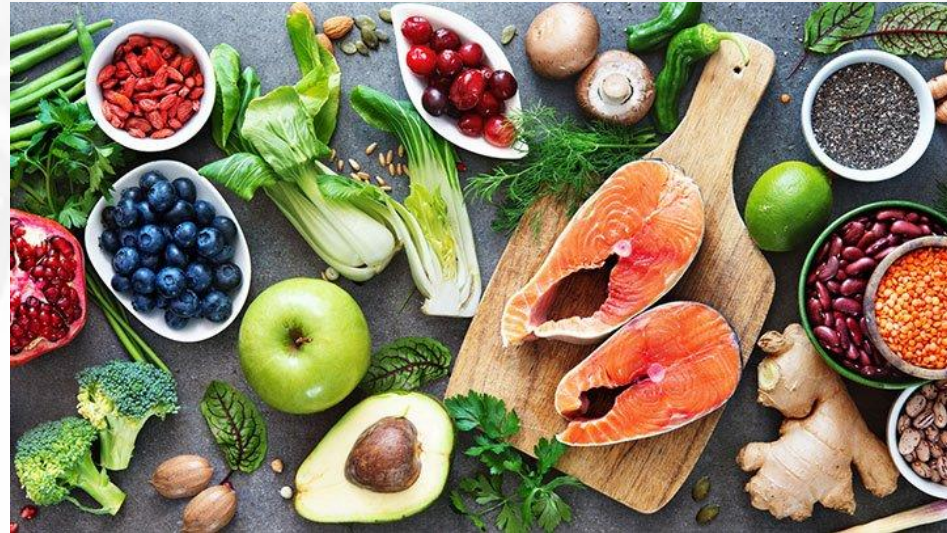


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Nutrition and Inflammation (the good news).

- Research shows that one of the best ways to reduce inflammation lies not in the medicine cabinet, but in the refrigerator...



DEEP THOUGHTS...

Every time you eat or drink
in the firehouse, you are
either feeding disease or
fighting it...



BOOM!

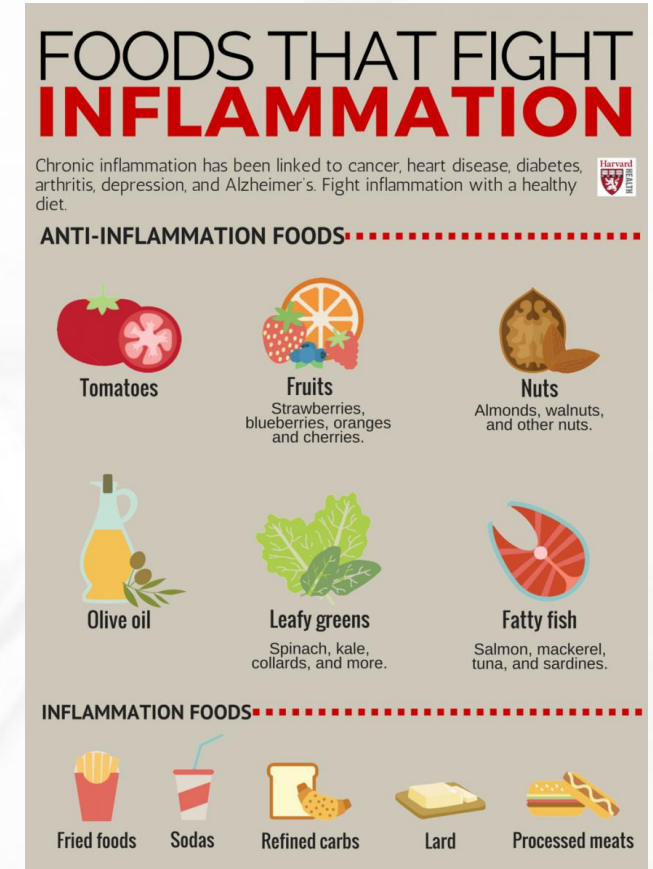


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Improve Performance and Resilience (the Application)

- **MIND YOUR NUTRITION**
 - Drink at least 80 ounces of water a day!
 - Eat real food
 - Limit sugar and processed “junk” food
 - Eat your fruits and veggies
 - Your Mom was right!
 - Have some healthy fats
 - Focus on healthy fats (nuts, olive oil, avocado)



Improve Performance and Resilience (the Application)

- **MIND YOUR NUTRITION**
 - Use the 10-minute rule for eating.
 - Take at least 10 minutes to eat each meal.
 - Wait 10 minutes before going for any second helping.



Sleep and Inflammation (the good news).

- **Sleeping seven to eight hours can help prevent and reduce inflammation and disease.**
- **WIN, WIN, WIN**
 - Exercise can help you sleep, sleep can help you perform, and vise-versa.
 - Sleep can help deal with trauma.
 - Sleep can combat cravings.

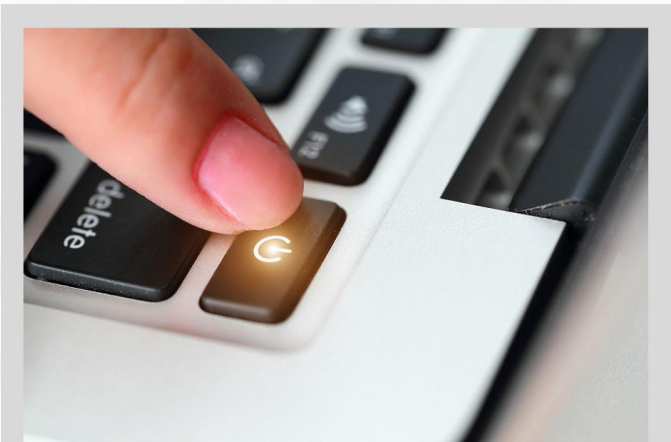


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Improve Performance and Resilience (the Application)

- **SLEEP!**
 - Aim for 7-9 hours (as often as possible).
 - Hit the rack at the same time each night.
 - Create a “Sleep Fortress”
 - Dark, cool, and quiet
 - Power down at least 30-minutes before bed
 - Blue light from cell phones, computer screens, and LED and florescent lighting can block production of sleep hormones.

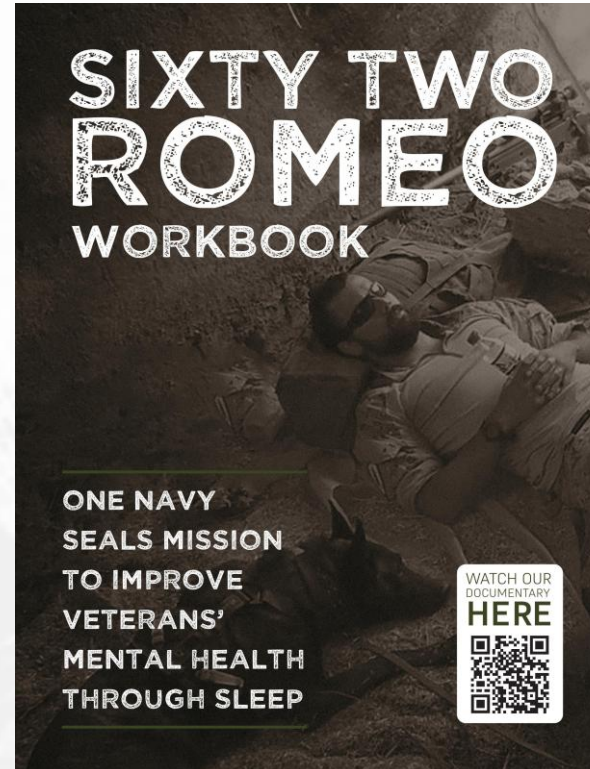


Power down before napping and sleeping.



Improve Performance and Resilience (the Application)

- **SLEEP!**
 - Nap when needed.
 - Try a “Coffee Nap”
 - Deep Breathing for Stress Relief
 - Sleep Education- It is a skill and takes work
 - Sixty Two Romeo



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CREATE YOUR “RESILIENT” PROTOCOL.

When are you at your best?

What did you do, eat, sleep, feel, etc.

What habits do you need to follow to be at your best?



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BUILDING HABITS !



“

**MOTIVATION IS WHAT
GETS YOU STARTED...
HABIT IS WHAT GETS
YOU RESULTS. ”**

-ZAM



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"I lost 10 pounds and most importantly, FEEL GREAT!
Now, 20 members of my department are doing it."
-Karl Weeks

"I was incredibly negative and going thru a difficult breakup. I had a very unhealthy relationship with alcohol and couldn't sleep thru most nights. I was 20 pounds overweight and had not read a book in 3 years. All of the habits I chose have changed me as a person and helped me gain control of my health!"
-John Foster

5 FOR 50 CHALLENGE

**CREATE/ SELECT 5 HABITS THAT PROMOTE RESILIENCE.
DO THEM, EVERY DAY FOR 50 DAYS.
IF YOU MISS ONE, START OVER AT DAY 1.**

EXAMPLES OF HABITS TO FOLLOW

- 30 MINUTES OF EXERCISE
- 8500 STEPS
- 75 OUNCES OF WATER
- NO CHEAT DAYS/ NO ALCOHOL
- FOLLOW A DIET/ HEALTHY EATING PLAN
- 10 MINUTES OF READING (NON-FICTION)
- 1 MINUTE OF DEEP BREATHING
- POWER DOWN 30 MINUTES BEFORE BED
- BED AT THE SAME TIME EVERY DAY
- DAILY GRATITUDE
- +1 (OR MORE) YOUR CHOICE HABIT

COMPLETE 50 DAYS AND GET A SPECIAL CHALLENGE COIN



www.FireRescueFitness.com/Resilient50

"Drinking water, sleeping better, and have more energy than ever. Thanks for getting me out of my slump."
-Brandon Skeith

"Officially cancer free. During my treatments, The R50 inspired me stick with my protocol and to keep going, to stay strong."
-Becky Myers

"I lost 24 pounds and regained control of my mental and physical health. And I am not stopping."
-Sam Arnold



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'I'm proof that it works.'



Sign up for the R50 Challenge for FREE: www.R50Challenge.com



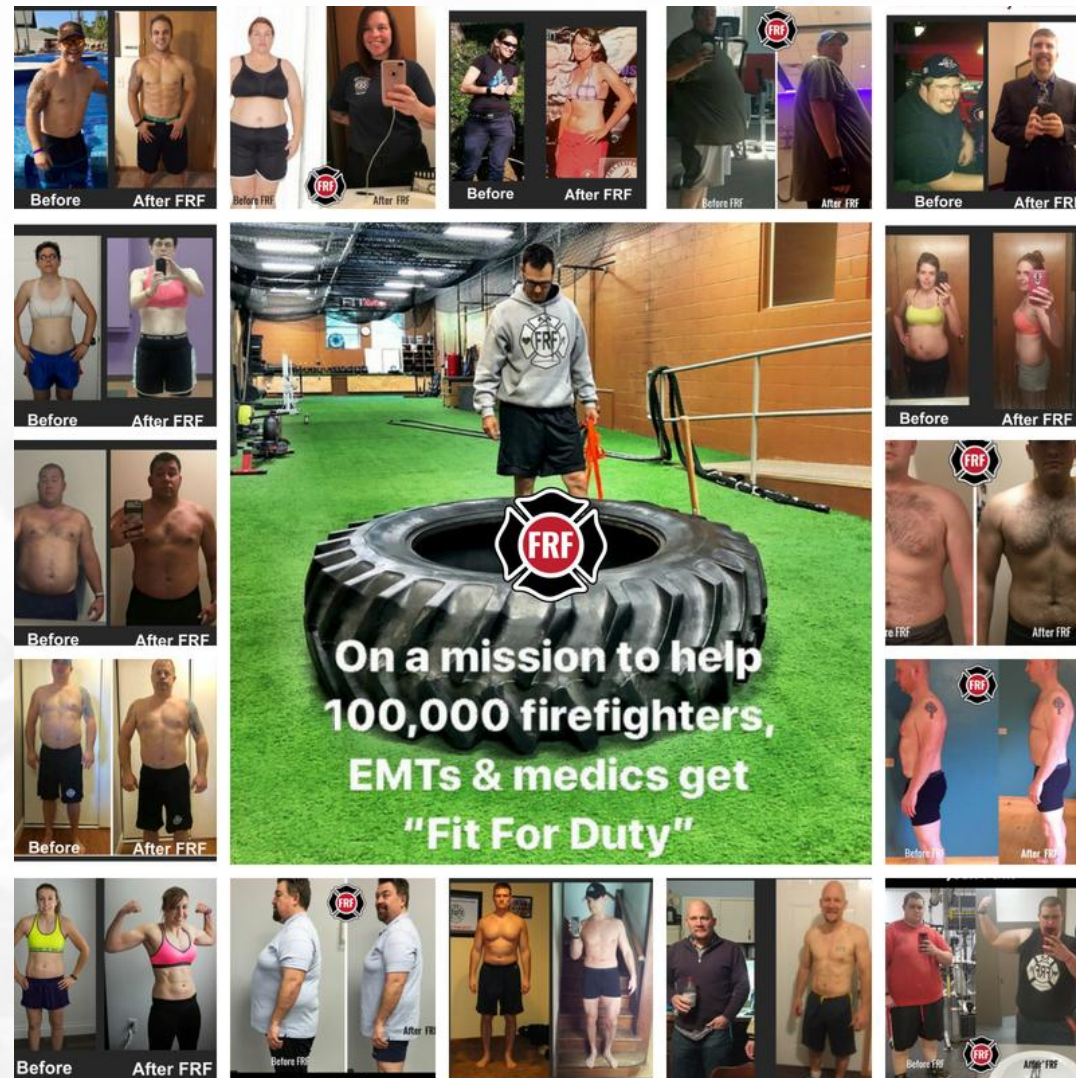
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**Do something every day/shift
to improve your health!**

Thank You for Attending

Contact ZAM with any questions via
www.FireRescueFitness.com/contact



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Q and A

- When to Workout?
- Assessments?
- Best Exercises?
- Snack Options?
- Best “functional” equipment?
- How to stay motivated?

**EMERGENCIES
DO NOT TAKE A
DAY OFF...
NEITHER
SHOULD YOUR
FITNESS**

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Additional Slides for Q and A



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Essential Components of a Firefighter Workout.

1. Have a Plan
2. You MUST work your Core
3. Have Some Heart- Intervals
4. Be Full-body Functional
5. Warm-up and Be Flexible (foam rolle
6. Understand RECOVERY



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The Anatomy of a Functional Workout

- Active warm-up (3-4 exercises)
- Core Training and prehab (3-4 exercises)
- Strength Training (8 exercises)
- Interval Overhauls (5 movements)
 - Use an interval timer
- Stretch and foam roll (5 minutes)



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Nutrition Hacks



Stay hydrated, hide the sweets, have good choices available, plan with healthy snacks, have some go to healthy recipes...



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WHAT ARE YOU GOING TO DO TO BE BETTER?

**THE PERSON YOU
SEE IN THE
MIRROR IS MOST
RESPONSIBLE FOR
YOUR HEALTH.**



**“ONE OF THE BEST
FORMS OF PEER
SUPPORT IS
ENCOURAGING A
HEALTHY CULTURE.”**



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Improve Performance and Resilience (The Plan)

Optimizing the fire Ground						
Sunday (on shift)	Monday	Tuesday	Wednesday (on shift)	Thursday	Friday	Saturday (on shift)
30-minute walk	Full-body Strength Workout	Light jog, bike or walk with 10 minutes of stretching/ yoga	Crew Interval Workout (slams, crawls, stairs, plank, carry, drag)	Light jog, bike or walk with 10 minutes of stretching/ yoga	Full-body Strength Workout + 10 minutes of intervals	30-minute walk
5 +1 = 6 Breathing	Coffee Nap		5 +1 = 6 Breathing			5 +1 = 6 Breathing
Bed at 10	Bed at 10	Bed at 10	Bed at 10	Bed at 10	Bed at 10	Bed at 10

Daily Nutrition Goals

- At least 80 ounces of water
- Limit Sugars (added sugars 40 grams or less)
- Eat lean protein, veggies and fruit at each meal (4x/ day)
- Have some healthy fats (almonds, avocado)



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TOP 10 THINGS FIT FIREFIGHTERS DO

- 1. Train functionally at least 3-4 times per week (consistently).**
- 2. Hydrate- with water. Watch alcohol and energy drinks.**
- 3. Get your annual medicals and cancer screens. And assess your level of fitness regularly.**
- 4. Eat according to your goals. Eat real foods and lots of fruits and vegetables.**
- 5. Focus on sleep (value sleep).**
- 6. Manage your weight and body fat percentage.**
- 7. Clean gear 2x per year and after incidents (including helmet liner and hood).**
- 8. Work on your Emotional Resilience (build resilience). Connect with people!**
- 9. Wear SCBA during all fires including overhaul and dumpster/ auto fires.**
- 10. Get Better Every Shift- Practice an attitude of gratitude and focus on making yourself and those around you inspired to improve health, knowledge, and impact.**



Some great sources to check out for more information.

Free course on stress first aid from FRCE: <https://www.firstrespondercenter.org/training>

Harvard health- Foods that Fight Inflammation: <https://www.health.harvard.edu/staying-healthy/foods-that-fight-inflammation>

Giugliano D, Ceriello A, Esposito K. The effects of diet on inflammation - Emphasis on the metabolic syndrome. J Am Coll Cardiol. 2006;48:677–85. [[PubMed](#)] [[Google Scholar](#)]

Pahwa R, Goyal A, Jialal I. Chronic Inflammation. [Updated 2023 Aug 7]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK493173/>

Lee, C. H., & Giuliani, F. (2019). The Role of Inflammation in Depression and Fatigue. Frontiers in immunology, 10, 1696. <https://doi.org/10.3389/fimmu.2019.01696>

