



The world marveled at the bravery and sacrifice of the New York City Fire Department (FDNY) on 9/11, but to these firefighters, it's just part of the job. GNC recently honored the FDNY to thank these everyday heroes for their service (see page 62), while *M&B* asked members of the storied fire department what it takes to be a first responder.

BY MICHAEL Q. BULLERDICK

True Courage

ONE SMALL BUT REVEALING SIGN OF OUR TIMES is that the traditional, straightforward title of “fireman” has become woefully insufficient to describe the current monumental scope of the job. It’s to the extent that the word now seems oddly quaint, a carryover from Norman Rockwell’s tidier and tamer America. Following the media’s lead after the catastrophic events of 9/11, Hurricane Katrina, the BP oil spill, Superstorm Sandy, this year’s Boston Marathon bombing and the West Texas chemical plant explosion, and most recently, the tragic deaths of 19 Arizona “Hotshots,” we refer to these brave men and women using more officious labels: “firefighters,” “emergency personnel” and, increasingly, “first responders.” Argue, if you will, that it’s merely a matter of semantics, but you’d be missing the point. In a gritty and less certain world, they’re the ones racing toward life-threatening situations while the rest of us are busy running the other way.

How they do so is truly remarkable given the obvious dangers and the fact that such efforts are completely counter to the way human brains are hardwired. Neurologists who study the brain using fMRI technology have shown that fear sends the amygdala, a lower part of the brain that processes emotions, into overdrive. In a split second, our primal fight-or-flight instinct is activated and the body is flooded with adrenaline and cortisol, chemicals that provide the energy boost needed to dig in and fight, or head for the hills.

Fear and its fight-or-flight response is nature's tactical plan for keeping individuals out of harm's way, thereby ensuring the survival of our species. But it's a major hindrance that borders on a liability for firefighters. For one thing, fear weakens resolve and buckles the knees—both really bad things if your career demands rushing headlong into blazing infernos. For another, it clouds the thought process, since the brain's precious resources are diverted toward the alarmist amygdala during fight-or-flight mode and away from higher regions where rationality and logic occur. In fact, studies of first responders indicate that they experience an adrenalized spike immediately following the alarm bell's call to action. Even before arriving "on scene," they're dealing with a level of fear related to the unknown.

"A bit of fear is healthy," says Battalion Chief Michael Meyers, of New York's Fire Operations Plans Section. "But if you panic as a firefighter, you're in a world of trouble and you need to go do something else for a living."

WORKING THROUGH FEAR

"Dealing with fear all comes down to straightforward respect and appreciation for life," says firefighter Sean Johnson, who is part of the Fire Department of New York's Incident Management Team (IMT), an elite group of first responders who are routinely sent to other states to provide training or aid during disasters of all sorts. "I think 95% of people are born with the ability to work through fear to help others. You have to love people. And if you don't allow things like a person's height, weight, age, color or religion to get in your line of sight—if you just see people as people—you're capable of being a responder."

Maybe so, but there's an awful lot about fire, in particular, that can easily trigger the fight-or-flight response. Fire is nothing if not resourceful and resilient. It can be summoned on purpose using all the known methods, but erupts into life just as easily by accident—breaking out after a bullet's ricochet from a shoot-out; as the result of high-speed car collisions or after a utility pole is struck and downed; as the result of plane crashes or chemical-truck rollovers; or as the result of gas and



Honor and Sorrow: (Above) Members of FDNY Ladder Company 15 flank GNC CEO Joe Fortunato (seventh from left) as he tours their facilities. (Left) A memorial to the firefighters lost in the attack on the World Trade Center on September 11, 2001.



oil leaks that have ignited due to earth-

quakes, lightning strikes or flying debris that are a constant of high-wind storms.

Heading into a structural fire is like sliding down a rabbit hole into an alternate universe because of the way time and distance is perceived during extreme conditions, and while under the influence of adrenaline, can run askew. Two minutes can feel as long as 20, and critical decisions about whether or not to traverse a 15-foot hallway can be second-guessed because the hallway may seem four times as long and therefore four times as risky. Ash, heavy smoke, falling debris and the moving shadows projected by flickering flames obscure vision, while the consistent pop of air pockets from heat exchange creates a wall of sound that impedes hearing. Breathing becomes labored after charging up flights of seemingly endless stairs with 100 or so pounds of equipment strapped to your body, and because carbon monoxide, hydrogen cyanide (a by-product of burning plastics) and other carcinogens can sometimes penetrate even the best high-tech masks. Thanks to the law of physics that makes hot air rise, heat that may have seemed bearable on lower floors can become overwhelmingly intense



after climbing just a single flight of stairs. Eventually, it will even radiate through a firefighter's protective clothing because "the suit, your skin, you—everything can burn. Everything eventually has its flash point," says Johnson. "In a fire, you don't overstay your welcome."

That's often easier said than done when it comes to search-and-rescue duties, because people rarely behave the way you'd expect them to in a fire. As slaves to their own panicking amygdalae, children and even some adults make irrational decisions. Sometimes they'll hide, squeezing themselves into the smallest and most difficult spaces, making it difficult to locate them. Even when conscious, they'll remain silent, often failing to call for help or answering searchers' calls due to the effects of shock. And when they are found they often panic, putting up a fight for reasons they may not be able to explain or even remember later.

TOP-NOTCH TRAINING, ASTOUNDING RESULTS

Much of how firefighters learn to deal with these nightmarish conditions, including beating back fear, begins during training programs at fire academies across the nation. The rest comes with experience obtained on the job. Research indicates that successful firefighters are those who can keep their fear in check and quickly synthesize parts of their training to answer the unique problems each new scene poses.

"You can't train for every specific contingency," says Meyers. "But you put it all together in your head and you eventually figure it out."

"It comes down to relying on your training and the

other members of the team," says Johnson. "You know they have your back and you trust in that because, in some ways, you know them better than their families do. You live together during long shifts, but you also see how they behave during the most extreme conditions. That'll tell you a lot about who a person is inside."

By such accounting, then, the members of the FDNY are some pretty terrific folks. Offhanded and boastful as that claim may seem, there's hard data to confirm it. In New York City—a coverage area that encompasses some 8.3 million inhabitants—there were just 58 civilian fire-related deaths in 2012, making the FDNY and its 15,000 officers the best and most efficient department in the nation for the second year in a row. In fact, the statistic is the best ever recorded given the

average 1.3 million fire and medical emergency calls the department responds to each year. Of course, the FDNY's officers will say that even one death is one too many, and they'd be correct in that assertion. But the reality underlying the numbers is especially impressive after also considering New York's diverse architecture, with its thousands of skyscrapers extending beyond the department's ladder reach of just 10 floors. What's equally impressive—and speaks highly of the department's consistency of mission and excellence in training—is



that the FDNY was forced to partially rebuild after the tragic loss of 343 of its brethren on a single day, September 11, 2001. Soon afterward, many more opted for early retirement as the result of injuries sustained on that day.

HEALTH AND FITNESS ARE KEY

Rebuilding began almost immediately, and the effort took place where it has since 1975—at the much-heralded Fire Academy on New York's Randall's Island, where Lieutenant Michael Cacciola, the FDNY's director of health and fitness, has the responsibility and privilege of preparing recruits for the mental and physical challenges that come with firefighting.

For Cacciola, molding firefighters who "never quit" out of raw, inexperienced recruits means adhering to a strict program of



Fortunato (far right) checks out some of the fitness gear at Ladder Company 15, located at 42 South Street in Manhattan, with Captain David Drake (center).

GET FIREFIGHTER FIT

While you may not be fighting fires, adapting some firefighter training into your own workout can help you to achieve a peak level of fitness, says retired FDNY firefighter Kevin S. Malley, chairperson of the Fire Science Department of New Jersey University, and co-author of “Get Firefighter Fit.”

To get started, try his Special Operations Squad Unit Workout, which is designed for elite firefighters who perform the full spectrum of engine, ladder and special-operations tasks. “This focused, high-intensity workout is designed to develop great strength and muscle size in the chest, back, shoulders and arms,”

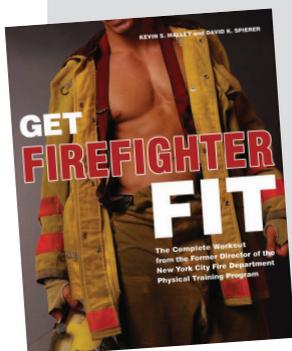
Special Operations Squad Unit Workout

Exercise

- Dumbbell Bench Press
- Cable Low Row (below) >>
- Cable Lift and Press (Vertical Bar, at far right) >>
- Cable Pull-Down (Vertical Bar)
- Cable Triceps Press-Down (at right) >>
- Dumbbell Twisting Curl

Home Exercises

- Push-Up
- Dumbbell One-Arm Row
- Dumbbell Overhead Press
- Close-Grip Chin-Up
- Dumbbell Kickback
- Dumbbell Twisting Curl



says Malley. “It’s specifically designed for the peak development of high-performance athletes and firefighters.”

To obtain full benefits, don’t take any break for recovery between exercises. The upper-body superset is composed of six exercises to be completed in series, one right after the other; 15–20 reps are executed with each exercise in the first set. As soon as you’ve completed the final (sixth) exercise of the set, move immediately back to the first exercise and begin your next set. Continue using the same weight for all 3 sets—only the number of reps changes. After completing 15–20 reps of the first set, you should complete 8–12 in the second set and 3–5 in the third.



TURN UP THE HEAT ON YOUR WORKOUT. For more tips on how to get firefighter fit, check out “Get Firefighter Fit: The Complete Workout from the Former Director of the New York City Fire Department Physical Training Program” by Kevin S. Malley and David K. Spierer.

high-intensity interval training (HIIT). The program not only builds endurance, but it also teaches critical skills for controlling breathing and dealing with adrenaline spikes.

“Training for firemen has to be at high intensity,” says Cacciola, “because it’s extremely rare that actual firefighting occurs at low intensity. You need strength and endurance.”

HIIT, as applied to the daily running drills that Cacciola

favors, calls for cycles of alternating effort and speed. At the Academy, it plays out as warming up for a minute or so and then running for an additional minute at a manageable speed—a 7 on an imaginary scale of 1–10. Then the speed is hiked up to a maximum for nine minutes before cycling back down to Level 7 for a minute of active recovery. Then it’s back up to 10 with the process repeating for 5–10 intervals

MUCH-DESERVED RECOGNITION

The 2013 FDNY Foundation Humanitarian Awards

For those living in a city that was targeted as Ground Zero not too long ago, it was absolutely reassuring to learn earlier this year that the FDNY's 2012 safety record for fewest civilian fire-related deaths was once again the best in the nation. Short of watching its officers in action, few things drive that comforting point home more than being surrounded by a sea of its finest officers. That was the scene at the New York Hilton Midtown this past April, during a night of celebration all around, as many of the department's officers, members of the FDNY Foundation, its patrons and celebrity guests gathered for the annual Fire Commissioner's Humanitarian Awards Dinner.

Although the FDNY's stellar achievements were reason enough for celebration, the purpose of the Foundation-sponsored event was to honor its patrons for their hard work, support and the \$1.9 million in generous donations to the not-for-profit organization.

Those who were singled out for Humanitarian Awards this year were patrons Joseph M. Fortunato, chairman of GNC Holdings, Inc., and Howard Lutnick, chairman and CEO of Cantor Fitzgerald L.P. and BGC Partners, Inc. "Business leaders who both demonstrated outstanding and continuing service to the New York City community," said Fire Commissioner Salvatore Cassano, who added



that such efforts "are critical to the health and strength of our department and making sure that our officers can respond to every call. You are all part of the mission to keep New Yorkers safe."

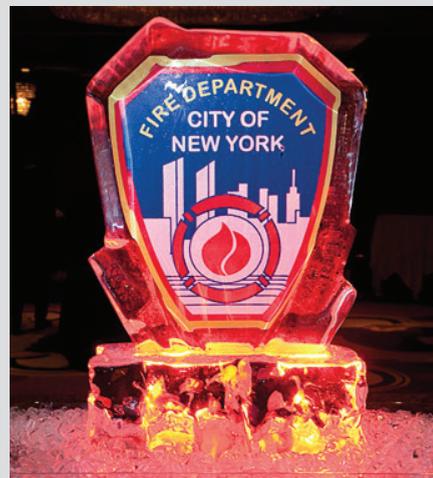
"The loyalty that exists in this room is incredible," noted Fortunato. "I'm proud to be here today not only to accept the award, but to continue supporting the FDNY."

In addition to his generous donation, Fortunato provided all 15,000 members of the FDNY with a GNC Gold Card, which gives discounts on health, wellness and strength-conditioning products offered by the retailer.

"GNC has always been about helping people to live their best lives," said Fortunato. "The members of the FDNY live their lives attempting to save the lives and property of others, and we at GNC are proud to be a part

of those values and principles. Everyone here should be proud of their record."

Few people in New York have reason to be grateful for the FDNY than patron and co-honoree Howard Lutnick. His firm, Cantor Fitzgerald L.P., lost two-thirds of its employees (658) after One World Trade Center was struck by the first hijacked airliner, but the FDNY ensured that many more were saved that day. "I watched these guys go in with their heads down and their equipment



(Top) Scenes from the FDNY Foundation Dinner. (Above, L to R) Awards host Rosanna Scott, Fire Commissioner Salvatore Cassano, honoree Howard Lutnick, honoree Joe Fortunato, Chief of Department Edward Kilduff.

on, marching into the World Trade Center on 9/11, knowing nothing good could come of it," he said. "Firefighters were going into the worst circumstances imaginable, but they were going in anyway, helping and protecting people. They're there to answer the call for us, and when they call me, I have to answer the call to help them. I have to be there."

Established in 1981, the FDNY Foundation supports various initiatives and a variety of educational and public-awareness programs designed to reduce the number of fires and fire fatalities. Donations from previous years have been used, for example, to educate 100,000 residents with lifesaving CPR training and 600,000 city residents on fire safety with materials published in 10 different languages. In addition, the Foundation has also purchased thousands of smoke alarms, smoke detectors and batteries for safety programs benefitting lower-income families.



Fortunato (center) receives his Humanitarian Award, with Fire Commissioner Cassano (third from left) and Peter Arnell (third from right).

(depending on where you are in the 18-week basic-training program), before a final half-mile cooldown.

“The job is all about legs and lungs,” says firefighter Kevon Harper of Ladder Company 176, who has been on the job for six years in addition to running a CrossFit training boot camp on Staten Island. “You need legs to get up stairs and climb over things, and you need strong lungs to fuel your body and for endurance. Some people say it’s a young man’s job, so keeping yourself fit and feeling young will help you in every aspect of the job.”

When they’re not busy running or participating in fire-training exercises outfitted in full bunker gear, recruits participate in circuit training four times a week. “We start firemen out with higher rep work, but after three to four weeks, we tailor the program for specific individual needs,” says Cacciola. “If we think a recruit needs to build strength, we’ll lower the reps and increase the weight.”

Several hundred of Cacciola’s graduates, past and present, certainly looked like gladiators at this year’s FDNY banquet, as they posed for a group photo against a backdrop of the American flag and the department’s iconic red, black and gold logo. Along with many of the city’s power brokers and celebrity guests, they attended the event at the New York Hilton Midtown in April to celebrate the department’s phenomenal 2012 record, honor its patrons, and raise funds to help pay for fire-prevention education programs and thousands of smoke and carbon-monoxide detectors that will be supplied to the city’s low-income residents. (See page 62 for more.)

For the most part, the first responders kept to themselves during the evening, enjoying a rare multicourse gourmet meal. But the running joke at many of their tables was about having to work off the calories before the week ended. Like novelist Rudyard Kipling’s legendary fictional mongoose Rikki-Tikki-Tavi, who remains self-disciplined enough to eat only half his daily food allotment in order to remain light and nimble enough to fight off India’s threatening cobra population, firefighters rarely indulge without considering the impact excess weight could have on job performance.

“Some of the guys will come in with cookies and cakes their wives baked, and you’ll take a cookie or two,” says Johnson. “But you keep yourself from overeating or drinking too much coffee. You make sure you drink plenty of water to stay hydrated because we can be dispatched at any minute.”

“Eating right, exercising and staying fit in general is something you do and think about all the time, especially as you get older,” says Captain David Drake, of New York’s Ladder Company 15. “There are days I may not feel like running, but



Proud members of the FDNY gather at the Foundation Humanitarian Awards Dinner in New York.

then the guilt sets in. My men are depending on me and I think about the ‘what ifs?’”

BRAVERY BEYOND COMPARISON

For Drake, the “what ifs” that are a part of his job as captain extend to formal training regarding notifying next of kin and dealing with firehouse morale following a death in the line of duty. To date, he’s never had to call upon this training, and prays things will remain that way. The sentiment reflects the aphorism printed on the cover of the department’s protocol manual, which reads, “May this also gather dust.”

“I hope it stays up on its shelf, dusty and unused, because what I’m fearful of is losing any one of my guys,” says Drake. “As a captain, I have a tremendous amount of responsibility. I have five other guys I am responsible for, and that’s always on my mind. That’s my focus—to make sure we all go home together.”

Literal-minded scientists would of course object to equating worry, anxiety and concern with fear, given the latter word’s strict neurologic definition. But while that may seem like splitting hairs, such distinctions are critical to the study of the brain and its range of emotions and impulses. Applied to first responders, brain science has revealed yet another reason why they are especially deserving of our awe, respect and praise: To risk one’s own life in attempting to save another is astounding all by itself—and why we rightly call these remarkable men and women heroes. But to manage such acts of bravery in sustained defiance of a super-powerful “me first” self-preservation instinct represents an astonishing triumph of will. That so many of us even make the attempt is mind-boggling. That so many manage to succeed is nothing short of miraculous. **MSB**

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