

NFPA®

1584

Standard on the
Rehabilitation Process for
Members During Emergency
Operations and Training Exercises

2022



NFPA® 1584

Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises

2022 Edition



NFPA, 1 Batterymarch Park, Quincy, MA 02269-9101
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NFPA® 1584

Standard on the

Rehabilitation Process for Members During Emergency Operations and Training Exercises

2022 Edition

This edition of NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*, was prepared by the Technical Committee on Fire Service Occupational Safety. It was issued by the Standards Council on March 18, 2021, with an effective date of April 8, 2021, and supersedes all previous editions.

This edition of NFPA 1584 was approved as an American National Standard on April 8, 2021.

Origin and Development of NFPA 1584

The first edition of NFPA 1584, *Recommended Practice on the Rehabilitation of Members Operating at Incident Scene Operations and Training Exercises*, was issued in January 2003 to support the requirements in NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, for a rehabilitation program for fire department members operating at emergency incidents. An organized approach for fire department members' rehabilitation at incident scene operations was an integral component of both an occupational safety and health program and incident scene management.

For the 2008 edition, the committee felt that rehabilitation was important enough to the health and safety of firefighters that it should be addressed in a standard rather than in a recommended practice. Accordingly, that edition was completely revised from the previous edition and retitled *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*.

The committee reviewed and updated the text so the standard reflected current science and knowledge on rehabilitation of fire service members. Requirements for medical monitoring during rehabilitation were added, with a lengthy discussion in the annex that recognized that vital signs alone cannot be used to determine if a firefighter entering or in rehabilitation should receive further medical treatment.

Terminology was updated to be compatible with the National Incident Management System (NIMS). Annex material was added to show a sample standard operating procedure for a rehabilitation process and provide information on the classification, signs, symptoms, and treatment of heat stress and cold stress. Emphasis was placed on firefighters, maintaining proper nutrition, hydration, and a healthy lifestyle prior to emergency operations or training exercises.

For the 2015 edition, the committee updated the document to emphasize the importance and need for rehabilitation not just during emergency incidents and training exercises, but for post-rehabilitation hydration as well. This included differentiating sports drinks from energy drinks and how such drinks can affect or impede the rehabilitation process. Environmental effects on the rehabilitation process were also addressed.

The committee also included requirements so that members of the incident command system could have a greater responsibility in the effectiveness of the rehabilitation process. A focus was placed on individual members to know their limitations and to report them during rehabilitation.

Carbon monoxide monitoring was also included among the vital signs taken during rehabilitation.

The 2022 edition includes several significant changes. It includes new and expanded coverage of prehabilitation and rehabilitation at events. New chapters on preliminary exposure reduction and post-incident recovery are added, as well as a new reserved chapter on process implementation that will be developed in future editions. New and revised requirements address contamination control measures.

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Committee Scope: This Committee shall have primary responsibility for documents on occupational safety and incident command in the working environment of the fire service, not including hazardous materials or cross functional events. The committee shall also have responsibility for documents related to medical requirements for firefighters, and the professional qualifications for fire department safety officer. It shall coordinate its work with NFPA technical committees dealing with emergency responder safety and wellness.

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NFPA 1584

Standard on the

Rehabilitation Process for Members During Emergency Operations and Training Exercises

2022 Edition

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Information on referenced and extracted publications can be found in Chapter 2 and Annex C.

Chapter 1 Administration

1.1 Scope. This standard establishes the minimum criteria for developing and implementing processes for member prehabilitation, contamination control, rehabilitation, and recovery from incident scene operations and training exercises.

1.2 Purpose. This standard describes the prerehabilitation, contamination control, rehabilitation, and post-incident recovery processes for members prior to, during, and after incident scene operations, training, and exercises.

1.3 Application.

1.3.1 This standard applies to organizations providing rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services, including public, military, private, and industrial fire departments.

1.3.2 This standard does not apply to industrial fire brigades that might also be known as emergency brigades, emergency

response teams, fire teams, plant emergency organizations, or mine emergency response teams.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1403, *Standard on Live Fire Training Evolutions*, 2018 edition.

NFPA 1500™, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2021 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2020 edition.

NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Department Members*, 2022 edition.

NFPA 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, 2020 edition.

2.3 Other Publications.

Merriam-Webster's *Collegiate Dictionary*, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2018 edition.

NFPA 1500™, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2021 edition.

NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*, 2020 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2020 edition.

NFPA 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, 2020 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.2.4 Should. Indicates a recommendation or that which is advised but not required.

3.2.5 Standard. An NFPA Standard, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase “standards development process” or “standards development activities,” the term “standards” includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

3.3 General Definitions.

3.3.1 Active Cooling. See 3.3.7.1.

3.3.2 Advanced Life Support (ALS). Functional provision of advanced airway management including intubation, advanced cardiac monitoring, manual defibrillation, establishment and maintenance of intravenous access, and drug therapy.

3.3.3* Basic Life Support (BLS). A specific level of prehospital medical care provided by trained responders, focused on rapidly evaluating a patient's condition; maintaining a patient's airway, breathing, and circulation; controlling external bleeding; preventing shock; and preventing further injury or disability by immobilizing potential spinal or other bone fractures.

3.3.4 Company. A group of members (1) under the direct supervision of an officer; (2) trained and equipped to perform assigned tasks; (3) usually organized and identified as engine companies, ladder companies, rescue companies, squad companies, or multi-functional companies; (4) operating with one piece of fire apparatus (pumper, aerial fire apparatus, elevating platform, quint, rescue, squad, ambulance) except where multiple apparatus are assigned that are dispatched and arrive together, continuously operate together, and are managed by a single company officer; (5) arriving at the incident scene on fire apparatus. [1500, 2021]

N 3.3.5 Contaminants. Harmful, irritating, or nuisance material foreign to the normal atmosphere. [1500, 2021]

N 3.3.6 Contamination. The accumulation of products of combustion and other hazardous materials on or in an ensemble element that includes carcinogenic, toxic, corrosive, or allergy-causing chemicals, body fluids, infectious microorganisms, or [chemical, biological, radiological, and nuclear defense] CBRN terrorism agents. [1851, 2020]

3.3.7 Cooling.

3.3.7.1 Active Cooling. The process of using external methods or devices (e.g., hand and forearm immersion, misting fans, ice vests) to reduce elevated core body temperature.

3.3.7.2 Passive Cooling. The process of using natural evaporative cooling (e.g., sweating, doffing personal protective equipment, moving to a cool environment) to reduce elevated core body temperature.

3.3.8* Core Body Temperature. The temperature deep within a living body.

3.3.9 Crew. A team of two or more fire fighters. [1500, 2021]

3.3.10 Emergency Incident. Any situation to which an emergency services organization responds to deliver emergency serv-

ices, including rescue, fire suppression, emergency medical care, special operations, law enforcement, and other forms of hazard control and mitigation. [1561, 2020]

3.3.11 Emergency Medical Care. The treatment of patients, using first aid, cardiopulmonary resuscitation, basic life support, advanced life support, and other medical protocols prior to arrival at a hospital or other health care facility.

3.3.12 Emergency Medical Services. The provision of treatment, such as first aid, cardiopulmonary resuscitation, basic life support, advanced life support, and other pre-hospital procedures including ambulance transportation, to patients. [1500, 2021]

3.3.13 Emergency Operations. Activities of the fire department relating to rescue, fire suppression, emergency medical care, and special operations, including response to the scene of the incident and all functions performed at the scene. [1500, 2021]

3.3.14 Energy Drink. A type of beverage containing stimulant drugs (caffeine and other ingredients such as taurine, ginseng, and guarana) that is marketed as providing mental or physical stimulation.

N 3.3.15 Gross Decontamination. A term used in the hazardous materials response industry to indicate the partial removal of exterior contamination from protective clothing, usually by rinsing with water, sometimes with detergent, to allow for the safe exit of the responder from the protective clothing in the contamination reduction zone of an emergency incident. [1851, 2020]

3.3.16* Hydration. The introduction of water in the form of food or fluids into the body.

3.3.17 Incident Commander (IC). The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. [472, 2018]

3.3.18* Incident Management System (IMS). A system that defines the roles and responsibilities to be assumed by responders and the standard operating procedures to be used in the management and direction of emergency incidents and other functions. [1561, 2020]

3.3.19* Member. A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. [1500, 2021]

3.3.20 Passive Cooling. See 3.3.7.2.

3.3.21 Patient. An emergency responder who is provided emergency medical care during the rehabilitation process.

3.3.22 Personnel Accountability System. A system that readily identifies both the location and function of all members operating at an incident scene. [1500, 2021]

N 3.3.23 Prehabilitation. Physical and lifestyle preparation strategies to increase capability and capacity, reduce the potential for injury, and improve readiness in anticipation of an upcoming stressor.

N 3.3.24* Preliminary Exposure Reduction. Techniques for reducing soiling and contamination levels on the exterior of protective clothing and equipment following incident operations. This is not the same as cleaning or decontamination.

3.3.25 Procedure. An organizational directive issued by the authority having jurisdiction or by the department that establishes a specific policy that must be followed. [1561, 2020]

3.3.26 Recovery. The process of returning a member's physiological and psychological states to levels that indicate the person is able to perform additional emergency tasks, be reassigned, or released without any adverse effects.

3.3.27* Rehabilitation. An intervention designed to mitigate against the physical, physiological, and emotional stress of firefighting in order to sustain a member's energy, improve performance, and decrease the likelihood of on-scene injury or death.

3.3.28 Rehabilitation Manager. The person or officer assigned to manage rehabilitation.

3.3.29 Sports Drink. A fluid replacement beverage that is between 4 percent and 8 percent carbohydrate and contains between 0.5 g and 0.7 g of sodium per liter of solution.

3.3.30 Standard Operating Guideline. A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely, which can be varied due to operational need in the performance of designated operations or actions. [1521, 2020]

3.3.31* Standard Operating Procedure. A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely for the performance of designated operations or actions. [1521, 2020]

3.3.32 Supervisor. An emergency services responder who has responsibility for overseeing the performance of other responders assigned to a specific division or group.

Chapter 4 Preparedness

4.1 General.

4.1.1 Standard Operating Procedures/Guidelines.

4.1.1.1* The fire department shall develop standard operating procedures/guidelines (SOP/Gs) that outline a systematic approach for the prehabilitation, contamination control, rehabilitation, and recovery of members operating at incidents and training exercises.

Δ 4.1.1.2* These SOP/Gs shall, at a minimum, address the following:

- (1) Relief from climatic conditions
- (2) Processes for contamination reduction prior to rehabilitation
- (3) Active and/or passive cooling or warming as needed for incident type and climate conditions
- (4) Rehydration (fluid replacement)
- (5) Calorie and electrolyte replacement
- (6) Medical assessment
- (7) Emergency medical services (EMS) treatment in accordance with local protocol
- (8) Member accountability
- (9) Member release disposition from rehabilitation (reassignment, EMS evaluation, or post-incident recovery)

4.1.1.3* Crews shall be rotated as necessary to allow for rehabilitation.

4.1.2 Protocols and procedures guiding fire department and other emergency services personnel who care for ill or injured members during emergency operations shall be developed by the EMS medical director in collaboration with the fire department physician and fire chief.

4.1.3 Procedures shall be in place to ensure that contamination control, rehabilitation, and recovery efforts commence whenever emergency operations or training activities pose the risk of members becoming exposed to contaminants and/or exceeding a safe level of physical or mental endurance.

N 4.1.4* The fire department shall develop SOP/Gs that outline a systematic approach to post-incident recovery in order to return a member to where they can safely perform additional emergency tasks, be reassigned, or be released from duty.

N 4.1.4.1 These SOP/Gs shall include, but are not limited to, the following:

- (1) On-scene contamination reduction
- (2) Criteria for release to post-incident recovery
- (3) Post-incident requirements to return to service
- (4) Mental and physical rest periods
- (5) Post-incident hydration and nutrition
- (6) Sleep deprivation recognition and prevention
- (7) Recognition and response to potentially traumatic events

4.2 Recognition of Heat/Cold Stress.

4.2.1 All members shall be provided with information on how the body regulates core temperature, how to recognize the signs and symptoms, and how to utilize controls for heat and cold stress. (See Annex B.)

• 4.2.2 Education shall be provided on wind chill and heat index considerations.

4.2.3 Education shall be provided on the importance of proper hydration, nutrition, and rest.

4.3 Member Prehabilitation.

4.3.1* Members shall maintain proper hydration, nutrition, and rest to maintain normal body function.

N 4.3.2* Members shall maintain a physical fitness regime in accordance with NFPA 1583 as a prehabilitation strategy for incident response demands.

N 4.3.3 Members assigned to incident response duties shall not engage in activities that may diminish their ability to safely perform the essential job tasks.

N 4.3.4 Members engaged in nonincident strenuous physical activities shall be allowed recovery time prior to returning to in-service status for incident response.

N 4.3.5 When a physically demanding event is scheduled (training/drill), members shall engage in pre-event warm-up activities to help prevent injuries.

N 4.3.6* The department shall develop and implement SOP/G's to provide strategies to manage the effects of acute and chronic sleep and circadian rhythm disruption that lead to sleep deprivation, fatigue, and other adverse health effects.

N Chapter 5 Preliminary Exposure Reduction

N 5.1 Implementation.

N 5.1.1* Preliminary exposure reduction activities shall be implemented whenever members are exposed to a contaminant during incident operations or training exercises that pose a potential safety or health risk to members.

N 5.1.1.1 Incident-related life safety, rescue, fire control, and patient care shall take priority over preliminary exposure reduction.

N 5.1.1.2 Preliminary exposure reduction activities shall be completed prior to rehabilitation or demobilization from the incident but shall not interfere with fireground priorities.

N 5.2 Hazard Control Zones.

N 5.2.1 Hazard control zones shall be established in accordance with NFPA 1500 whenever the potential for contamination exists.

N 5.2.2 The perimeters of the hazard control zones shall be designated and communicated by the incident commander and marked when possible.

N 5.2.3 The incident commander shall ensure that the protective clothing and equipment requirements of each control zone are commensurate with the hazards in the zone.

N 5.2.3.1 All officers and members shall ensure the use of personal protective equipment is appropriate for the risks encountered in each zone.

N 5.2.4 The process of utilizing hazard control zones shall continue until the incident hazards have been mitigated or the incident is over.

N 5.2.5* A no-entry zone is an area at an incident scene that no person(s) shall be permitted to enter due to imminent hazard(s), dangerous conditions, or the need to protect evidence.

N 5.2.6* The hot zone is the area presenting the greatest risk of contamination to members.

N 5.2.6.1 All members shall wear appropriate PPE for the risks that might be encountered while in the hot zone.

N 5.2.7* The warm zone shall serve as a limited access area where contamination reduction activities are implemented if the threat of cross-contamination persists.

N 5.2.7.1 Preliminary exposure reduction shall be conducted in the warm zone.

N 5.2.8* A cold zone shall be established outside the area where contamination is being mitigated.

N 5.3 Contamination Reduction.

N 5.3.1* When protective clothing or equipment has become soiled or contaminated, members shall carry out preliminary exposure reduction followed by advanced or specialized cleaning in accordance with NFPA 1851.

N 5.3.1.1* Dry or wet mitigation techniques shall be conducted prior to the removal of any ensemble or ensemble elements.

N 5.3.2* Members shall remain on supplied air or other appropriate respiratory protection during preliminary exposure reduction.

N 5.3.2.1 Members assisting with preliminary exposure reduction shall use appropriate protective clothing, including respiratory protection.

N 5.3.3 Incidents where known hazardous materials, industrial chemicals, or asbestos are involved shall require a decontamination or disposal process for the hazards encountered.

N 5.3.4 Preliminary exposure reduction of proximity firefighting ensembles and ensemble elements shall comply with the requirements in NFPA 1851.

N 5.3.5 Personnel shall doff contaminated protective clothing prior to entering the cold zone.

N 5.3.6* Following mitigation, potential contaminated and exposed items (PC&E) shall be isolated and bagged prior to entering the cold zone or being transported away from the scene.

N 5.4 On-Scene Personal Hygiene.

N 5.4.1* Immediately after doffing contaminated protective equipment, and prior to entering the cold zone, personnel shall wipe all exposed skin areas with soap and water or an appropriate skin wipe if soap and water are not available.

Chapter 6 Incident Scene and Training Rehabilitation

6.1 Criteria for Implementation. Rehabilitation shall be provided in accordance with fire department standard SOP/Gs, NFPA 1500, and NFPA 1561.

6.1.1 Rehabilitation shall commence whenever the physical or mental demands of an incident operation or training exercise poses a potential safety or health risk to members.

N 6.1.1.1* Rehabilitation at small-scale and routine incidents shall be crew-based, also known as self-rehab.

N 6.1.1.2* Rehabilitation shall be formalized into a rehabilitation group based on the incident size, scope, duration, or complexity.

6.1.2 Members shall be assigned to rehabilitation as prescribed by departmental SOP/Gs.

6.1.3* Emergency medical services (EMS) practitioners in rehabilitation shall have the authority, as delegated by the incident commander, to use their professional judgment to keep members in rehabilitation or to transport them for further medical evaluation or treatment.

Δ 6.1.4* Members shall undergo rehabilitation following the use of a self-contained breathing apparatus (SCBA) cylinder, or after 40 minutes of intense work without SCBA.

6.1.4.1 A supervisor shall be permitted to adjust the requirements in 6.1.4 in order to address incident-related life safety, rescue, and patient care.

N 6.1.4.2* Crews shall be rotated as necessary to allow for rehabilitation.

N 6.1.4.3 For incidents, training, and exercises involving training fires, crew rotation shall be in accordance with NFPA 1403.