



Building Firefighter Resilience with Fitness and Nutrition

Presented by:

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Aaron Zamzow

- Firefighter and Training Officer for the City of Madison, WI Fire Department. Firefighter/ EMT for over 15 years.
- Certified (NASM, Ace – Peer Fitness, NSCA – CSCS, PN1) and degreed Personal Fitness Trainer with 25 years experience.
- Trained with elite athletes for the NBA, NHL, and NFL and had the privilege to study under some of the top trainers in the world.
- Owner of Fire Rescue Fitness
- Contributing Writer for Firehouse Magazine (Expo and World), Lexipol, FR1...
- Thank YOU! www.FireRescueFitness.com



Building Resilience with Fitness and Nutrition

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WELCOME TO THE FIRE SERVICE!

- Greatest job in the world.
- One of the most challenging professions.
- This job can kill you.
- You will never “know it all.”
- You control your health!

Please ask questions...



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Please remember this!

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



www.FireRescueFitness.com

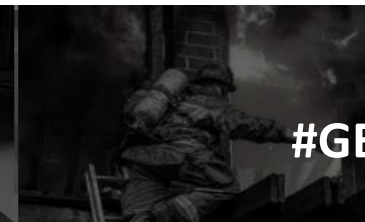


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This is my
"why."



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What we want to learn today

- Introduction- Happy to be here!
- Session Overview- Why did we create this seminar.
- What is Inflammation- Why should you care?
- What are the benefits of consistent “functional” exercise.
- What are the benefits of proper nutrition.
- What is Resilience.
- What are the "best" steps to improve resilience
- Q and A



What are the health and fitness issues facing first responders?

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



Responses to “Unmanaged” Stress

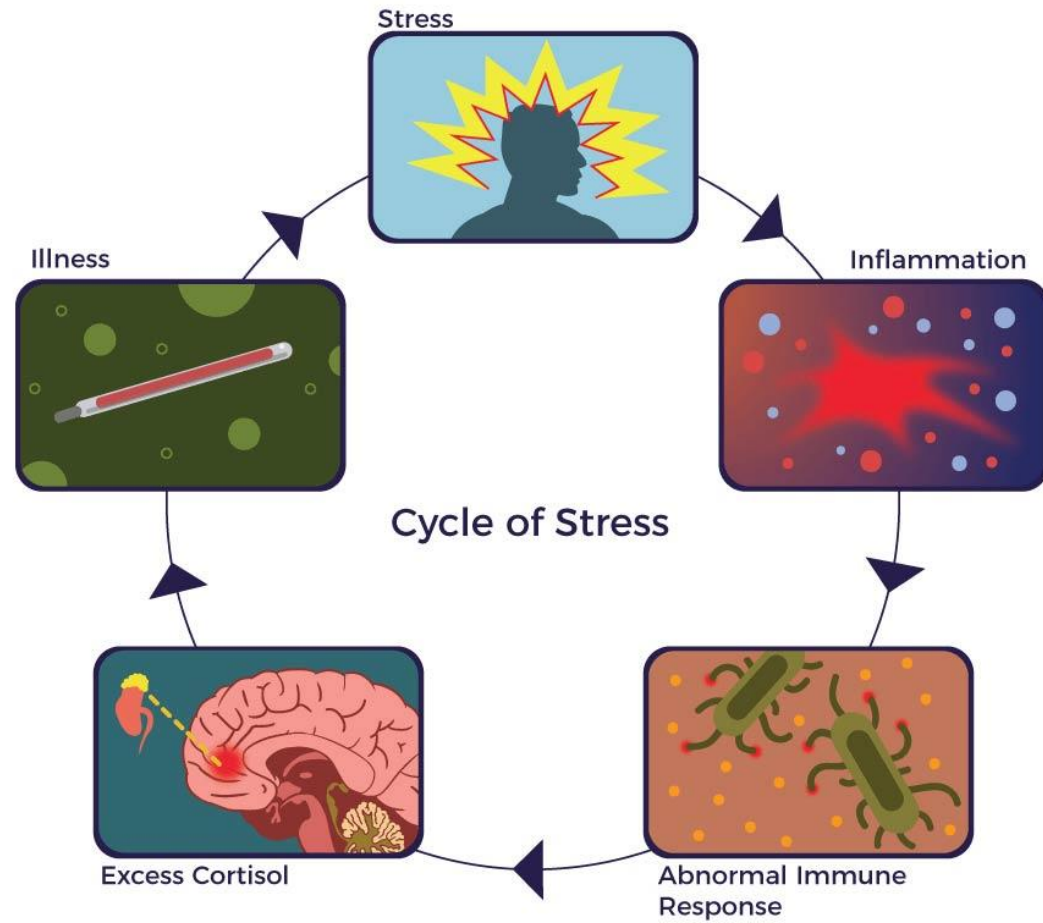
- Physical responses may include”
 - Fatigue
 - Extreme exhaustion
 - Headaches
 - Heartburn
 - Difficulty sleeping and nightmares
 - Digestion issues
 - Increased inflammation and joint pain
- Emotional and mental responses include:
 - Confusion
 - Anxiety
 - Depression
 - Anger and outrage
 - Feelings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



- Heart attacks and strokes
 - Cancer
- High Blood Pressure
 - Substance abuse
 - Obesity, diabetes
- Low T (low testosterone)
 - Sleep apnea
 - PTSD
 - Mental Health
 - Depression
- Musculoskeletal Injury
 - Suicide
 - Digestive issues
 - Memory loss
 - Relationship Issue



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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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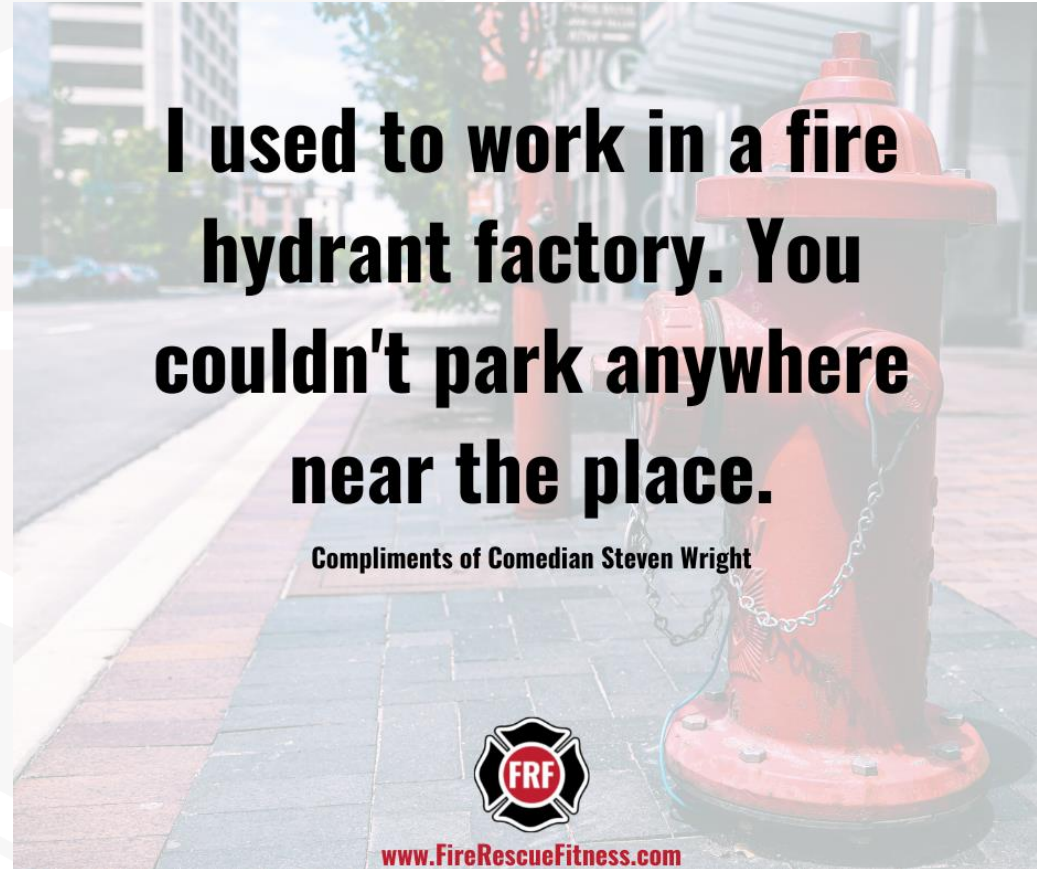
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- Drugs
- Alcohol
- Anger
- Eating
- **WE DON'T?**

How do we cope?



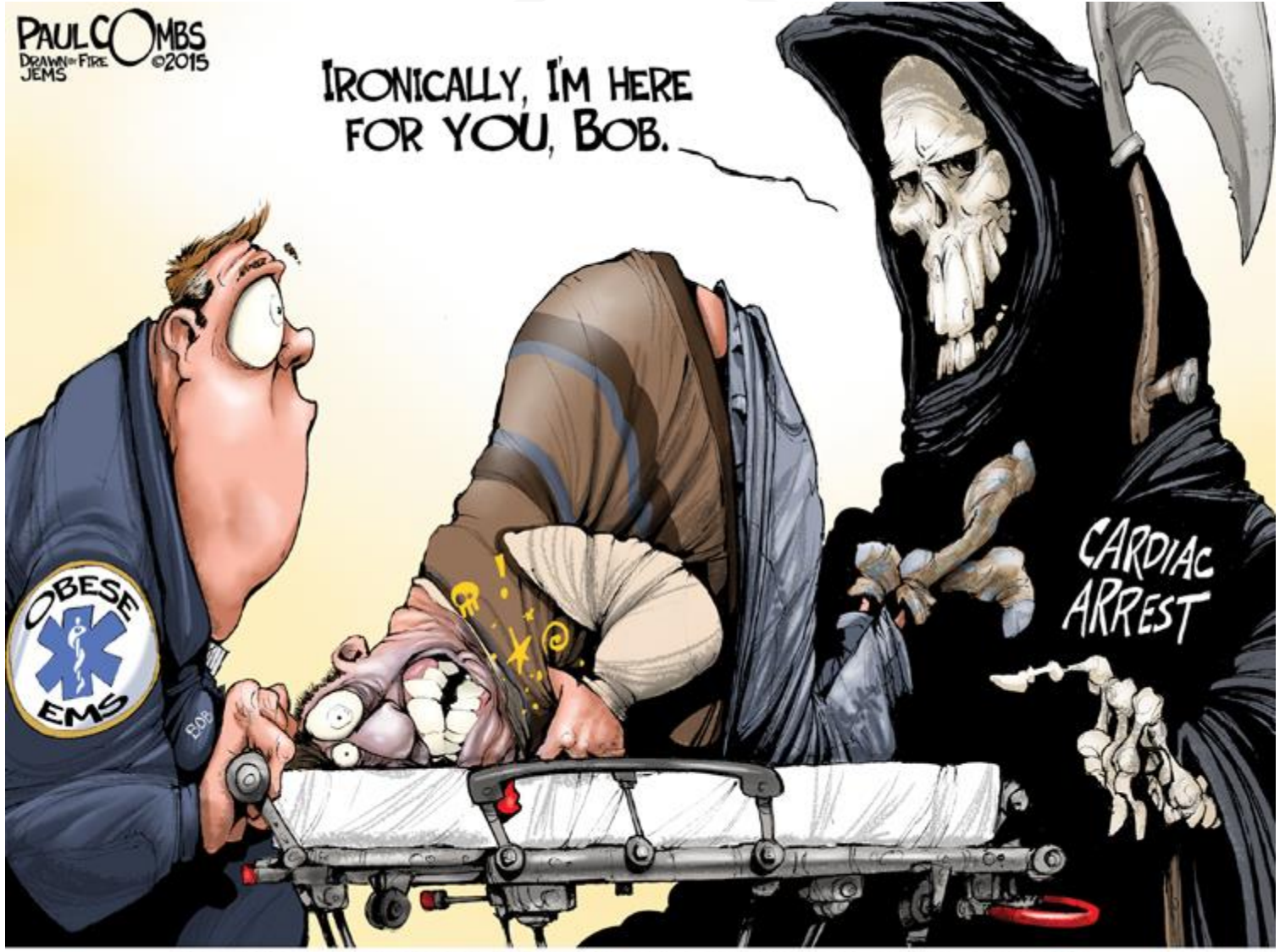
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PAUL COMBS
DRAWN BY FIRE
JEMS ©2015

IRONICALLY, I'M HERE
FOR YOU, BOB.



GET FIT AND STAY FIT, SO YOU CAN BE THERE TO SAVE OTHERS!

BY PAUL COMBS

© Paul Combs ArtStudioSeven.com

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 numerous health problems, including heart disease, arthritis, depression, Alzheimer's disease, PTSD and even cancer (Segerstrom, 2006).



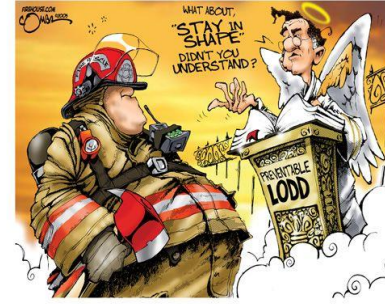
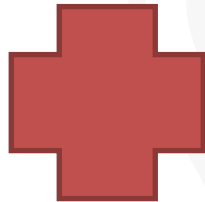
Nutrition and Inflammation (the bad news).

- Diets that promote inflammation are high in refined starches, sugar, saturated and trans-fats, and low in omega-3 fatty acids, natural antioxidants and fiber from fruits, vegetables, and whole grains (Giugliano et al.).
- Eating toxins cause an inflammatory response in the body.



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](#)]

Uncontrolled Inflammation



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How to Control Stress/ Inflammation- 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



The Proof (Exercise is Good)

Exercise and Depression

Studies show that exercise can treat mild to moderate depression as effectively as antidepressant medication — but without the side-effects, of course. As one example, a recent study done by the Harvard T.H. Chan School of Public Health found that running for 15 minutes a day or walking for an hour reduces the risk of major depression by 26

Exercise and PTSD/ trauma

Evidence suggests that by really focusing on your body and how it feels as you exercise, you can actually help your nervous system become “unstuck” and begin to move out of the immobilization stress response that characterizes PTSD or trauma

Exercise and Injury Reduction

There is limited evidence to suggest that firefighters that exercise regularly are less likely to experience injuries while on duty. But there is strong evidence to support those injured have a much better chance of full and shortened recovery from injury.

Exercise and Reduction of Sudden Cardiac Arrest

Regular exercise may significantly minimize this small transient risk and may lower the overall long-term risk of sudden cardiac death. Regular exercise has numerous cardiovascular benefits and has been associated with improved cardiovascular and all-cause mortality.

The Proof (continued)

Exercise and Cancer

Staying active can help you lower your risk of many types of cancer including breast, colorectal and uterine cancers. Exercise lowers your cancer risk in several ways: Exercise helps you maintain a healthy weight. Being overweight or obese raises your risk for several cancers.

Exercise and Resilience.

When faced with mental or emotional challenges in life, exercise can help you build resilience and cope in a healthy way, instead of resorting to alcohol, drugs, or other negative behaviors that ultimately only make your symptoms worse. Regular exercise can also help boost your immune system and reduce the impact of stress.

Exercise and Cognitive Thinking.

Exercise can help boost thinking and memory indirectly by improving one's mood and reducing stress, depression, and anxiety. Exercise has been shown to decrease feelings of depression , anxiety, and stress which leads to better decision making (especially under stress).

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...
- To reduce levels of inflammation, aim for an overall healthy diet.



STAY BACK 500 FEET



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Nutrition and Inflammation.

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





What is Resilience?

It refers to a person's ability to withstand, adapt to, and recover from adversity and stressful situations.

Individual resilience involves behaviors, thoughts, and actions that promote personal wellbeing and mental health.



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WE ALL MUST REALIZE THIS...

**The person you see
in the mirror is
most responsible
for your fitness.**



Strong Body, Strong Mind (the Application)

- **Step 1- Get Moving**

- Exercise at least 3 times per 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

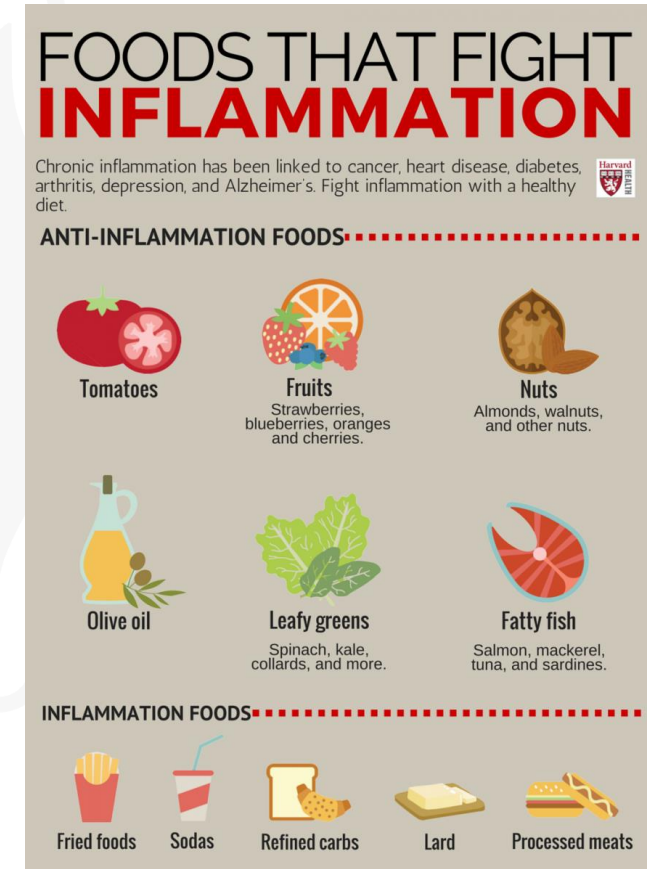


Squat to Press



Strong Body, Strong Mind (the Application)

- **Step 2- Eat to Perform.**
 - 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)



Strong Body, Strong Mind (the Application)

- **Step 3 – Mind your Business...**
 - Incorporate 10-minutes of “quiet time” each shift.
 - Yoga
 - Stretch
 - Meditate
 - Use an app (calm)
 - Focus on taking deep breaths
 - Give it a try!
 - New research shows that even small bouts of “mindfulness” exercises 3x a week can be VERY beneficial!



Control your Heart Rate...



Strong Body, Strong Mind (the Application)

Strong Body, Strong Mind Workout Plan						
Sunday (on shift)	Monday	Tuesday	Wednesday (on shift)	Thursday	Friday	Saturday (on shift)
OFF Deep breathing	Full-body Strength Workout	Light jog, bike or walk with 10 minutes of stretching/ yoga	Crew Interval Workout (slams, crawls, stairs, plank, carry, drag) Deep breathing	OFF	Full-body Strength Workout + 10 minutes of intervals	Yoga and stretching

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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Now is the time to create
healthy habits.

Eat right, exercise, hydrate and
set an example for the
community.

Stay Safe and FRF
-Aaron Zamzow



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

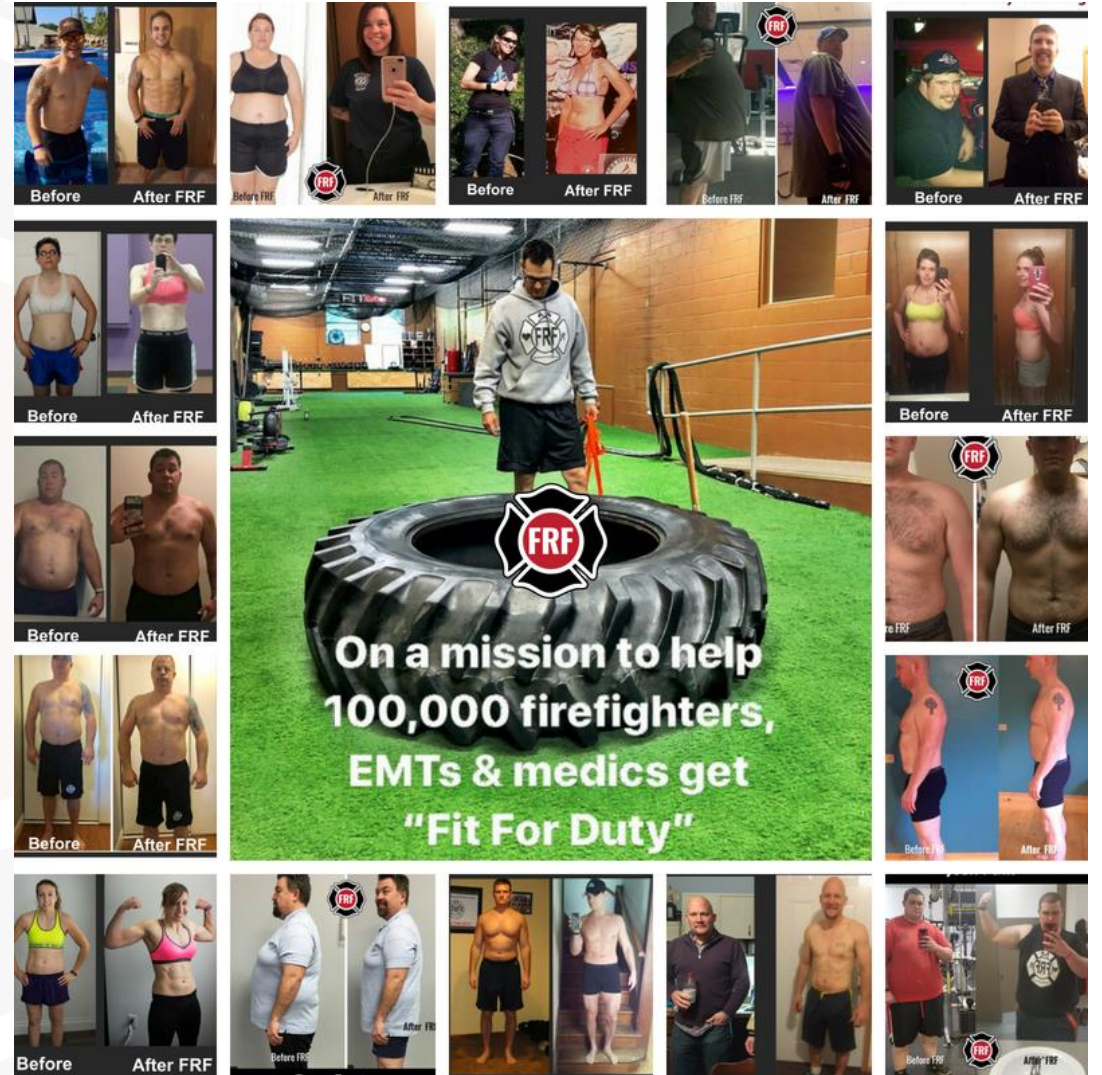
-ZAM

**Thank You for
Attending!**

**Get a Free Workout
Program and some
additional bonus
materials...**

Please visit:

www.firerescuefitness.com/contact



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**

WWW.FIRERESCUFITNESS.COM



A large, light gray watermark of the FIRF logo is centered on the page. The logo consists of a Maltese cross with a circular center containing the letters 'FIRF' in white. The cross arms are filled with a light gray color and have a white outline.

Additional Slides for Q and A

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.





FITNESS MOTIVATION



We help you get "fit for duty."

www.FireRescueFitness.com

Nutrition... Simplified.



**The Best Ab
Exercise for
Firefighters is...
Stop Eating so
Much Crap!**

Nutrition Hacks

You can eat healthy at the firehouse...



www.FireRescueFitness.com

How to Resist Sweets in the Firehouse (or any house)..



FIRE RESCUE FITNESS

FIREFIGHTER SNACK OPTIONS



New and Improved Version 2.0



Over 80 Recipes!

Healthy Firehouse Recipes

Healthy and easy recipes that will satisfy your (or any) crew



Courtesy of www.FireRescueFitness.com

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

Fitness Success Spectrum

Unhealthy

Healthy/ Fit



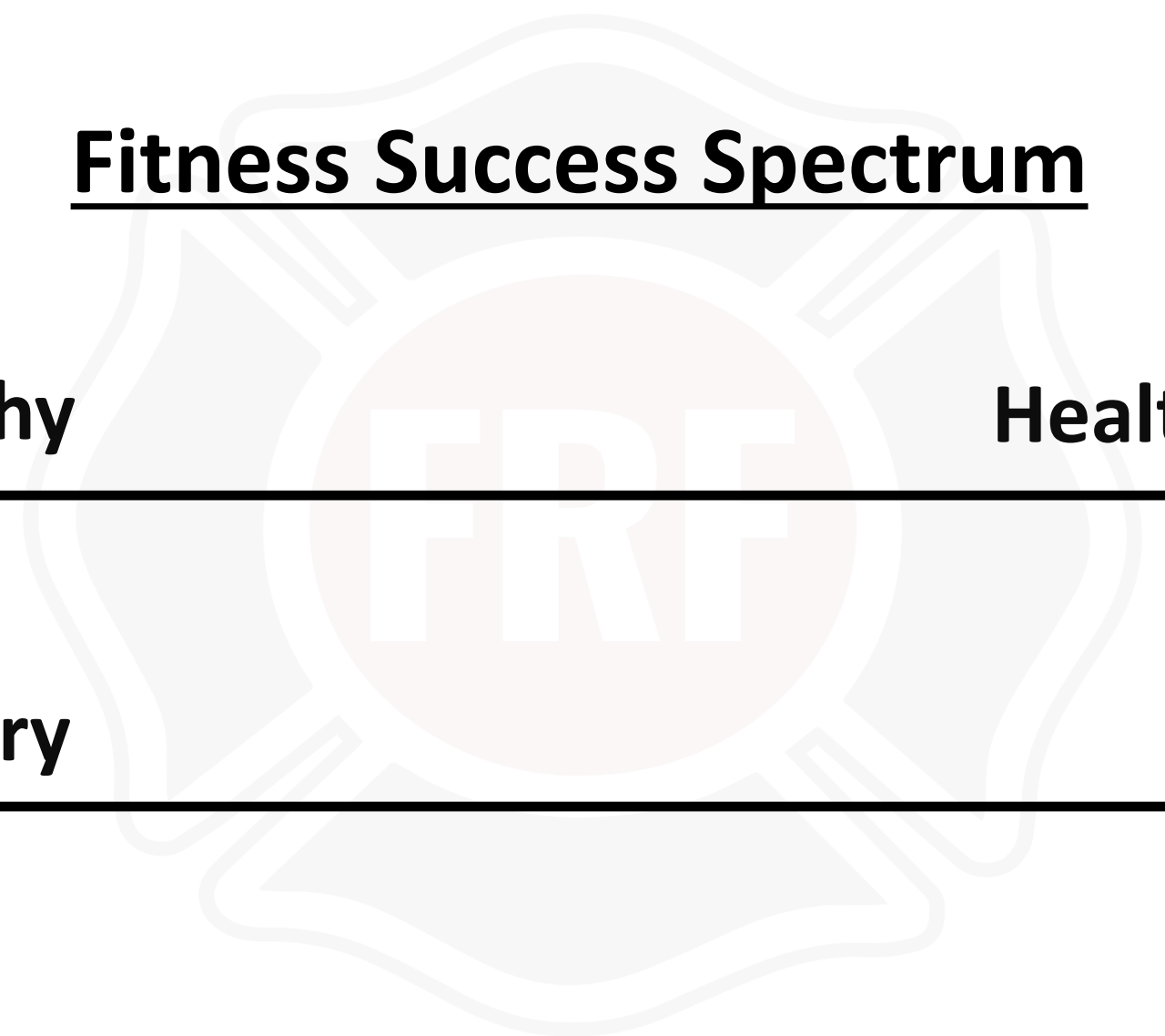
Sedentary

Active



**Poor Diet
Habits**

**Good Diet
Habits**



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

Some great sources to check out for more information

<https://nutrition.org/inflammation-what-is-it-and-how-can-my-diet-and-behavior-affect-it/>

<https://www.henryford.com/blog/2018/05/inflammation-and-your-diet-whats-the-connection>

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](#)]

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