



# **Fitness & Nutrition for Resilient First Responders**

**Presented by:**

*Aaron Zamzow, Firefighter/Training Officer,*

*City of Madison Fire Department*

*Owner- FireRescueFitness.com*

*Author- Firehouse Magazine, Lexipol, FR1*



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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...
- I Want to help you “Take Action”

[www.FireRescueFitness.com/100Club](http://www.FireRescueFitness.com/100Club)



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Fitness & Nutrition for Resilient First Responders



# Who are you?

- Chiefs, Captains, Admin?
- Peer Fitness Trainers?
- Interested in Fitness?
- How many have fitness teams and/or gyms?
- What do you hope to get from today's seminar?
  - Please ask questions...



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# What we want to learn today

## Resilience = Strong Body and Strong Mind

- Introduction- Happy to be here! (5 minutes)
- Session Overview- Why did we create this seminar. (5 minutes).
  - What are the health issues facing first responders
  - What is Resilience...
- What is Inflammation? (10 minutes)
  - Sources of inflammation
  - What role does it play in our health
- What are the benefits of consistent exercise? (15 minutes)
  - Disease Prevention and inflammation reduction
  - Exercise and its role in mental health and depression
- What are the benefits of proper nutrition (15 minutes)
  - What is “healthy” nutrition
- What are the "best" steps to help build a resilient body and mind
  - Putting it all together
- Q and A... (20 minutes)



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# What are the health and fitness issues facing first responders?

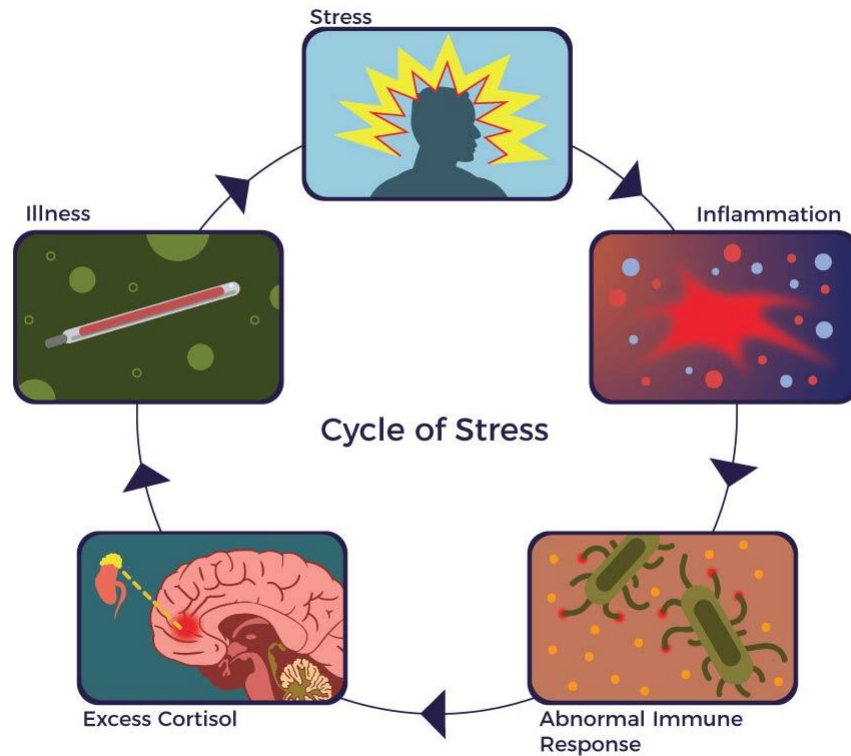
- Heart attacks and strokes
  - Cancer
  - Obesity, diabetes
- Low T (low testosterone)
  - Sleep apnea
  - PTSD
  - Mental Health
  - Depression
- Musculoskeletal Injury
  - Suicide



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# What are the Effects of Unmanaged Stress?



- 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
  - Anger



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# What is Resilience?

**Individual resilience involves 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.**



**WE ALL MUST REALIZE THIS...**

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

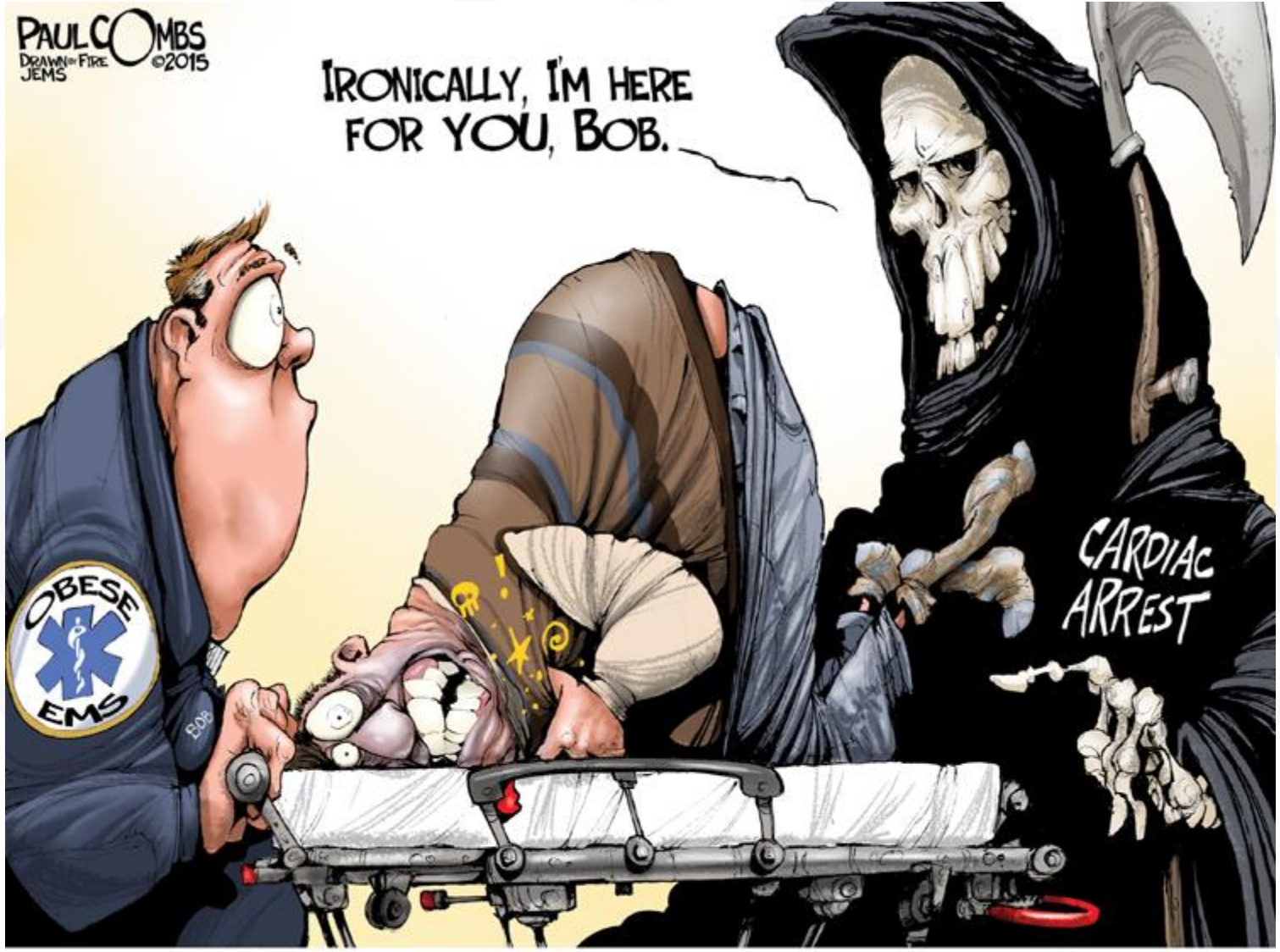


**FIRE RESCUE  
FITNESS**



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).

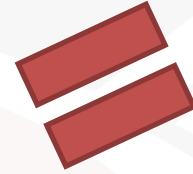
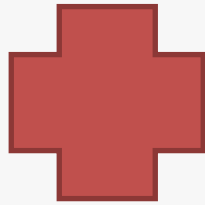


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# Uncontrolled Inflammation



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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)

# 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 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 (sugar) 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](#)]

# 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- high in fruits, vegetables, nuts, whole grains, fish, and healthy oils.



# Nutrition and Inflammation.

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



**FIRE RESCUE FITNESS**

# Strong Body, Strong Mind (the Application)

- **Step 1- Get Moving**

- Exercise at least 3 times per week for 30-45 minutes

- **Include Full-body strength exercises**

- Include core movements -plank

- **Mobility Exercises (at least 5 minutes)**

- Stretch and foam roll

- **Cardiovascular Exercise**

- Long slow cardio

- Intervals



**Squat to Press**



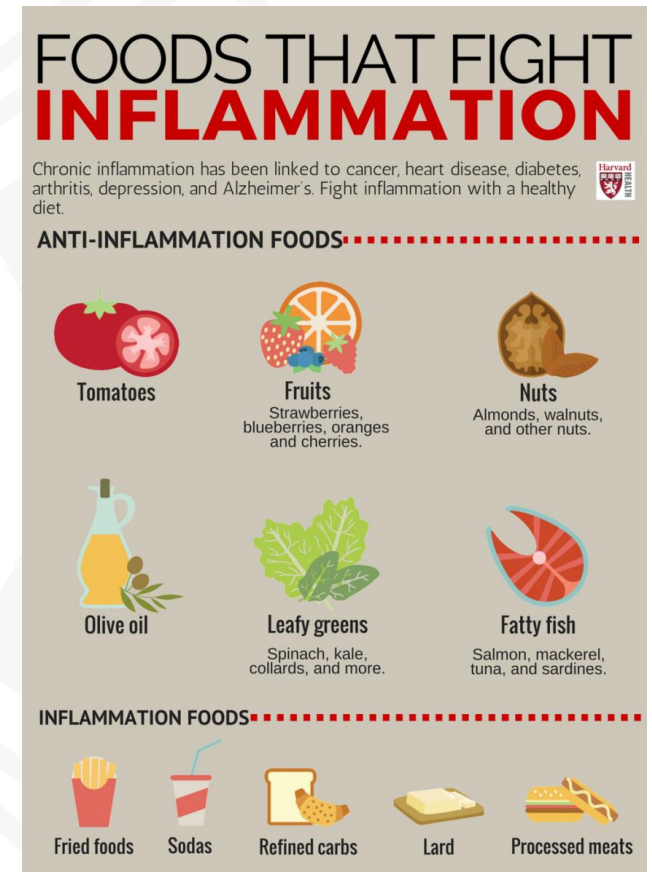
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# Strong Body, Strong Mind (the Application)

- **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 monounsaturated fats (e.g. nuts, olive oil, avocado) and omega-3 polyunsaturated fats (e.g. fish, flaxseeds, walnuts). They are associated with decreased biomarkers of inflammation.



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# 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 3 times a week can be beneficial



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# 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	Full-body Strength Workout	Light jog, bike or walk with 10 minutes of stretching/ yoga	Crew Interval Workout (slams, crawls, stairs, plank, carry, drag)	OFF	Full-body Strength Workout + 10 minutes of intervals	Yoga and stretching

## Daily Nutrition Goals

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



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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**

WWW.FIRERESCUFITNESS.COM



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**Now is the time to make a positive  
change in our industry.**

**Create your Strong Body and your  
Mind will follow!**

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

**Stay Safe and FRF  
-Aaron Zamzow**



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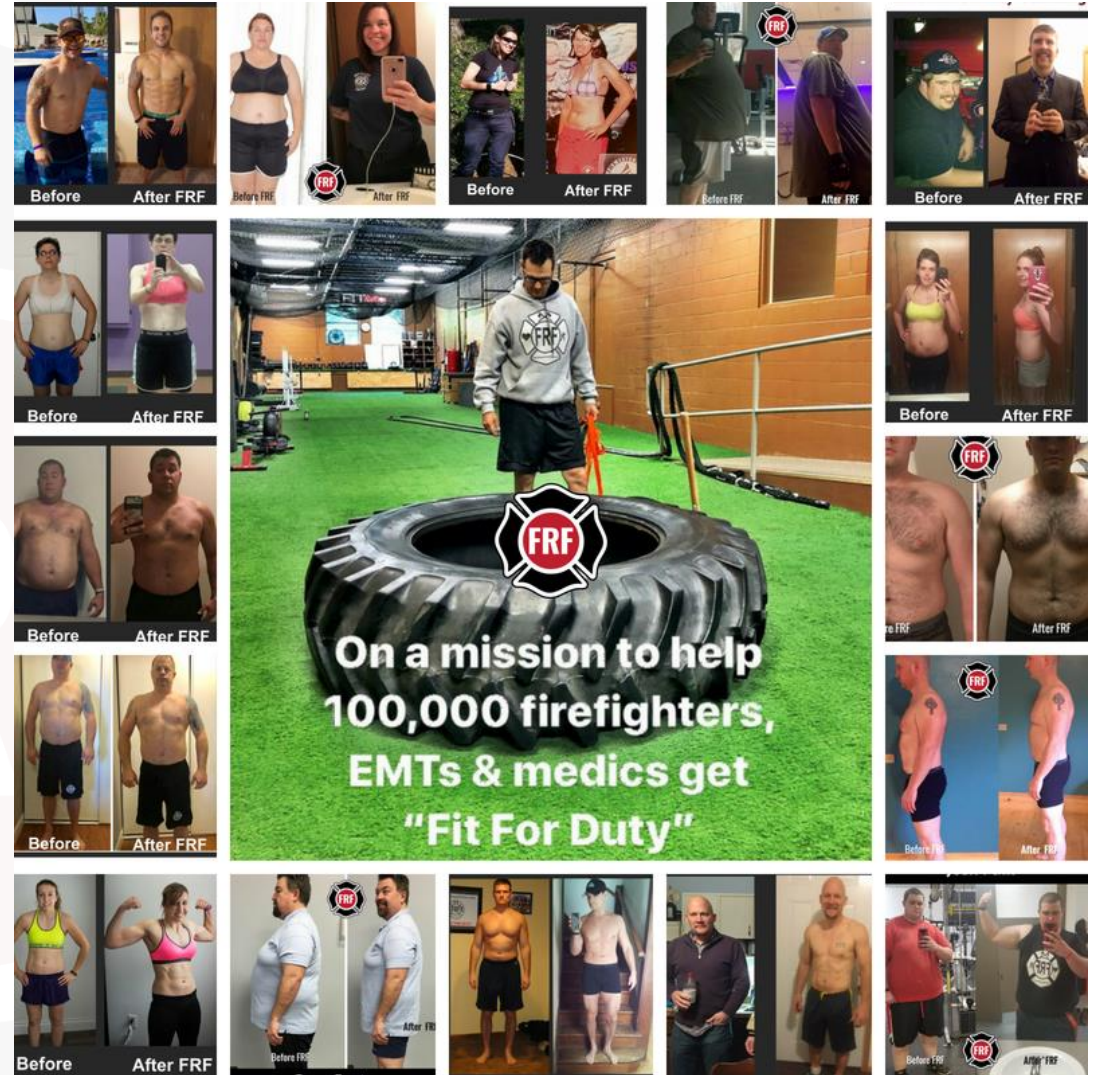


# Thank You for Attending!

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

Please visit:

[www.FireRescueFitness.com/100Club](http://www.FireRescueFitness.com/100Club)



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Contact Aaron with any questions via  
[www.FireRescueFitness.com/contact](http://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>



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# Additional Slides for Q and A



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# FITNESS MOTIVATION



We help you get "fit for duty."

[www.FireRescueFitness.com](http://www.FireRescueFitness.com)

## Nutrition... Simplified.



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

[www.FireRescueFitness.com](http://www.FireRescueFitness.com)

# 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...



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# Fitness Success Spectrum

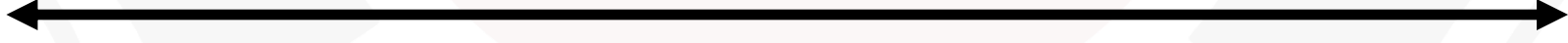
**Unhealthy**

**Healthy/ Fit**



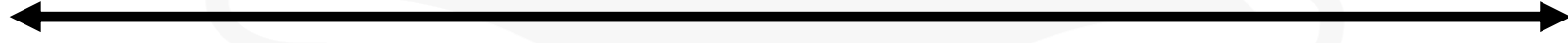
**Sedentary**

**Active**



**Poor Diet  
Habits**

**Good Diet  
Habits**



**FREE**