

KEY FINDINGS

The Weight Problem

- Between 73% and 88% of firefighters are overweight or obese across career and volunteer departments
- Obesity rates in one large study rose 33.7% to 40.4% in just 5 years
- Obese firefighters face significantly higher rates of CVD risk factors, injury, missed duty, and disability

How the Study Was Done

- Cluster randomized trial of 421 volunteer firefighters across 10 departments nationwide
- Tested The First Twenty1 (TF20) — a web-based nutrition, fitness, and behavioral health program built specifically for the fire service
- 6-month intervention compared against a no-treatment control group
- Weight change measured as the primary outcome

What's At Stake

- Without intervention, the average firefighter can gain 30 to 85 lbs over a 25-year career
- Obese firefighters are more likely to die of cardiovascular causes on duty and less likely to meet post-cardiac event return-to-work standards
- Poor nutrition is not just a wellness issue — it is a direct line-of-duty safety issue



Web-Based Nutrition and Physical Activity Program for Firefighters: Weight Outcomes in a Randomized Trial

SUMMARY:

Why This Matters to You

Most firefighters are carrying more weight than is safe for the job — and without deliberate action, the trend only goes one direction. This study tested the first web-based, firefighter-specific nutrition and fitness program proven to produce weight loss. Researchers randomized 421 volunteer firefighters across 10 departments for 6 months. The result: the program produced measurable weight loss while the control group gained weight, consistent with the typical firefighter career trajectory.

Nutrition & Weight in the Fire Service: What the Program Proved

FINDINGS:

The Most Important Things to Know

- The program produced real weight loss against a gaining control group: The treatment group lost an adjusted 1.7 to 2.8 lbs compared to controls — who gained weight, consistent with the typical pattern of gradual, persistent weight gain across a firefighter's career.
- Results were stronger for overweight and obese firefighters: Those in the overweight and obese category lost an adjusted 2.3 to 3.1 lbs — and 71% gained no weight at all during the 6-month period.
- The program worked because it spoke the fire service language: TF20 used firefighter-specific culture, shift-based scheduling, and job-relevant movements — push, pull, lift, drag, and carry. 46% of participants rated it as genuinely helpful.
- Without action, weight gain is the default: Control group firefighters gained weight over 6 months — consistent with studies showing the average firefighter gains 1 to 2 lbs per year, accumulating 30 to 85 lbs over a career.

BROUGHT TO YOUR STATION BY:



SCIENCE CAN

CONDITIONS, ACTIONS, & NEEDS



Big Picture: What Actually Works

FIRE STATION TALKS

- Most firefighters are overweight or obese — and the trend is worsening. Between 73% and 88% are overweight or obese, with obesity rising from 33.7% to 40.4% in just 5 years in one study. This is the baseline your nutrition habits are working against.
- Without intervention, gradual weight gain is the default. Control group firefighters gained weight over just 6 months — consistent with an average gain of 1 to 2 lbs per year. Over a 25-year career that adds up to 30 to 85 lbs.
- Occupationally tailored programming works better than generic wellness. TF20 used firefighter-specific language, shift-based scheduling, and job-relevant movements. That specificity matters — generic programs have consistently failed to produce lasting change in the fire service.
- Nutrition and fitness are inseparable from cardiac and injury risk. Obese firefighters carry higher CVD risk factors, fail cardiac return-to-work standards at higher rates, and are more likely to be injured and miss duty time.

Key Actions: To Take Control of Your Nutrition

TAKEAWAYS

- Know your trajectory — and act on it. If you're not actively working against weight gain, you're likely gaining. The control group gained weight in just 6 months. The typical firefighter career pattern is slow, steady accumulation that compounds over decades.
- Focus on the basics: hydration, fruits and vegetables, less processed food. Those were the three nutrition pillars of the program that produced results — not a complicated plan, just consistent fundamentals applied in a fire service context.
- Use programming built for your job. Generic programs don't account for shift work, station culture, or firefighting demands. TF20 built workouts around push, pull, lift, drag, and carry — movements your job actually requires.

Data Sources:

DAY, R.S., JAHNKE, S.A., HADDOCK, C.K., KAIPUST, C.M., JITNARIN, N., & POSTON, W.S.C. (2019). OCCUPATIONALLY TAILORED, WEB-BASED NUTRITION AND PHYSICAL ACTIVITY PROGRAM FOR FIREFIGHTERS. JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE, 61(10), 841-848.

TAKING THE LEAD

What Chiefs Can Do: About Nutrition & Weight

- Address station food culture directly. Large portions, high-calorie purchases after calls, and celebratory eating were identified as drivers of weight gain. Chiefs set the tone for what's normal at the station table.
- Provide access to occupationally tailored programs. Generic wellness hasn't moved the needle. Programs using firefighter-specific language, scheduling, and movements produce measurably better engagement and outcomes than off-the-shelf options.
- Track body composition trends over time. Annual data capturing weight & body composition — not just fitness pass/fail — gives agencies the early warning to intervene before obesity-related costs accumulate.
- Connect obesity directly to line-of-duty death risk. Obese firefighters are more likely to die of cardiovascular causes on duty and less likely to meet post-cardiac event return-to-work standards.
- Build nutrition support into your wellness infrastructure. Providing a web-based resource costs far less than the disability claims, missed duty, and cardiovascular events that unchecked obesity produces.
- Normalize healthy eating at the station without shaming. Cultural change starts better choices — not mandates. Small, consistent shifts in station cooking culture compound significantly over time.

Conclusion

73 TO 88% OF FIREFIGHTERS ARE OVERWEIGHT OR OBESE — AND WITHOUT ACTION, GRADUAL WEIGHT GAIN IS THE DEFAULT. THIS STUDY PROVED A FIREFIGHTER-SPECIFIC NUTRITION AND FITNESS PROGRAM REVERSES THAT TREND. THE TREATMENT GROUP LOST WEIGHT WHILE CONTROLS GAINED. HYDRATION, WHOLE FOODS, AND LESS PROCESSED FOOD APPLIED CONSISTENTLY IS WHERE THE CHANGE STARTS. KNOW YOUR TRAJECTORY AND ACT ON IT.

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