

1) PHYSICAL ACTIVITY

American College of Sports Medicine recommends frequent physical activity to develop and maintain:⁸

- Cardiorespiratory fitness
- Musculoskeletal fitness
- Neuromotor fitness

CARDIOVASCULAR EXERCISE⁸

- Moderate intensity cardiovascular (aerobic) exercise 5x/week, 30 minutes (moderate intensity = able to carry on a conversation while exercising), OR
- Vigorous intensity aerobic exercise 3X/week, 20 minutes.

RESISTANCE EXERCISE⁸

- Resistance exercise (weight training) can be performed using various methods, such as free weights, selectorized strength machines, cross-training, and resistance bands.
- Focus on major muscle group movements.
- 2-3X/week, 1-2 sets of 8-10 exercises.
- Strength focus: 8-12 reps/set of each exercise.
- Endurance focus: 15-25 reps/set of each exercise.
- Progressively increasing resistance exercise intensity (weight, load) is critical for making muscular strength and endurance gains over time.

FLEXIBILITY EXERCISE⁸

- Stretch > 2-3 days/week . Stretching options: static (active or passive), dynamic, ballistic, proprioceptive neuromuscular fasciculation (PNF).
- Stretch to point of feeling tightness or slight discomfort and hold static stretch for 10-30 sec.
- Repeat each stretching pattern 2-4 times.

REFERENCES

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Firefighters' Guide to Health and Wellness

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We developed the *Firefighters' Guide to Health and Wellness* to assist the Exercise Specialist in counseling study participants in the supervised exercise group on Nutrition, General Well-Being, and Physical Activity using standardized approaches.

The Guide provides material to deliver about: 1) how to exercise for optimal performance, 2) what to eat for energy, weight maintenance, fat loss, and muscle mass gains, and 3) other health goals.

The Guide aligns with the FEMA and IRB approved protocol to "provide ongoing consultation, reinforcing general principles of exercise, fitness, and healthy lifestyles."

2) NUTRITION

GENERAL GUIDANCE

EAT SMALL MEALS every 2-3 hours.¹

EAT COMPLETE, LEAN PROTEINS.¹ Fish, turkey, eggs, meat, dairy, or beans are great options.

INCLUDE VEGETABLES in every meal.¹

EAT A COMBINATION of healthy fats.¹

E.g. Coconut oil, nuts, olives, olive oil, fish oil, flax oil.

EAT CARBS WHEN THEY WILL BE USED.¹ Include carbs when your body will use them as fuel (e.g. prior to or immediately after a lift) and focus on lean proteins, veggies, fruit and healthy fat the rest of day.

PREP MEALS IN ADVANCE.¹ This will ensure that you do not reach for whatever is in front of you when you are hungry.

PRACTICE PORTION CONTROL!¹ Use a food scale or simply use your palm to measure your portions.

- Your **palm** determines your protein portions.
- Your **fist** determines your vegetable portions.
- Your **cupped hand** determines your carb portions
- Your **thumb** determines your fat portions.
- A "**palm-sized**" portion is the same diameter and thickness as your palm.
- A "**fist-sized**" portion is the same diameter and thickness as your fist.

MAKE SMARTER CHOICES and substitute to make meals lower calorie and higher in nutrient density. Example: Choose a healthy burger: whole wheat bun, 90% lean ground beef, avocado and baked sweet potato fries in place of the traditional cheeseburger and fries.

SERVING SIZES^a

FOR WOMEN:¹

- 1 palm of protein dense foods (fish, turkey, eggs, meat, dairy, or beans).
- 1 fist of vegetables.
- 1 cupped hand of carb dense foods (whole grains, whole grain starches, or fruits) with **most** meals.
- 1 entire thumb of fat dense foods with **most** meals.

FOR MEN:¹

- 2 palms of protein dense foods (fish, turkey, eggs, meat, dairy, or beans)
- 2 fists of vegetables.
- 2 cupped hands of carb dense foods (whole grains, whole grain starches, or fruits) with **most** meals
- 2 entire thumbs of fat dense foods with **most** meals

^a**Remember:** These are general guides.

- To add muscle/bodyweight, add a serving of carbohydrates or fats.
- To lose bodyweight, remove a serving of carbohydrates or fats.

3) GENERAL WELL BEING

MAINTAIN IDEAL BODY WEIGHT

A "good" bodyfat percentage for most adults (age 20-57 years) in general population is:

- Women: 19-27%²
- Men: 15-22%²

GET APPROPRIATE REST

- 7-9 hours of sleep per night is recommended.³

NUTRITION PLAN^b

- Eat breakfast daily.⁴
- Drink (8oz) water with most meals.⁴
- Minimize soda and diet soda consumption.⁴
- Eat ≥ 7 servings per day of vegetables and fruits.⁴
- Use healthy fats in place of butter, margarine, lard.⁴, CL & JM personal recommendations
- Replace white bread and pasta with whole grain, multi grain, brown rice, or whole wheat pasta.⁴
- Minimize fast food to ≤1 day per week.⁴
- Eat grilled, boiled or blackened ocean (salmon, tuna, cod, haddock) fish ≥ 2 times per week.⁴
- Minimize fried food to ≤1 time per week (French fries, fried chicken, chicken nuggets).⁴
- Minimize sweet dessert (cake, cookies, pie, ice cream, etc.) to 1 serving per week.⁴
- Eggs 2-4 servings per week.⁴
- Poultry 2-3 servings per week.⁴
- Legumes ≥ 3 servings per week.⁴
- Limit intake of commercial sweets and refined carbohydrates < 3 servings per week.⁴
- Limit intake of soda and sugary drinks < 1 per day.⁴
- Include lean, grass fed beef in several meals per week.^{5,6}
- For active lifestyles and those seeking to build, consume at least 2g protein per kg of body weight.⁷

Recommendations adapted from nutrition plan tested in firefighters,⁴ along with our personal recommendations.