

# KEEP IT STRONG

NVFC HEART-HEALTHY FIREFIGHTER **RESOURCE GUIDE**

SECOND EDITION

Every day, firefighters risk the  
protecting people and prop  
in communities, firefighters  
health needs protecting, too  
statistics are clear: firefight  
are at an extremely high risk  
heart attacks and heart-relat  
conditions such as coronary  
heart disease diabetes hig

# Working together to protect firefighters

These organizations serve on the Heart-Healthy Firefighter Work Group, and have worked with the National Volunteer Fire Council to develop and implement this program.

## **American Dietetic Association**

With nearly 70,000 members, the American Dietetic Association (ADA) is the nation's largest organization of food and nutrition professionals. Its mission is "leading the future of dietetics".® [www.eatright.org](http://www.eatright.org)

## **American Heart Association**

The American Heart Association(AHA) is a national voluntary health agency whose mission is to reduce disability and death from cardiovascular diseases and stroke. [www.heart.org](http://www.heart.org)

## **International Association of Fire Chiefs**

Established in 1873, the International Association of Fire Chiefs (IAFC) is a network of more than 12,000 chief fire and emergency officers. The mission of the IAFC is to provide leadership to career and volunteer chiefs, chief fire officers, and managers of emergency service organizations throughout the international community through vision, information, education, services, and representation to enhance their professionalism and capabilities. [www.iafc.org](http://www.iafc.org)

## **L&T Health and Fitness**

L&T Health and Fitness (L&T) is an award-winning, small business headquartered in Falls Church, Virginia. Founded in 1984 by Susan Liebenow and Susan Torok, L&T provides health promotion programs and fitness opportunities to clients nationwide. [www.ltwell.com](http://www.ltwell.com)

## **Medical Reserve Corps**

The mission of the Medical Reserve Corps (MRC) is to improve the health and safety of communities across the country by organizing and utilizing public health, medical, and other volunteers. [www.medicalreservecorps.gov](http://www.medicalreservecorps.gov)

## **National Fallen Firefighters Foundation**

The United States Congress created the National Fallen Firefighters Foundation (NFFF) to lead a nationwide effort to remember America's fallen firefighters. Since 1992, the NFFF has developed and expanded programs to honor our fallen fire heroes and assist their families and coworkers. [www.firehero.org](http://www.firehero.org)

## **National Fire Protection Association**

The mission of the nonprofit National Fire Protection Association (NFPA) is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.

[www.nfpa.org](http://www.nfpa.org)

## **National Heart, Lung and Blood Institute**

The National Heart, Lung and Blood Institute (NHLBI) provides leadership for a national program in diseases of the heart, blood vessels, lung, and blood; blood resources; and sleep disorders. [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

## **National Institute for Occupational Safety and Health**

The National Institute for Occupational Safety and Health (NIOSH) is the federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. NIOSH is part of the Centers for Disease Control and Prevention (CDC) in the Department of Health and Human Services. [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

## **National Volunteer Fire Council**

The National Volunteer Fire Council (NVFC) is a nonprofit membership association representing the interests of the volunteer fire, EMS, and rescue services. The NVFC provides a voice for the fire service community and is the information source for the emergency services.

[www.nvfc.org](http://www.nvfc.org)

## **United States Fire Administration**

As an entity of the Federal Emergency Management Agency, the mission of the United States Fire Administration (USFA) is to reduce life and economic losses due to fire and related emergencies, through leadership, advocacy, coordination, and support.

[www.usfa.dhs.gov](http://www.usfa.dhs.gov)

# TABLE OF CONTENTS

## Introduction

Why are so many firefighters suffering from heart attacks? What can be done to reverse this trend?

**2** Introduction

## Part 1: Assessing Your Risk

Explains Coronary Heart Disease and other health conditions that put firefighters at risk for heart attacks.

**6** Coronary Heart Disease **10** Diabetes **12** High Cholesterol **14** Hypertension (High Blood Pressure)

## Part 2: Reducing Your Risk

Learn more about how to get “heart smart” and take on one of the most important challenges of your career – reducing heart attack risk.

**18** Quitting Smoking **24** Physical Fitness  
**30** Good Nutrition

## Part 3: Getting the Help You Need

Discover additional tools and resources to help keep you fit and healthy.

**38** Fired Up For Fitness **39** Put It Out Campaign  
**40** Heart-Healthy Firefighter Program Resources  
**42** Glossary **45** Additional Resources

# INTRODUCTION

**Are you as tough as you think?** Not everyone can be a first responder. You need to be tough to stand up to the challenge, mentally and physically. But even the toughest firefighter and EMT can have a hidden weakness: heart disease. In fact, heart attacks are the number one cause of death among the nation's firefighters. If you or someone you love is a firefighter or emergency responder, read on to discover more about this dangerous trend—and what you can do to stop it.



## OUR NATION'S FIRST RESPONDERS AT RISK

Every day, firefighters and EMS personnel risk their lives protecting people and property in their communities. But these first responders need protecting, too. The statistics are clear: Firefighters are at an extremely high risk for heart attacks and other heart-related conditions. This booklet provides information on the causes of heart disease, as well as ways to prevent it by lowering your cholesterol level, becoming more active, and eating healthier. The National Volunteer Fire Council (NVFC) is proud to provide this information, education, and support to assist our nation's firefighters and EMS personnel in preparation for their selfless duties.

## HEART ATTACKS: THE HIDDEN THREAT

Did you know that nearly one-half of all firefighter deaths each year are attributed to heart attacks? According to a study by the U.S. Fire Administration, many of these firefighters had pre-existing conditions such as hypertension and arteriosclerosis that contributed to the heart attack. Such conditions, if left untreated, often leave individuals at an increased risk for suffering from a heart attack. Coupling that with the strenuous tasks of emergency response makes a lethal combination.

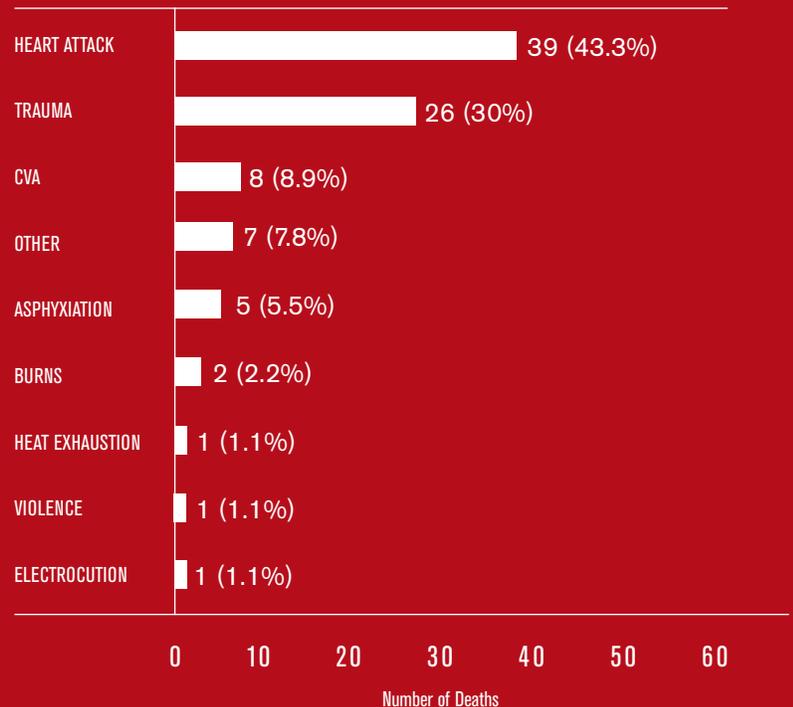
Firefighting and emergency response places increased demands on firefighters' and EMT's bodies, which, in many cases, are not physically prepared for the strain. Contributing to this risk is the fact that many departments do not require their firefighters to stay physically active and maintain a healthy physical condition. While on duty, firefighters often have large amounts of time in between calls. Also, there are over 800,000 volunteer firefighters in the U.S.—and most have other jobs that are far less physically demanding than firefighting.



### GETTING "HEART SMART"

Through the Heart-Healthy Firefighter Program, the NVFC is working in partnership with our sponsors and partners to dramatically reduce the number of firefighter and EMS deaths from heart attack. You can learn more about becoming "heart smart" online at [www.healthy-firefighter.org](http://www.healthy-firefighter.org).

## Fatalities by Nature of Fatal Injury (2009)



\*U.S. Fire Administration, Firefighter Fatalities in the United States in 2009. Released July 2010.



# PART 1

## ASSESSING YOUR RISK

### UNDERSTANDING WHY HEART ATTACKS HAPPEN

Heart attack. It sounds scary...and it is.

A heart attack occurs when the blood supply to part of the heart muscle—the myocardium—is severely reduced or stopped. The medical term for heart attack is myocardial infarction. In the following pages, you will learn more about the physical conditions that are most often associated with heart attacks.

# CORONARY HEART DISEASE

## WHAT YOU SHOULD KNOW ABOUT **CORONARY HEART DISEASE**

**Coronary heart disease (CHD) is the most common form of heart disease** as well as the leading cause of death for all Americans—not just firefighters. More than 16 million Americans have CHD, a disease that often results in a heart attack. About 1.2 million Americans suffer heart attacks each year—and many of them are fatal. Fortunately, CHD can be prevented or controlled by taking steps to protect your heart health.

### **THE FACTS ABOUT CHD**

The heart is a muscle that works 24 hours a day. To perform well, it needs a constant supply of oxygen and nutrients, which is delivered by the blood through the coronary arteries.

That blood flow can be reduced by a process called **atherosclerosis**, in which plaques or fatty substances build up inside the walls of blood vessels. The plaques attract blood components, which stick to the inside surface of the vessel walls. Atherosclerosis can affect many blood vessels and causes them to narrow and harden. It develops over many years and can begin early in life. In CHD, atherosclerosis affects the coronary arteries. The fatty buildup, or plaque, can break open and lead to the formation of a blood clot. The clot covers the site of the rupture, also reducing blood flow. Eventually, the clot becomes firm. The process of fatty buildup, plaque rupture, and clot formation recurs, progressively narrowing the arteries. Over time, less blood reaches the heart muscle.

If the blood supply is nearly, completely, and/or abruptly cut off, a **heart attack** results and cells in the heart muscle that do not receive enough oxygen begin to die. The more time that passes without treatment to restore blood flow, the greater the damage to the heart. Because heart cells cannot be replaced, the cell loss is permanent.

### **SYMPTOMS OF CHD**

Symptoms of CHD can vary. One person may feel no discomfort, while another might experience chest pain or shortness of breath. Sometimes the very first symptom of CHD is a heart attack or cardiac arrest (a sudden, abrupt loss of heart function).

Chest pain also can vary in its occurrence. Chest pain occurs when the blood flow to the heart is critically reduced and does not match the demands placed on the heart. Called **angina**, the pain may be mild and intermittent—or more pronounced and steady. It can be severe enough to make normal everyday activities difficult. The same inadequate blood supply also may cause no



Coronary heart disease is the leading cause of death for all Americans—not just firefighters.

symptoms, a condition called **silent ischemia**. Particularly in men, angina is often felt behind the breastbone and may radiate up the left arm or neck. It may also be felt in the shoulders, elbows, jaw, or back. Angina is usually brought on by exercise. It may last 2 to 5 minutes, does not change with breathing, and is eased by rest.

Women may experience a less typical form of angina that feels like shortness of breath or indigestion, and can linger or occur in a different location than behind the breastbone. It may not be brought on by exertion or be eased by rest. In fact, it may occur only at rest. A person who has any symptoms should talk with his or her doctor. Without treatment, symptoms may return, worsen, become unstable, or progress to a heart attack.





## Heart Attack Warning Signs

- ▶ Discomfort or pain in the center of the chest
- ▶ Discomfort in the arm(s), back, neck, jaw, or stomach
- ▶ Shortness of breath
- ▶ Breaking out in a cold sweat, nausea, or light-headedness

### **SURVIVING A HEART ATTACK**

The key to surviving a heart attack is fast action. It is important to learn the heart attack warning signs and, if you or someone else experiences any of them, call 9-1-1 quickly!

Fast treatment is critical because treatments to restore blood flow to the heart are most effective if given within an hour of the start of symptoms. The sooner

treatment is begun, the greater your chance for survival and a full recovery.

The most common warning sign—chest discomfort—is the same for men and women. However, women are somewhat more likely than men to experience other symptoms, particularly shortness of breath, nausea and vomiting, and back or jaw pain.

Information courtesy of the National Heart, Lung and Blood Institute

# Coronary Heart Disease Risk Factors

Certain behaviors and conditions (“risk factors”) increase the risk a firefighter will develop CHD. They can also increase the chance that CHD, if already present, will worsen. The good news is that there are six key risk factors that you can change. See Part Two of this guide for information and tips on how to decrease your risk of CHD through lifestyle changes.

## **FACTORS THAT CAN BE MODIFIED**

- ▶ Cigarette smoking
- ▶ High blood pressure
- ▶ High blood cholesterol
- ▶ Overweight/obesity
- ▶ Physical inactivity
- ▶ Diabetes

## **FACTORS THAT CANNOT BE MODIFIED**

- ▶ Age—45 and older for men;  
55 and older for women
- ▶ Family history of early CHD
- ▶ Father or brother diagnosed  
before age 55
- ▶ Mother or sister diagnosed  
before age 65

# DIABETES

## WHAT YOU SHOULD KNOW ABOUT **DIABETES**

**Diabetes affects 25.8 million Americans.** It damages blood vessels, including the coronary arteries of the heart. Up to 75 percent of people with diabetes develop heart and blood vessel diseases. Diabetes also can lead to stroke, kidney failure, and other problems.

### **THE FACTS ABOUT DIABETES**

Diabetes occurs when the body is not able to use sugar as it should for growth and energy. The body gets sugar when it changes food into glucose (a form of sugar). A hormone made in the pancreas called insulin is needed for the glucose to be taken up and used by the body. In diabetes, the body cannot make use of the glucose in the blood because either the pancreas cannot make enough insulin, or the insulin that is available is not effective.

### **SYMPTOMS OF DIABETES**

Symptoms of diabetes include: increased thirst and urination (including at night), weight loss, blurred vision, hunger, fatigue, frequent infections, and slow healing of wounds or sores.

### **HOW TO CONTROL DIABETES**

Physical activity, along with a healthy diet and weight control, are the pillars of good health for people with diabetes. Regular physical activity is a key to diabetes control. This is true for people with diabetes, as

well as for those at risk for developing it. Poor diet and sedentary lifestyles can lead to Type 2 diabetes, which accounts for 90-95% of all diagnosed cases in adults. In 2010, 25.8 million Americans had diabetes (18.8 diagnosed and 7 million undiagnosed), and 79 million adults had pre-diabetes. Each year, 1.9 million new cases are diagnosed in adults, and over 200,000 people actually die from diabetes. The cost to the economy is staggering: \$174 billion in direct and indirect medical costs. But the good news is that people can sharply lower their chances of developing the disease.

You do not need to be an athlete to be physically active. Thirty minutes of moderate physical activity every day (2 hours 30 minutes per week) brings great health benefits. This is especially true for people with diabetes. Examples of moderate physical activity include:

- Brisk walking
- Yard work or gardening (e.g., raking leaves, shoveling dirt, pulling weeds)



## Fitness Counts!

Physical activity benefits people at risk for diabetes because it:

- ▶ **Lowers blood sugar levels**
- ▶ **Helps the body use its food supply better**
- ▶ **May enable insulin to work better**
- ▶ **Improves the flow of blood through the small vessels and increases the heart's pumping power**
- ▶ **Burns calories that would otherwise be stored as extra pounds**

- ▶ Active house work (e.g., mopping or vacuuming)
- ▶ Sports (e.g., bicycling, golf, volleyball)

A good way to begin an active lifestyle is to build opportunities for physical activity into your daily life. Physical activity is beneficial, even if practiced in smaller segments of time, such as walking for 10 minutes three times a day and using the stairs regularly instead of elevators. Or you may park your car several blocks away from your office and walk—or get off the bus a stop or two early and walk the rest of the way. You can plan errands that allow you to walk. Or how about making physical activity a

“family affair” by taking walks together on a regular basis?

Additional health benefits are gained by engaging in greater amounts of more vigorous physical activity, such as running or working out at a gym for cardiovascular endurance, muscle strength, and flexibility.

Information courtesy of selected agencies and offices of the Department of Health & Human Services; the President's Council on Fitness, Sports, and Nutrition; and the National Heart, Lung and Blood Institute

# HIGH CHOLESTEROL

## WHAT YOU SHOULD KNOW ABOUT **HIGH CHOLESTEROL**

**Cholesterol is a fat-like substance** found inside every cell in your body and is a necessary substance that your body requires to function properly. Cholesterol does such things as make hormones, Vitamin D, and substances that help you to digest foods.

### **THE FACTS ABOUT HIGH BLOOD CHOLESTEROL**

If you've ever tried to mix oil and water, you know that they do not mix. Cholesterol and blood are the same as oil and water. Therefore, cholesterol is carried through the blood by something called lipoproteins, made up of fat (inside) and proteins (outside).

There are two types of lipoproteins that carry cholesterol through your body. The first type is **Low-Density Lipoprotein (LDL)**, also known as “bad” cholesterol. This type of cholesterol, in large quantities, leads to a buildup of cholesterol in your arteries. Over time, this leads to heart disease. The other type is **High-Density Lipoprotein (HDL)**, or “good” cholesterol, which carries cholesterol from various parts of your body to your liver. The liver then removes the cholesterol from your body. High HDL (good) cholesterol reduces your risk of getting heart disease, whereas high LDL (bad) cholesterol increases your risk of getting heart disease.

When there is an abundance of LDL (bad) cholesterol in your blood, it begins to build-up in the walls of your arteries. This build-up, called plaque, causes a narrowing of the artery walls. This is called atherosclerosis. When

this happens, the amount of blood that can reach your heart goes down. The flow of blood to your heart can completely stop if the plaque builds up too much. When enough blood can't reach your heart, you can have chest pain. This chest pain, called angina, is a common sign of coronary artery disease. Having high LDL (bad) cholesterol in your blood also puts you at risk of forming blood clots that can cut off blood supply to your heart. The result of this is a heart attack.

### **WHERE DOES CHOLESTEROL COME FROM?**

Did you know there are two sources of cholesterol: food and family? It is important to understand that there are two sources of cholesterol. In addition to the cholesterol that comes from foods you eat, cholesterol is also produced naturally in your body based on your family health history.

### **UNDERSTANDING YOUR CHOLESTEROL NUMBERS**

To start with, you should make sure that you get your cholesterol tested about once every five years. You can get tested at your doctor's office, and there are many places that offer free screening for cholesterol. Wherever you get

tested, share the results with your doctor. When you are tested, you will most likely get a “lipoprotein profile.” This test will give you several pieces of information about your cholesterol, including:

- ▶ Total cholesterol
- ▶ LDL (bad) cholesterol
- ▶ HDL (good) cholesterol
- ▶ Triglycerides (another form of fat in your blood)

If a lipoprotein profile is not available, you should find out your total cholesterol, LDL (bad) cholesterol, and HDL (good) cholesterol numbers. These will give you a good idea about your cholesterol levels.

Work with your doctor to identify a treatment plan that is right for you. Your doctor may suggest making some lifestyle changes such as modifying your diet, reducing your weight, and increasing your level of physical activity.

### LOWERING YOUR CHOLESTEROL

**Diet**—Saturated fats and cholesterol in the food you eat make your blood cholesterol level go up. Start checking the nutrition labels to find out how much fat and cholesterol something has before you begin eating. Turn to the nutrition section of this resource guide to find out how to lower your LDL (bad) cholesterol with the foods you eat every day.

**Weight**—Excessive weight increases your cholesterol, thereby increasing your risk of heart disease. By losing weight, you bring down your LDL (bad) cholesterol while you raise your HDL (good) cholesterol level. The fitness section of this booklet provides examples of easy exercises you can do to get into better shape and lower your cholesterol levels.

**Physical Activity**—Firefighters are often sedentary because of a need to be on call at the firehouse regardless of the number of incidents needing response. Doing physical

## Cholesterol Risk Levels

TOTAL CHOLESTEROL LEVEL	RISK CATEGORY
▶ Less than 200 mg/dL	Desirable
▶ 200-239 mg/dL	Borderline High
▶ 240 mg/dL and above	High

LDL CHOLESTEROL LEVEL	RISK CATEGORY
▶ Less than 100 mg/dL	Optimal
▶ 100-129 mg/dL	Near Optimal
▶ 130-159 mg/dL	Borderline High
▶ 160-189 mg/dL	High
▶ 190 mg/dL and above	Very High

Your HDL cholesterol is also very important. Any HDL level below 40 mg/dL is considered too low, and a risk factor for heart disease. Any level above 60 mg/dL is a good score that will help lower your risk of heart disease.

activity for 30 minutes every day can help lower your LDL (bad) and raise your HDL (good) cholesterol as well as help you lose weight. Not bad, huh? Talk to your doctor about an exercise plan that is right for you. You should aim to get at least 30 minutes of physical activity on most, if not all, days.

If lifestyle changes aren't enough to lower your LDL (bad) cholesterol, your physician may discuss other treatment options. Because everyone is different, it is important to work with your doctor to identify the treatment plan that is right for you.

Information courtesy of the National Heart, Lung and Blood Institute

# HYPERTENSION (HIGH BLOOD PRESSURE)

## WHAT YOU SHOULD KNOW ABOUT HYPERTENSION

**Blood pressure is the force of blood against the walls of the arteries.** It is normal for blood pressure to rise and fall throughout the day. But when it stays elevated over time, it is called high blood pressure.

The medical term for high blood pressure is **hypertension**. High blood pressure is dangerous because it makes the heart work too hard and contributes to atherosclerosis (hardening of the arteries). It increases the risk of heart disease and stroke and can also result in other conditions, such as congestive heart failure, kidney disease, and blindness.

### THE FACTS ABOUT HIGH BLOOD PRESSURE

Blood pressure is measured in millimeters of mercury (mmHg) and is recorded as two numbers: **systolic pressure** (as the heart beats) “over” **diastolic pressure** (as the heart relaxes between beats). Both numbers in a blood pressure test are important, but for people age 50 and older, systolic pressure gives the most accurate diagnosis of high blood pressure. A blood pressure level of 140/90 mmHg or higher is considered high.

Blood pressure between 120/80 and 139/89 is considered pre-hypertension. This means that you are likely to develop high blood pressure in the future if lifestyle changes are not made. High blood pressure is a condition most people will face at some point in their lives. People who do not have high blood pressure by the age of 55 still have a 90 percent chance of developing hypertension during their lifetime.

### HOW TO PREVENT HIGH BLOOD PRESSURE

There are numerous lifestyle changes that can be made to prevent or lower high blood pressure. Taking the following steps will help:

#### Maintain a Healthy Weight

- ▶ Check with your doctor to see if you need to lose weight.
- ▶ If you do, lose weight slowly, using a healthy eating plan and engaging in physical activity.

#### Be Physically Active

- ▶ Engage in physical activity for 30 minutes every day.
- ▶ Combine everyday chores with moderate-level activities, such as walking.



Hypertension or high blood pressure increases the risk of heart disease and stroke.

#### Follow a Healthy Eating Plan

- ▶ Set up a healthy eating plan with foods low in saturated fat, total fat, and cholesterol ... and high in fruits, vegetables, and low-fat dairy foods.
- ▶ Write down everything that you eat and drink in a food diary. Pay attention to areas that are successful or need improvement.
- ▶ If you are trying to lose weight, choose an eating plan that is lower in calories.

#### Reduce Sodium In Your Diet

- ▶ Choose foods that are lower in salt and other forms of sodium.
- ▶ Use spices, garlic, and onions to add flavor to your meals without added sodium.

#### Drink Alcohol Only In Moderation

- ▶ In addition to raising blood pressure, too much alcohol adds calories to your diet.
- ▶ If you drink alcoholic beverages, have only a moderate amount (one drink per day for women, two drinks per day for men).

#### Use Prescribed Drugs as Directed

- ▶ If you need medications to help lower your blood pressure, you should also follow the lifestyle changes mentioned above.
- ▶ Use notes and other reminders to help you remember to take your medications on schedule.

Information courtesy of the National Heart, Lung and Blood Institute



# PART 2

## REDUCING YOUR RISK

### HEART ATTACK PREVENTION STRATEGIES FOR FIREFIGHTERS

The best news about heart attacks? There are steps you can take to significantly reduce your risk. It may not be easy—but as an emergency responder, you have plenty of experience in taking on tough challenges. In the following pages, you will learn more about prevention strategies.

Quitting Smoking | Physical Fitness | Good Nutrition

# QUITTING SMOKING

**Cigarette smoking remains the leading preventable cause of death in the United States, accounting for approximately one out of every five deaths (443,000 people) each year.** More deaths are caused by tobacco use than by human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murder combined.



- ▶ Cigarette smoking is more common among men (23.5%) than women (17.9%).
- ▶ Cigarette smoking is more common among adults who live below the poverty level (31.1%) than other Americans (19.4%).
- ▶ Cigarette smoking estimates are higher for adults with a General Education Development diploma (49.1%) or 9 to 11 years of education (33.6%), compared to adults with an undergraduate college degree (11.1%) or a graduate college degree (5.6%).

## MORE FACTS ABOUT SMOKING

- ▶ Cigarette smoking kills an estimated 269,600 men and 173,900 women in the United States each year.
- ▶ Of the estimated 443,000 deaths attributed to smoking every year, 49,400 are from exposure to second-hand smoke.
- ▶ On average, adults who smoke cigarettes die 13 to 14 years earlier than nonsmokers.
- ▶ Based on current cigarette smoking patterns, an estimated 25 million Americans alive today will die prematurely from smoking-related illnesses—including 5 million people younger than age 18.

## ALARMING STATISTICS

National cigarette smoking statistics illustrate the magnitude of the smoking challenge:

- ▶ An estimated 20.6% of all adult Americans (46.6 million people) smoke cigarettes.
- ▶ Cigarette smoking estimates by age are 21.8% for those 18–24 years, 24% for those 25–44 years, 21.9% for those 45–64 years, and only 9.5% for those 65 years or older.

## SMOKING AND DISEASE

Smoking increases the mortality rates for a variety of specific diseases. Lung cancer (125,500); heart disease (101,000); and the chronic lung diseases of emphysema, bronchitis, and chronic airways obstruction (92,900) are responsible for the largest number of smoking-related deaths.

Today, the risk of dying from lung cancer is more than 22 times higher among men who smoke cigarettes—and about 12 times higher among women who smoke—compared with people who have never smoked. Moreover, since 1950, lung cancer deaths among women have increased by more than 600%, and since 1987, lung cancer has become the leading cause of cancer-related deaths in women.

Pipe smoking and cigar smoking are not good alternatives to cigarette smoking; they also increase the risk of dying from cancers of the lung, esophagus, larynx, and oral cavity. Using smokeless tobacco increases the risk of developing oral cancer.

Cigarette smoking kills an estimated 269,600 men and 173,900 women in the United States each year.



Within 20 minutes after you smoke that last cigarette, your body begins a series of changes that continue for years.



#### NICOTINE: A POWERFUL ADDICTION

If you've ever tried to quit smoking, you know what a challenge it can be. It is hard, because **nicotine** is a very addictive drug. (For some people, it can be as addictive as heroin or cocaine.) Quitting is so difficult, people often try two or three times before finally being able to quit. But it is well worth the effort, because it is one of the most important things you can ever do for yourself and your loved ones:

- You will live longer and live better.
- You will lower your chance of having a heart attack, stroke, or cancer.
- If you are pregnant, quitting smoking will improve your chances of having a healthy baby.
- The people you live with, especially your children, will be healthier.
- You will have extra money to spend on things that are really good for you.

#### SPECIAL CONDITIONS

While studies suggest that everyone can quit smoking, your own personal situation or condition may give you even more special reasons to quit:

- Pregnant women/new mothers—by quitting, you will protect your baby's health and your own.
- Hospitalized patients—by quitting, you reduce health problems and accelerate your healing.
- Heart attack patients—by quitting, you reduce your risk of a second heart attack.
- Lung, head, and neck cancer patients—by quitting, you reduce your chance of a second cancer developing.
- Parents—by quitting, you protect your children from illnesses caused by second-hand smoke, and set a good example.

### QUESTIONS FOR YOUR HEALTHCARE PROVIDER

- ▶ How can you help me to be successful at quitting?
- ▶ What medication do you think might be best for me, and how should I take it?
- ▶ What should I do if I need more help?
- ▶ What is withdrawal like? How can I get more information on withdrawal?

### QUESTIONS TO THINK ABOUT

Think about the following questions before you try to stop smoking. (You may want to talk about your answers with your healthcare provider.)

- ▶ Why do I want to quit?
- ▶ If I have tried to quit in the past, what helped and what didn't?
- ▶ What will be the most difficult situations for me after I quit? How do I plan to handle them?
- ▶ Who can help me through the tough times? My family? Friends? Healthcare provider?
- ▶ What pleasure do I get from smoking? In what ways can I still get pleasure if I quit?

## When you stop smoking

- ▶ **20 minutes after:** your heart rate drops.
- ▶ **12 hours after:** carbon monoxide level in your blood drops to normal.
- ▶ **2 weeks to 3 months after:** your heart attack risk begins to drop, and your lung function begins to improve.
- ▶ **1–9 months after:** your coughing and shortness of breath decrease.
- ▶ **1 year after:** your added risk of coronary heart disease is half that of a continuing smoker's risk.
- ▶ **5 years after:** your stroke risk is reduced to that of a nonsmoker's 5 to 15 years after quitting.
- ▶ **10 years after:** your lung cancer death rate is about half that of a smoker's. Your risk of cancers of the mouth, throat, esophagus, bladder, kidney, and pancreas decreases.
- ▶ **15 years after:** your risk of coronary heart disease is now the same as that of a nonsmoker's risk.

# Five Steps for Quitting Smoking

Studies show that these five steps will help you quit—and quit for good. You'll have the best chance of quitting if you use them together:

## 1. GET READY

- ▶ Set a quit date.
- ▶ Change your environment.
- ▶ Review your past attempts to quit.
- ▶ Once you quit, do not smoke a puff.

## 2. GET SUPPORT AND ENCOURAGEMENT

- ▶ Talk to your healthcare provider.
- ▶ Get individual, group, or telephone counseling support. The more support you have, the better your chances are of quitting.
- ▶ Ask family and friends to not smoke around you.

## 3. LEARN NEW SKILLS AND BEHAVIORS

- ▶ Drink plenty of water and other fluids.
- ▶ Distract yourself from urges to smoke.
- ▶ Do things that reduce your stress.
- ▶ Plan something fun to do every day.

## 4. GET MEDICATION AND USE IT CORRECTLY

Medications can help you stop smoking and lessen the urge to smoke. Everyone who is trying to quit may benefit from using a medication. However, if you are pregnant or trying to become pregnant, nursing, under age 18, currently smoking fewer than 10 cigarettes per day, or have a medical condition, be sure to talk to your doctor or other healthcare provider before taking medications.

The U.S. Food and Drug Administration (FDA) has approved seven medications to help you quit smoking:

- ▶ Bupropion—prescription only
- ▶ Nicotine gum—available over-the-counter
- ▶ Nicotine inhaler—prescription only
- ▶ Nicotine lozenges—available over-the-counter
- ▶ Nicotine nasal spray—prescription only
- ▶ Nicotine patch—available over-the-counter
- ▶ Varenicline Tartrate—prescription only

Ask your healthcare provider for advice, and carefully read the information on medication packages.

## 5. BE PREPARED FOR RELAPSE OR DIFFICULT SITUATIONS

Most relapses occur within the first three months after quitting. Don't be discouraged if you start smoking again—remember, most people try several times before they finally quit. Here are some difficult situations to watch for:

- ▶ Avoid drinking alcohol.
- ▶ Being around a smoking environment or other smokers can make you want to smoke.
- ▶ Many smokers will gain weight when they quit—usually less than 10 pounds. Eat a healthy diet and stay active. Some quit-smoking medications may help delay weight gain.
- ▶ Moodiness or depression—there are ways to improve your mood other than resuming smoking.
- ▶ If you're having problems with any of these situations, be sure to talk to your doctor or other healthcare provider.



# PHYSICAL FITNESS

**Lack of physical activity, combined with poor eating habits, contributes to many preventable deaths every year in the United States.** In fact, more than 40 percent of all deaths in the United States are caused by behavior patterns that could be modified. A sedentary lifestyle is a major risk factor across the spectrum of preventable diseases—diseases that lower the quality of life and kill Americans. The combination of poor diet and physical inactivity are rapidly approaching smoking as the leading cause of preventable death in the United States.

## IMPORTANT FACTS ABOUT EXERCISE

- ▶ Adults 18 and older need 30 minutes of physical activity five or more days per week to be healthy. Children and teens need 60 minutes of activity each day.
  - ▶ Significant health benefits can be obtained by including a moderate amount of physical activity (e.g., 30 minutes of brisk walking or raking leaves, 15 minutes of running, 45 minutes of playing volleyball). Additional health benefits can be gained through greater amounts of physical activity.
  - ▶ Thirty to 60 minutes of activity, broken into smaller segments of 10 or 15 minutes throughout the day, also provides significant health benefits.
  - ▶ Moderate daily physical activity can substantially reduce the risk of developing (or dying from) cardiovascular disease, Type 2 diabetes, as well as certain cancers such as colon cancer. Daily physical activity helps to lower blood pressure and cholesterol, prevent or retard osteoporosis, and reduce obesity, symptoms of anxiety and depression, and symptoms of arthritis.
  - ▶ About 4 in 10 of American adults report that they are not active at all, while 7 in 10 are not moderately active for the recommended 30 minutes a day, five or more days a week.
- ▶ Poor diet and inactivity can lead to unhealthy weight gain. Persons who are overweight or obese are at increased risk for many ailments, including high blood pressure, Type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems, and some types of cancer.
  - ▶ Obesity continues to climb among American adults. Over 72 million Americans are obese, while about 68% of adults are either obese or overweight (a body mass index greater than 25). That means roughly two out of three Americans are carrying an unhealthy amount of excess weight.
  - ▶ The cost of obesity in terms of direct and indirect medical costs is an astounding \$147 billion per year. This condition cuts across all ages, racial and ethnic groups, and both genders. A study in the Netherlands has found that excess weight cuts years off your life.

The major obstacles most individuals face when trying to increase physical activity are time, access to convenient facilities, and a safe environment in which to be active. School and workplace-based programs have proven to be successful in increasing physical activity levels.



No matter how much weight you need to lose, modest goals and a slow course will increase your chances of losing the weight.

### **STARTING A PHYSICAL ACTIVITY PROGRAM**

Increasing physical activity should be an important part of any emergency responder's weight management program. Most weight loss occurs because of decreased caloric intake, but sustained physical activity is very helpful in the prevention of weight regain. In addition, exercise has the benefit of reducing risks of cardiovascular disease and diabetes. It is best to start exercising slowly, gradually increasing the intensity. Trying too hard at first can lead to injury.

When you are ready to begin a physical activity program, the first thing to do is check with your health-care provider to decide how much and what kinds of physical activity you should do. For example, people with diabetes should have their blood sugar under control before beginning a physical activity program.

Exercise can be done all at one time, or intermittently over the day. Initial activities may be walking or swimming at a slow pace. You might start out by walking 30 minutes three days a week, and then build to 45 minutes of more intense walking at least five days a week. Following this regimen, you can burn 100 to 200 additional calories per day.

Also, try to increase everyday activities such as walking stairs instead of taking the elevator. Reducing sedentary time is an effective strategy to increase your activity by undertaking frequent, less strenuous activities. In time, you will likely be able to engage in more strenuous activities.

Quick weight loss methods don't provide lasting results. Methods that rely on diet aids like drinks, prepackaged foods, or diet pills don't work in the long run.



### **SELECTING A WEIGHT LOSS PROGRAM**

Some people lose weight on their own. Others like the support of a structured program. Emergency responders who are overweight and are successful at losing weight can reduce their risk factors for heart disease. If you decide to join any kind of weight control program, here are some factors to consider before joining:

#### **Does the program provide counseling to help you change your eating, activity, and personal habits?**

- The weight loss program should teach you how to permanently change the eating habits and lifestyle factors – such as lack of physical activity – that have contributed to weight gain.

#### **Is the staff made up of a variety of qualified counselors and health professionals such as nutritionists, registered dietitians, doctors, nurses, psychologists, and exercise physiologists?**

- You should be evaluated by a physician if you have any health problems, are currently taking any medicine or plan on taking any medicine, or plan to lose more than 15 to 20 pounds. If your weight control plan uses a very low-calorie diet (such as a special liquid formula that replaces all food for one to four months), an exam and follow-up visits by a doctor are also needed.

CONTINUED ON PAGE 29

## Examples of Moderate Amounts of Physical Activity

### COMMON CHORES

- ▶ Washing and waxing a car for 45-60 minutes
- ▶ Washing windows or floors for 45-60 minutes
- ▶ Gardening for 30-45 minutes
- ▶ Pushing a stroller 1-1/2 miles in 30 minutes
- ▶ Raking leaves for 30 minutes
- ▶ Stair-walking for 15 minutes
- ▶ Shoveling snow for 15 minutes

### SPORTING ACTIVITIES

- ▶ Walking 1-3/4 miles in 35 minutes
- ▶ Bicycling five miles in 30 minutes
- ▶ Jumping rope for 15 minutes
- ▶ Running 1-1/2 miles in 15 minutes
- ▶ Playing touch football for 45 minutes
- ▶ Swimming laps for 20 minutes
- ▶ Shooting baskets for 30 minutes

# Healthy resolutions for the whole year

We all make New Year's resolutions we don't keep. This year—whatever the season—don't aim for perfection. Instead, make getting fit and healthy part of your lifelong plan. Set simple, attainable goals you will feel comfortable sticking with.



## 1. TAKE SMALL STEPS.

Instead of promising to lose 20 pounds, resolve to go to the gym on Tuesdays and Thursdays, or eat oatmeal for breakfast. Accomplishing smaller goals will help you immediately feel a sense of success.

## 2. CHANGE FOR YOURSELF.

If you sincerely want to change, you are more likely to succeed than if you are simply trying to please others.

## 3. BE CREATIVE.

Exercise while you are accomplishing other goals. Take family hikes, join an exercise group, jog while your children ride their bikes.

## 4. BE REALISTIC.

Don't set yourself up for failure. Make a realistic plan of action.

## 5. ANTICIPATE ROADBLOCKS AND REWARD YOURSELF FOR SUCCESSSES.

If you get off track, get right back on. And celebrate your progress with delicious meals, small desserts, fun activities...whatever it takes to stay motivated and feel good about yourself.

Courtesy of the American Council on Exercise



Whether you lose weight on your own, or with a group, remember that the most important changes are longterm.

CONTINUED FROM PAGE 26

**Is training available on how to deal with times when you may feel stressed, and prone to slip back into old habits?**

- ▶ The program should provide long-term strategies to deal with weight problems you may have in the future. These strategies could include things like setting up a support system and establishing a physical activity routine.

**How much attention is paid to keeping the weight off? How long is this phase?**

- ▶ Choose a program that teaches skills and techniques to make permanent changes in eating habits and levels of physical activity to prevent weight gain.

**Are food choices flexible and suitable?**

- ▶ The program should consider your food likes and dislikes as well as your lifestyle when your weight loss goals are being planned.

#### ACTIVITY LEVELS

For the beginner, activity should be at a very light level, and could include an increase in standing activities, special chores such as room painting, pushing a wheelchair, doing yard work, ironing, cooking, or playing a musical instrument.

The next level is light activity such as slow walking (24 minutes per mile), garage work, carpentry, housecleaning, child care, golf, sailing, and recreational table tennis.

The next level is moderate activity, such as walking a 15-minute mile, weeding or hoeing a garden, cycling, skiing, tennis, and dancing.

High activity could include walking a 10-minute mile, walking with load uphill, tree felling, heavy manual digging, climbing, or playing basketball or soccer.

Information courtesy of selected agencies and offices of the U.S. Department of Health and Human Services, including Public Health Service, National Institutes of Health, Centers for Disease Control and Prevention, National Institute of Diabetes and Digestive and Kidney Diseases, and the National Heart, Lung and Blood Institute

# GOOD NUTRITION

**Eating is one of life's greatest pleasures! There are many foods and many ways to build a healthy diet, so there is a lot of room for choice.**

Achieving and sustaining a healthy weight, consuming more healthy foods, and reducing intake of sodium, saturated and trans fats, added sugars, and refined grains are key to promoting good health and reducing the risk for heart disease, stroke, diabetes, and certain cancers. The U.S. Department of Agriculture's Dietary Guidelines for Americans serves as a guide to help you reach your dietary goals and stay on track to good health.



## **FOOD AND CHOLESTEROL**

Improper nutrition and high cholesterol put everyone at risk for heart disease. The good news is that there are some important and simple steps you can take toward keeping cholesterol in check and improving your overall health.

Start with food. Your diet is an important factor in controlling cholesterol. A healthy, low-fat eating plan, combined with regular physical activity, is key. The

Dietary Guidelines recommend consuming less than 300 mg per day of dietary cholesterol, which is found in foods of animal origins such as meat, seafood, poultry, eggs, and dietary products.

As you have read, there are two types of cholesterol, HDL (or “good”) cholesterol and LDL (“bad”) cholesterol. To boost your HDL cholesterol, you should stay active and trim away excess pounds if you are not already at a healthy weight. To improve your LDL cholesterol, your food choices are critical. A heart-healthy eating pattern—a diet that is high in soluble fiber with moderate amounts of fat and cholesterol—can make a difference and help reduce LDL levels.

To lower LDL, try eating more foods high in soluble fiber, like oatmeal, beans, peas, barley, apples, oranges, and carrots. For example, studies have shown that oatmeal helps to lower LDL cholesterol, without lowering HDL at the same time.



## The ABCs of Nutrition

THE PATH TO GOOD NUTRITION AND HEALTH IS REALLY AS SIMPLE AS A-B-C:

- ▶ Aim for fitness
- ▶ Build a healthy base
- ▶ Choose foods sensibly

### BALANCE CALORIES WITH PHYSICAL FITNESS

- ▶ Aim for a healthy weight. Prevent or reduce overweight and obesity through improved eating combined with physical activity.
- ▶ Get moving. Make physical activity part of your daily routine. Reduce time spent in sedentary behaviors.
- ▶ Control total calorie intake to manage body weight.

### BUILD A HEALTHY BASE

- ▶ Make healthy food choices that you can enjoy. Build your eating patterns on a variety of grains, fruits, and vegetables.
- ▶ Make at least half of your grains whole grains, such as whole wheat, brown rice, oats, and whole grain corn.

- ▶ Make half of your plates fruits and vegetables. Vary your vegetables, especially dark green leafy vegetables, red and orange vegetables, and beans and peas.
- ▶ Switch to fat-free or low-fat (1%) milk, yogurt, cheese, or fortified soy beverages.
- ▶ Choose lean meats and poultry. Eat cooked beans and seafood in place of some meat and poultry.
- ▶ Enjoy fats and sweets occasionally, in moderation.

### CHOOSE FOODS SENSIBLY

- ▶ Select an eating pattern that meets nutrient needs over time at an appropriate calorie level.
- ▶ Limit solid fats, such as butter and hard margarines. Use vegetable oils as a substitute.

By following the guidelines developed by the U.S. Department of Agriculture, you and your fellow firefighters can promote good health and reduce the risk for heart disease, stroke, diabetes, and certain cancers.



- ▶ To keep your sodium intake moderate, choose and prepare foods with less salt or salty flavorings.
- ▶ Use nutrition facts labels to help choose foods that are lower in total fat (especially saturated fat), as well as lower in cholesterol and sodium.
- ▶ Limit beverages and foods that are high in added sugars. Drink water in place of sugary drinks.
- ▶ Don't let soft drinks or sweets crowd out other foods you need, such as milk products or other calcium sources.

#### **CHOOSE SENSIBLE PORTIONS**

- ▶ Check product labels to see how much food is considered to be a serving. (Beware! Many items sold as single portions actually provide two servings or more—such as a 20-ounce soft drink, a 12-ounce steak, a 3-ounce bag of chips, or a large bagel.)
- ▶ Enjoy your food, but eat less. Avoid oversized portions.
- ▶ Be especially careful to limit portion size of high-calorie foods, such as cookies, cakes, and other sweets, and fried foods.
- ▶ If you are eating out, order smaller portions, share an entrée with a friend, or take part of the food home.

## What is Your Limit on Fat?

TOTAL CALORIES PER DAY	SATURATED FAT IN GRAMS*	TOTAL FAT IN GRAMS*
1,600	18 or less	53
2,000**	20 or less	65
2,200	24 or less	73
2,500**	25 or less	80
2,800	31 or less	93

\* THESE LIMITS ARE LESS THAN 10% OF CALORIES FOR SATURATED FAT, AND 30% OF CALORIES FOR TOTAL FAT.

\*\* PERCENT DAILY VALUE ON NUTRITION FACTS LABELS, BASED ON A 2,000 CALORIE DIET. VALUES FOR 2,000 AND 2,500 CALORIES ARE ROUNDED TO THE NEAREST 5 GRAMS TO BE CONSISTENT WITH THE NUTRITION FACTS LABELS.

A healthy low-fat eating plan, combined with regular physical activity, is key.



## Beef and Bean Chili

Courtesy of the National Heart, Lung and Blood Institute

**2 lb lean beef stew meat, trimmed of fat,  
cut in 1-inch cubes**

**3 Tbsp vegetable oil**

**2 cups water**

**2 tsp garlic, minced**

**1 large onion, finely chopped**

**1 Tbsp flour**

**2 tsp chili powder**

**1 green pepper, chopped**

**2 lb (or 3 cups) tomatoes, chopped**

**1 Tbsp oregano**

**1 tsp cumin**

**2 cups canned kidney beans\***

\*To cut back on sodium, try using "no salt added" canned kidney beans or beans prepared at home without salt.

1. Brown meat in large skillet with half of vegetable oil. Add water. Simmer covered for 1 hour until meat is tender.

2. Heat remaining vegetable oil in second skillet. Add garlic and onion, and cook over low heat until onion is softened. Add flour and cook for 2 minutes.

3. Add garlic-onion-flour mixture to cooked meat. Then add remaining ingredients to meat mixture. Simmer for 1/2 hour.

**Yield: 9 servings | Serving size: 8 oz**

EACH SERVING PROVIDES: CALORIES: 284 | TOTAL FAT: 10 G | SATURATED FAT: 2 G | CHOLESTEROL: 76 MG | SODIUM: 162 MG  
TOTAL FIBER: 4 G | PROTEIN: 33 G | CARBOHYDRATES: 16 G | POTASSIUM: 769 MG

# Eat Well To Stay Motivated and Energized

If you have trouble feeling motivated to exercise, or you feel too tired to stick to a fitness routine, your diet may be the problem. Here are two great ways to help fuel your workouts:

## 1. EAT COMPLEX CARBOHYDRATES

Do you eat big meals every day? Do you snack on potato chips, doughnuts, or other “quick fixes” to curb your hunger?

Try changing your habits. By eating several small meals a day of complex carbohydrates like whole grains, beans, or vegetables, you may find you have more energy. Complex carbohydrates can help keep your blood sugar stable. Plus, a diet of complex carbohydrates can improve your mood by regulating the amount of serotonin (an important chemical) in your brain.

## 2. CUT DOWN ON CAFFEINE

A cup of coffee can give you an energy boost. But a breakfast of caffeine can leave you feeling tired, lightheaded, and thirsty in the middle of your workout. Caffeine affects your blood sugar and can also cause dehydration. Try a glass of juice before you hit the treadmill.



# PART 3

## GETTING THE HELP YOU NEED

### **HEART-HEALTHY TOOLS & RESOURCES**

Your good health is important—and not just to you. Your family, friends, and fellow firefighters can help give you the support you need. The NVFC has teamed up with our sponsors and partners to give you plenty of tools and resources. So start “getting tough with your heart” today!

# FIRED UP FOR FITNESS

**The NVFC offers an online tool for firefighters and EMS personnel who want to improve their fitness and health.**

FIRED UP FOR FITNESS is an interactive challenge where you can design and implement your very own fitness program. The program enables you to measure your personal progress by recording your physical activity.

As part of the program, participants are challenged to meet certain fitness goals over the course of a year. As each goal is achieved, you will receive a motivational prize to recognize your efforts. You can also compare your progress with fellow firefighters and EMTs all across the United States. To get started, go to [www.healthy-firefighter.org](http://www.healthy-firefighter.org) – it's easy and fun!

## FIRED UP FOR FITNESS Suggested Activities

**FIRED UP FOR FITNESS can record all sorts of exercise activities. Just about any physical activity you do can be added to your log and help you meet your fitness goals!**

Aerobics	Frisbee Golf	Mountain biking	Snowshoeing
Archery	Gardening	Mountain climbing	Soccer
Badminton	Golf	Racquetball	Softball
Baseball	Hiking	Rock climbing	Squash
Basketball	Hockey	Roller skating	Surfing
Bicycling	Home repair	Rowing	Swimming
Bowling	Horseback riding	Rugby	Tennis
Boxing/kickboxing	Household tasks	Running	Track & field
Canoeing	Jogging	Sailing	Volleyball
Cardio machines	Jumping rope	Scuba diving	Walking
Circuit training	Karate	Shuffleboard	Water aerobics
Crossfit	Kayaking	Skateboarding	Water skiing
Dancing	Lacrosse	Skating	Weight training
Diving	Lawn mowing	Skiing	Whitewater rafting
Fencing	Lifting/hauling	Snorkeling	Wrestling
Field hockey	Martial arts	Snowboarding	Yoga
Football	Motocross	Snowmobiling	

# PUT IT OUT

**Firefighters and emergency personnel run into extremely difficult situations while everyone else is running out.** Quitting smoking is no different. You CAN face the difficult process of quitting smoking!

The NVFC, with support from Pfizer, created the Put It Out campaign to help first responders quit smoking and stay quit. Families, departments, and state associations can also use these resources to inform and help first responders move to a smoke-free life and support them as they maintain their healthier lifestyle. Take the first step today by going to [www.healthy-firefighter.org/putitout](http://www.healthy-firefighter.org/putitout).

## Put It Out Resources

**The PUT IT OUT web site has tools and resources to assist first responders in quitting smoking, family members in supporting first responders who are quitting, departments in establishing a no-smoking policy, and state fire associations in encouraging their members to adopt a smoke-free lifestyle. Tools include:**

- ▶ A ‘quit calendar’
- ▶ Steps for how to quit
- ▶ Statistics and facts about smoking
- ▶ Sample documents such as press releases and no-smoking policies
- ▶ Outreach letters
- ▶ Motivational tools
- ▶ And more!

### **Additional Smoking Cessation Resources**

American Cancer Society–Stay Away from Tobacco  
[www.cancer.org/Healthy/StayAwayfromTobacco](http://www.cancer.org/Healthy/StayAwayfromTobacco)

Centers for Disease Control and Prevention–Quit Smoking  
[www.cdc.gov/tobacco/quit\\_smoking/index.htm](http://www.cdc.gov/tobacco/quit_smoking/index.htm)

Office of the Surgeon General–Smoking Cessation  
[www.surgeongeneral.gov/tobacco](http://www.surgeongeneral.gov/tobacco)

National Cancer Institute–Smokefree.gov  
[www.smokefree.gov](http://www.smokefree.gov)

Smoking Cessation  
[www.smoking-cessation.org](http://www.smoking-cessation.org)

# Heart-Healthy Firefighter Program RESOURCES

**The NVFC's Heart-Healthy Firefighter Program provides tools and resources to keep first responders heart-strong and ready for the next call.** With heart attack the leading cause of on-duty firefighter fatalities, and many more first responders affected by illnesses such as heart disease, diabetes, hypertension, high cholesterol, and cancer, getting and staying healthy needs to be a critical focus of the fire and emergency services.

By reading this resource guide, you have taken the first steps to getting healthy. Visit [www.healthy-firefighter.org](http://www.healthy-firefighter.org) to find additional information and tools to help keep you healthy for life and help motivate your entire department to focus on their health and wellness.

## **Resources available through the Heart-Healthy Firefighter Program include:**

- Information on heart health, fitness, nutrition, and lifestyle choices
- Resources for starting and implementing a health and wellness program in your fire/EMS department
- Securing Sponsors for Department Health and Wellness Programs, a toolkit for finding funding to support a wellness program in your department
- Health and Wellness Advocate Workshop to train department personnel to start a department health program and motivate their fellow responders to focus on health and fitness
- Behavioral Health Workshop addressing critical issues such as stress, time management, and alcohol abuse
- Webinars to educate first responders about important health and wellness topics
- Trade show booth with free health screenings and resources
- Fired Up For Fitness Challenge, an interactive tool with incentive rewards to motivate first responders to get active
- Heart-Healthy Firefighter E-news, a monthly electronic newsletter with news, information, and tips to help keep you on track with your healthy lifestyle
- National Firefighter Health Week, held each August to encourage departments and personnel to focus on health and wellness topics especially critical to the fire and emergency services
- Health and wellness challenges to help motivate you and your department
- Heart-Healthy Firefighter Cookbook
- Success stories from first responders from across the country who have succeeded in getting heart healthy

The NVFC also has additional health and wellness resources as part of the B.E.S.T. Practices for Firefighter Health and Safety. These B.E.S.T. Practices – divided into the categories of Behavior, Equipment, Standards and Codes, and Training – can be adopted by departments to promote and encourage firefighter health and safety at all times. Learn more and access resources for the B.E.S.T. Practices at [www.nvfc.org](http://www.nvfc.org).



# GLOSSARY



**Angina** – Angina is a specific type of chest discomfort caused by inadequate blood flow through the blood vessels (coronary vessels) of the heart muscle (myocardium).

**Atherosclerosis** – Atherosclerosis is a condition in which fatty material collects along the walls of arteries. This fatty material thickens, hardens, and may eventually block the arteries.

**Cholesterol** – Cholesterol is a soft, waxy substance found in all parts of the body. This includes the nervous system, skin, muscle, liver, intestines, and heart. It is made by the body and also obtained from animal products in the diet.

**Coronary Heart Disease** – Coronary heart disease (CHD) is a narrowing of the small blood vessels that supply blood and oxygen to the heart. CHD is also called coronary artery disease.

**Diabetes** – Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches, and other food into energy needed for daily life.

**Diastolic Pressure** – Blood pressure readings are measured in millimeters of mercury (mmHg) and usually given as two numbers. For example, 110 over 70 (written as 110/70). The bottom number is the diastolic blood pressure reading. It represents the pressure in the arteries when the heart is at rest.

**Heart Attack** – A heart attack (myocardial infarction) occurs when an area of heart muscle dies or is permanently damaged because of an inadequate supply of oxygen to that area.

**High Density Lipoprotein (HDL)** – HDL is one of two types of lipoproteins that carry cholesterol through your body. HDL is also known as “good” cholesterol.

**Hypertension** – Hypertension means high blood pressure.

**Low Density Lipoprotein (LDL)** – LDL is one of two types of lipoproteins that carry cholesterol through your body. LDL is also known as “bad” cholesterol.



Fighting fires is a dangerous battle, but with proper nutrition, a healthy lifestyle, and a consistent workout program, you can increase your chances of winning.

**Nicotine** – Nicotine is a substance found in cigarettes and considered an addictive drug. It causes changes in the brain that make people want to use it more and more. In addition, addictive drugs cause unpleasant withdrawal symptoms.

**Overweight/Obesity** – Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems.

**Silent Ischemia** – Silent ischemia is a condition where a person suffers inadequate blood flow through the blood vessels of the heart muscle, as in angina, but experiences no symptoms.

**Systolic Pressure** – Blood pressure readings are measured in millimeters of mercury (mmHg) and usually given as two numbers. For example, 110 over 70 (written as 110/70). The top number is the systolic blood pressure reading. It represents the maximum pressure exerted when the heart contracts.



# Additional Resources

## **AMERICAN COLLEGE OF CARDIOLOGY—HEART HOUSE**

2400 N Street, NW  
Washington DC, 20037  
Toll-Free: (800) 253-4636, ext. 5603  
(202) 375-6000  
[www.acc.org](http://www.acc.org)

## **AMERICAN COUNCIL ON EXERCISE**

4851 Paramount Drive  
San Diego, CA 92123  
Toll-Free: (888) 825-3636  
(858) 576-6500  
[www.acefitness.org](http://www.acefitness.org)

## **AMERICAN DIETETIC ASSOCIATION**

120 South Riverside Plaza  
Suite 2000  
Chicago, IL 60606-6995  
Toll-Free: (800) 877-1600  
(312) 899-0040  
[www.eatright.org](http://www.eatright.org)

## **AMERICAN HEART ASSOCIATION**

7272 Greenville Avenue  
Dallas, TX 75231  
Toll-Free: (800) AHA-USA-1  
(800) 242-8721  
[www.heart.org](http://www.heart.org)

## **AMERICAN RED CROSS**

2025 E Street, NW  
Washington, DC 20006  
Toll-Free: (800) 733-2767  
202-303-4498  
[www.redcross.org](http://www.redcross.org)

## **CENTERS FOR DISEASE CONTROL & PREVENTION—DIVISION FOR HEART DISEASE AND STROKE PREVENTION**

4770 Buford Highway, NE  
Mail Stop K-47  
Atlanta, GA 30341-3717  
Toll-Free: (800) CDC-INFO  
TTY: (800) 232-6348  
[www.cdc.gov/cvh/](http://www.cdc.gov/cvh/)

## **DEPARTMENT OF HEALTH & HUMAN SERVICES**

200 Independence Avenue, SW  
Washington, DC 20201  
Toll-Free: (877) 696-6775  
[www.hhs.gov](http://www.hhs.gov)

## **NATIONAL CENTER FOR PUBLIC SAFETY FITNESS—FIREFIT**

PE Building, Room 202  
George Mason University  
4400 University Drive, MSN-1F6  
Fairfax, Virginia 22030  
(703) 993-2071  
[www.firefit.org](http://www.firefit.org)

## **NATIONAL HEART, LUNG & BLOOD INSTITUTE**

Building 31, Room 5A52  
31 Center Drive MSC 2486  
Bethesda, MD 20892  
(301) 592-8573  
TTY: (240) 629-3255  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

## **NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH**

Toll-Free: (800) CDC-INFO (232-4636)  
(202) 887-5700  
[www.cdc.gov/niosh](http://www.cdc.gov/niosh)

## **NATIONAL VOLUNTEER FIRE COUNCIL**

7852 Walker Drive, Suite 450  
Greenbelt, MD 20770  
Toll-Free: (888) ASK-NVFC (275-6832)  
(202) 887-5700  
[www.nvfc.org](http://www.nvfc.org)

## **PRESIDENT'S COUNCIL ON FITNESS, SPORTS & NUTRITION**

1101 Wootton Parkway, Suite 560  
Rockville, MD 20852  
(240) 276-9567  
[www.fitness.gov](http://www.fitness.gov)  
[www.presidentschallenge.org](http://www.presidentschallenge.org)

## **UNITED STATES DEPARTMENT OF AGRICULTURE—CENTER FOR NUTRITION POLICY AND PROMOTION**

3101 Park Center Drive, 10th Floor  
Alexandria, VA 22302-1594  
(703) 305-7600  
[www.cnpp.usda.gov](http://www.cnpp.usda.gov)

## **UNITED STATES FIRE ADMINISTRATION**

16825 South Seton Avenue  
Emmitsburg, MD 21727  
(301) 447-1000  
[www.usfa.dhs.gov](http://www.usfa.dhs.gov)

## **YMCA**

101 North Wacker Drive  
Chicago, IL 60606  
Toll-Free: (800) 872-9622  
[www.ymca.net](http://www.ymca.net)



*Supporting Those Who Serve*



**CONTACT US:** 1.888.ASK.NVFC (275-6832) | [www.healthy-firefighter.org](http://www.healthy-firefighter.org)

THE CONTENT OF THIS BOOKLET IS FOR INFORMATION PURPOSES ONLY. IT IS NOT A SUBSTITUTE FOR MEDICAL ADVICE FROM YOUR PHYSICIAN. YOU SHOULD SEEK PROMPT MEDICAL CARE FOR ANY SPECIFIC HEALTH ISSUES; ONLY YOUR PHYSICIAN SHOULD DIAGNOSE A MEDICAL CONDITION AND PRESCRIBE TREATMENT. YOU MAY ALSO WISH TO CONSULT WITH YOUR PHYSICIAN BEFORE STARTING A NEW DIET OR FITNESS REGIMEN.

©2011 NATIONAL VOLUNTEER FIRE COUNCIL