

Firefighter

Note: This is just a sampling of items to think about. Your best course of action is to research this topic as it relates to the department of your choice as well as to research this topic as it relates to the fire service in general as this topic and material changes often.

Nature of the Work

Every year, fires and other emergencies take thousands of lives and destroy property worth billions of dollars. *Fire fighters* help protect the public against these dangers by responding to fires and a variety of other emergencies. Although they put out fires, fire fighters more frequently respond to other emergencies. They are often the first emergency personnel at the scene of a traffic accident or medical emergency and may be called upon to treat injuries or perform other vital functions.

During duty hours, fire fighters must be prepared to respond immediately to a fire or other emergency. Fighting fires is complex and dangerous and requires emergency scene, fire fighters perform specific they connect hose lines to hydrants and hoses. Some carry hoses, climb ladders, and careful procedures—to put out fires. At times, through doors, walls, and debris, sometimes



organization and teamwork. At every duties assigned by a superior officer. At fires, operate a pump to send water to high-pressure enter burning buildings—using systematic and they may need to use tools to make their way with the aid of information about a building's

floor plan. Some find and rescue occupants who are unable to leave the building safely without assistance. They also provide emergency medical attention, ventilate smoke-filled areas and attempt to salvage the contents of buildings. Fire fighters' duties may change several times while the company is in action. Sometimes they remain at the site of a disaster for days at a time, rescuing trapped survivors, and assisting with medical treatment.

Fire fighters work in a variety of settings, including metropolitan areas, rural areas, airports, chemical plants and other industrial sites. They also have assumed a range of responsibilities, including providing emergency medical services. In fact, most calls to which fire fighters respond involve medical emergencies. In addition, some fire fighters work in hazardous materials units that are specially trained for the control, prevention, and cleanup of hazardous materials, such as oil spills or accidents involving the transport of chemicals.

Workers specializing in forest fires utilize methods and equipment different from those of other fire fighters. When fires break out, crews of fire fighters are brought in to suppress the blaze with heavy equipment and water hoses. Fighting forest fires, like fighting urban fires, is rigorous work. One of the most effective means of fighting a forest fire is creating fire lines—cutting down trees and digging out grass and all other combustible vegetation in the path of

the fire in order to deprive it of fuel. Elite fire fighters called *smoke jumpers* parachute from airplanes to reach otherwise inaccessible areas. This tactic, however, can be extremely hazardous.

When they aren't responding to fires and other emergencies, fire fighters clean and maintain equipment, learn additional skills related to their jobs, conduct practice drills, and participate in physical fitness activities. They also prepare written reports on fire incidents and review fire science literature to stay informed about technological developments and changing administrative practices and policies. **"For females as well as males getting and staying in shape is a must."**



Work environment. Fire fighters spend much of their time at fire stations, which are usually similar to dormitories. When an alarm sounds, fire fighters respond, regardless of the weather or hour. Fire fighting involves a high risk of death or injury. Common causes include floors caving in, walls toppling, traffic accidents, and exposure to flame and smoke. Fire fighters also may come into contact with poisonous, flammable, or explosive gases and chemicals and radioactive materials, all of which may have immediate or long-term effects on their health. For these reasons, they must wear protective gear that can be very heavy and hot.



Work hours of fire fighters are longer and more varied than the hours of most other workers. Many fire fighters work about 50 hours a week, and sometimes they may work longer. In some agencies, fire fighters are on duty for 24 hours, then off for 48 hours, and receive an extra day off at intervals. In others, they work a day shift of 10 hours for 3 or 4 days, work a night shift of 14 hours for 3 or 4 nights, have 3 or 4 days off, and then repeat the cycle. In addition, fire fighters often work extra hours at fires and other emergencies and are regularly assigned to work on holidays. Fire lieutenants and fire captains frequently work the same hours as the fire fighters they supervise.

Fire fighters help protect the public by responding to fires and a variety of other emergencies.

Training, Other Qualifications, and Advancement

Applicants for firefighting jobs usually are required to have at least a high school diploma, but candidates with some postsecondary education are increasingly being preferred. Most municipal jobs require passing written and physical tests. All fire fighters receive extensive training after being hired.

Education and training. Most fire fighters have a high school diploma; however, the completion of community college courses or, in some cases, an associate's degree, in fire science may improve an applicant's chances for a job.

A number of colleges and universities offer courses leading to 2-year or 4-year degrees in fire engineering or fire science. In recent years, an increasing proportion of new fire fighters have had some education after high school.

As a rule, entry-level workers in large fire departments are trained for several weeks at the department's training center or academy. Through classroom instruction and practical training, the recruits study fire fighting techniques, fire prevention, hazardous materials control, local building codes, and emergency medical procedures, including first aid and cardiopulmonary resuscitation (CPR). They also learn how to use axes, chain saws, fire extinguishers, ladders, and other fire fighting and rescue equipment. After successfully completing training, the recruits are assigned to a fire company, where they undergo a period of probation.

Many fire departments have accredited apprenticeship programs lasting up to 4 years, including programs in fighting forest fires. These programs combine formal instruction with on-the-job training under the supervision of experienced fire fighters.

Almost all departments require fire fighters to be certified as emergency medical technicians. Although most fire departments require the lowest level of certification, Emergency Medical Technician-Basic (EMT-Basic), larger departments in major metropolitan areas increasingly are requiring paramedic certification. Some departments include this training in the fire academy, whereas others prefer that recruits earn EMT certification on their own, but will give them up to 1 year to do it.



In addition to participating in training programs conducted by local fire departments, some fire fighters attend training sessions sponsored by the U.S. National Fire Academy. These training sessions cover topics such as executive development, antiarson techniques, disaster preparedness, hazardous materials control, and public fire safety and education. Some States also have mandatory or voluntary fire fighter training and certification programs. Many fire departments offer fire fighters incentives, such as tuition reimbursement or higher pay, for completing advanced training.

Other qualifications. Applicants for municipal fire fighting jobs usually must pass a written exam; tests of strength, physical stamina, coordination, and agility; and a medical examination that includes a drug screening. Workers may be monitored on a random basis for drug use after accepting employment. Examinations are generally open to people who are at least 18 years of age and have a high school education or its equivalent. Those who receive the highest scores in all phases of testing have the best chances of being hired.

Among the personal qualities fire fighters need are mental alertness, self-discipline, courage, mechanical aptitude, endurance, strength, and a sense of public service. Initiative and good judgment also are extremely important, because fire fighters make quick decisions in emergencies. Members of a crew live and work closely together under

conditions of stress and danger for extended periods, so they must be dependable and able to get along well with others. Leadership qualities are necessary for officers, who must establish and maintain discipline and efficiency, as well as direct the activities of the fire fighters in their companies.

Advancement. Most experienced fire fighters continue studying to improve their job performance and prepare for promotion examinations. To progress to higher level positions, they acquire expertise in advanced fire fighting equipment and techniques, building construction, emergency medical technology, writing, public speaking, management and budgeting procedures, and public relations.

Opportunities for promotion depend upon the results of written examinations, as well as job performance, interviews, and seniority. Hands-on tests that simulate real-world job situations also are used by some fire departments.

Usually, fire fighters are first promoted to engineer, then lieutenant, captain, battalion chief, assistant chief, deputy chief, and, finally, chief. For promotion to positions higher than battalion chief, many fire departments now require a bachelor's degree, preferably in fire science, public administration, or a related field. An associate's degree is required for executive fire officer certification from the National Fire Academy.

Employment

In 2008, total paid employment in fire fighting occupations was about 365,600. Fire fighters held about 310,400 jobs, and first-line supervisors/managers of fire fighting and prevention workers held about 55,200. These employment figures include only paid career fire fighters—they do not cover volunteer fire fighters, who perform the same duties and may constitute the majority of fire fighters in a residential area. According to the U.S. Fire Administration, about 70 percent of fire companies were staffed entirely by volunteer fire fighters in 2007.

About 91 percent of fire fighting workers were employed by local governments. Some local and regional fire departments are being consolidated into countywide establishments to reduce administrative staffs, cut costs, and establish consistent training standards and work procedures. Some large cities have thousands of career fire fighters, while many small towns have only a few. Most of the fire fighters not employed by local governments worked in fire departments on Federal and State installations, including airports. Private fire fighting companies employ a small number of fire fighters.

Job Outlook



Although employment is expected to grow faster than for all jobs, candidates for these positions are expected to face keen competition because these positions are highly attractive and sought after.

Employment change. Employment of fire fighters is expected to grow by 19 percent over the 2008–18 decade, which is faster than the average for all occupations. Most job growth will stem from volunteer fire fighting positions being converted to paid positions. In recent years, it has become more difficult for volunteer fire departments to recruit and retain volunteers, perhaps because of the considerable amount of training and time commitment required. Furthermore, a trend toward more people living in and around cities has increased the demand for fire fighters. When areas develop and become more densely populated, emergencies and fires affect more buildings and more people and, therefore, require more fire fighters.

Job prospects. Prospective fire fighters are expected to face keen competition for available job openings. Many people are attracted to fire fighting because (1) it is challenging and provides the opportunity to perform an essential public service, (2) a high school education is usually sufficient for entry, and (3) a pension is usually guaranteed after 25 years of service. Consequently, the number of qualified applicants in most areas far exceeds the number of job openings, even though the written examination and physical requirements eliminate many applicants. This situation is expected to



persist in coming years. Applicants with the best chances are those who are physically fit and score the highest on physical-conditioning and mechanical aptitude exams. Those who have completed some fire fighter education at a community college and have EMT or paramedic certification will have an additional advantage.

Projections Data

Projections data from the National Employment Matrix					
Occupational Title	SOC Code	Employment, 2008	Projected Employment, 2018	Change, 2008-18	
				Number	Percent
Fire fighting occupations	—	365,600	427,600	62,100	17
First-line supervisors/managers of fire fighting and prevention workers	33-1021	55,200	59,700	4,500	8
Fire fighters	33-2011	310,400	367,900	57,500	19

NOTE: Data in this table are rounded. Remember data changes often.

Earnings

Median annual wages of fire fighters were \$44,260 in May 2008. The middle 50 percent earned between \$31,180 and \$58,440. The lowest 10 percent earned less than \$22,440, and the highest 10 percent earned more than \$72,210.

Median annual wages were \$44,800 in local government, \$45,610 in the Federal Government, \$25,300 in other support services, and \$37,870 in State governments.

Median annual wages of first-line supervisors/managers of fire fighting and prevention workers were \$67,440 in May 2008. The middle 50 percent earned between \$53,820 and \$86,330. The lowest 10 percent earned less than \$40,850, and the highest 10 percent earned more than \$108,930. First-line supervisors/managers of fire fighting and prevention workers employed in local government earned a median of about \$69,000 a year.

According to the International City-County Management Association, average salaries in 2008 for sworn full-time positions were as follows:

Position	Minimum annual base salary	Maximum annual base salary
Fire chief	\$78,672	\$104,780
Deputy chief	69,166	88,571
Battalion chief	66,851	81,710
Assistant fire chief	65,691	83,748
Fire captain	60,605	72,716
Fire lieutenant	50,464	60,772
Engineer	48,307	62,265

Fire fighters who average more than a certain number of work hours per week are required to be paid overtime. The threshold is determined by the department. Fire fighters often work extra shifts to maintain minimum staffing levels and during special emergencies.



the individual is disabled in the line of duty.

In 2008, 66 percent of all fire fighters were union members or covered by a union contract. Fire fighters receive benefits that usually include medical and liability insurance, vacation and sick leave, and some paid holidays. Almost all fire departments provide protective clothing (helmets, boots, and coats) and breathing apparatus, and many also provide dress uniforms. Fire fighters generally are covered by pension plans, often offering retirement at half pay after 25 years of service or if

Nature of the Work – EMT / Paramedic

People's lives often depend on the quick reaction and competent care of *emergency medical technicians (EMTs)* and *paramedics*. Incidents as varied as automobile accidents, heart attacks, slips and falls, childbirth, and gunshot wounds require immediate medical attention. EMTs and paramedics provide this vital service as they care for and transport the sick or injured to a medical facility.

In an emergency, EMTs and paramedics are typically dispatched by a 911 operator to the scene, where they often work with police and fire fighters. Once they arrive, EMTs and paramedics assess the nature of the patient's condition, while trying to determine whether the patient has any pre-existing medical conditions. Following protocols and guidelines, they provide emergency care and transport the patient to a medical facility. EMTs and paramedics operate in emergency medical services systems where a physician provides medical direction and oversight.



EMTs and paramedics use special equipment, such as backboards, to immobilize patients before placing them on stretchers and securing them in the ambulance for transport to a medical facility. These workers generally work in teams. During the transport of a patient, one EMT or paramedic drives, while the other monitors the patient's vital signs and gives additional care, as needed. Some paramedics work as part of a helicopter's flight crew to quickly transport critically ill or injured patients to hospital trauma centers.

At the medical facility, EMTs and paramedics help transfer patients to the emergency department, report their observations and actions to emergency department staff, and may provide additional emergency treatment. After each run, EMTs and paramedics document the trip, replace used supplies and check equipment. If a transported patient has a contagious disease, EMTs and paramedics decontaminate the interior of the ambulance and report cases to the proper authorities.

EMTs and paramedics also provide transportation for patients from one medical facility to another, particularly if they work for private ambulance services. Patients often need to be transferred to a hospital that specializes in treating their injury or illness or to facility that provides long-term care, like nursing homes.

Beyond these general duties, the specific responsibilities of EMTs and paramedics depend on their level of qualification and training. The National Registry of Emergency Medical Technicians (NREMT) certifies emergency medical service providers at five levels: First Responder; EMT-Basic; EMT-Intermediate (which has two levels called

1985 and 1999) and Paramedic. Some States, however, have their own certification programs and use distinct names and titles.

The *EMT-Basic* represents the first response of the emergency medical system. An EMT trained at this level is prepared to care for patients at the scene of an accident and while transporting patients by ambulance to the hospital under the direction of more highly trained medical personnel. The EMT-Basic has the emergency skills to assess a patient's condition and manage respiratory, cardiac, and trauma emergencies.

The *EMT-Intermediate* has more advanced training. However, the specific tasks that those certified at this level are allowed to perform varies greatly from State to State.

Paramedics provide more extensive pre-hospital care than do EMTs. In addition to carrying out the procedures of the other levels, paramedics administer medications orally and intravenously, interpret electrocardiograms (EKGs), perform endotracheal intubations, and use monitors and other complex equipment. However, like the EMT-Intermediate level, what paramedics are permitted to do varies by State.



Work environment. EMTs and paramedics work both indoors and out, in all types of weather. They are required to do considerable kneeling, bending, and heavy lifting. These workers are at a higher risk for contracting illnesses or experiencing injuries on the job than workers in other occupations. They risk noise-induced hearing loss from sirens and back injuries from lifting patients. In addition, EMTs and paramedics may be exposed to communicable diseases, such as hepatitis-B and AIDS, as well as to violence from mentally unstable or combative patients. The work is not only physically strenuous but can be stressful, sometimes involving life-or-death situations and suffering patients. Nonetheless, many people find the work exciting and challenging and enjoy the opportunity to help others. These workers experienced a larger than average number of work-related injuries or illnesses

Many EMTs and paramedics are required to work more than 40 hours a week. Because emergency services function 24 hours a day, EMTs and paramedics may have irregular working hours.

Lives often depend on the quick reaction and competent care of emergency medical technicians and paramedics.

Training, Other Qualifications, and Advancement

Generally, a high school diploma is required to enter a training program to become an EMT or paramedic. Workers must complete a formal training and certification process.

Education and training. A high school diploma is usually required to enter a formal emergency medical technician training program. Training is offered at progressive levels: EMT-Basic, EMT-Intermediate, and Paramedic.

At the EMT-Basic level, coursework emphasizes emergency skills, such as managing respiratory, trauma, and cardiac emergencies, and patient assessment. Formal courses are often combined with time in an emergency department or ambulance. The program provides instruction and practice in dealing with bleeding, fractures, airway obstruction, cardiac arrest, and emergency childbirth. Students learn how to use and maintain common emergency equipment, such as backboards, suction devices, splints, oxygen delivery systems, and stretchers. Graduates of approved EMT-Basic training programs must pass a written and practical examination administered by the State licensing agency or the NREMT.

At the EMT-Intermediate level, training requirements vary by State. The nationally defined levels, EMT-Intermediate 1985 and EMT-Intermediate 1999, typically require 30 to 350 hours of training based on scope of practice. Students learn advanced skills such the use of advanced airway devices, intravenous fluids, and some medications.



The most advanced level of training for this occupation is Paramedic. At this level, the caregiver receives training in anatomy and physiology as well as advanced medical skills. Most commonly, the training is conducted in community colleges and technical schools and may result in an associate's degree. These programs may take up to one to two years. Such education prepares the graduate to take the NREMT examination to become certified as a Paramedic. Extensive related coursework and clinical and field experience is required. Refresher courses and continuing education are available for EMTs and paramedics at all levels.

Licensure. All 50 States require EMTs and Paramedics to be licensed, but the levels and titles vary from State to State. In most States and the District of Columbia certification by the NREMT is required at some or all levels. Some States administer their own certification examination or provide the option of taking either the NREMT or State examination. In most States, licensure renewal is required every two to three years and generally, EMTs and Paramedics must take refresher training courses or complete continuing education requirements. Many States restrict licensure based on an individual's criminal history.

Other qualifications. EMTs and paramedics should be emotionally stable, have good dexterity, agility, and physical coordination, and be able to lift and carry heavy loads. They also need good eyesight (corrective lenses may be used) with accurate color vision. Many employers require a criminal background check.

Advancement. Paramedics can become supervisors, operations managers, administrative directors, or executive directors of emergency services. Some EMTs and paramedics become instructors, dispatchers, or physician assistants; others move into sales or marketing of emergency medical equipment. A number of people become EMTs and paramedics to test their interest in healthcare before training as registered nurses, physicians, or other health workers.

Employment

EMTs and paramedics held about 210,700 jobs in 2008. Most career EMTs and paramedics work in metropolitan areas. Volunteer EMTs and paramedics are more common in small cities, towns, and rural areas. These individuals volunteer for fire departments, emergency medical services, or hospitals and may respond to only a few calls per month.



Paid EMTs and paramedics were employed in a number of industries. About 45 percent worked as employees of ambulance services. About 29 percent worked in local government. Another 20 percent worked in hospitals.

Job Outlook

Employment for EMTs and paramedics is expected to grow faster than for all occupations through 2018. Job prospects should be good, particularly in cities and private ambulance services. **Employment change.** Employment of emergency medical technicians and paramedics is expected to grow 9 percent between 2008 and 2018, which is about as fast as the average for all occupations. Growth in this occupation is due in large part to increasing call volume due to aging population. As a large segment of the population—aging members of the baby boom generation—becomes more likely to have medical emergencies, demand will increase for EMTs and paramedics. In addition, the time that EMTs and paramedics must spend with each patient is increasing as emergency departments across the country are experiencing overcrowding. As a result, when an ambulance arrives, it takes longer to transfer the patient from the care of the EMTs and paramedics to the staff of the emergency department. In addition, some emergency departments divert ambulances to other hospitals when they are too busy to take on new patients. As a result, ambulances may not be able to go to the nearest hospital, which increases the amount of time spent in transit. Both these factors result in EMTs and paramedics spending more time with each patient, which means more workers are needed to meet demand.



In addition, hospitals are increasingly specializing in treating a particular illness or injury. This results in more patients needing to be transferred to the hospital best able to treat them. Most patients must be transferred by ambulance, so their condition can be monitored en route. Therefore, more demand for transfers between hospitals increases the demand for the services of EMTs and paramedics.

There also still will be volunteer EMTs and and smaller metropolitan

Job prospects. Job favorable. Many job growth and from the need leave the occupation potential for advancement, and benefits in private-time paid EMTs and to replace unpaid medical service agencies to recruit and retain unpaid amount of training and the large time commitment these positions require. As a result, more paid EMTs and paramedics are needed.



demand for part-time, paramedics in rural areas areas.

prospects should be openings will arise from to replace workers who because of the limited as well as the modest pay sector jobs. In addition, full-paramedics will be needed volunteers. Emergency find it increasingly difficult volunteers because of the

Competition will be greater for jobs in local government, including fire, police, and independent third-service rescue squad departments that tend to have better salaries and benefits. EMTs and paramedics who have advanced education and certifications should enjoy the most favorable job prospects, as clients and patients demand higher levels of care before arriving at the hospital.

Text and Data – Bureau of Labor Statistics



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