

Unforeseen Consequences of Terrorism

Medically Unexplained Symptoms in a Time of Fear

ONE YEAR later, reports related to the psychological and physiological effects of the terrorist attacks perpetrated on September 11, 2001, continue to emerge. These reports and what little is known about the long-term health effects of terrorism suggest that many people will present to their physicians with medically unexplained symptoms. These symptoms may be mistaken for organic medical diseases, but are likely to be physiological manifestations of psychological distress. This distress stems from living with a heightened state of alertness and harboring a fear of the unknown given that there is now an unpredictable threat that could strike indiscriminately. Previous research examining survivors of terrorism, as well as natural and man-made disasters will be reviewed for it may provide clues as to the possible somatic and psychological costs of terrorism. Further, findings suggest that the negative health effects will reach beyond direct survivors and inhabitants of the New York City metropolitan and Washington, DC, areas and affect Americans across the country. Our observations of patients known to somatize stress are described and suggestions for early detection and treatment are also presented.

The unprecedented magnitude of the catastrophic events of September 11 makes the full impact on society difficult to predict. Clearly those closest to the disaster sites—direct survivors, emergency workers, family and friends of the deceased, and eyewitnesses to the carnage—are at risk for posttraumatic stress disorder (PTSD) and other well-defined psychiatric illnesses. However, the overall health effects are unlikely to remain limited to those immedi-

ately affected. Extensive media coverage and the repeated exposure of television viewers to graphic footage can vicariously traumatize even those geographically removed.¹⁻³ These vivid images linger in conscious states, intrude on daily activities, and permeate dreams. Further, the ongoing and poorly defined threat of imminent terrorism ignites the fear at the core of human instincts for self-preservation.

Perhaps the most psychologically taxing aspects will be the chronic heightened state of alertness and feelings of helplessness caused by a poorly defined risk of danger that could strike at any time in any form without warning for the foreseeable future. The unimaginable *has* happened *here*, therefore the unthinkable may lurk just beyond awareness. With the passage of time many Americans have returned to their pre-September 11 routines, but the Federal Bureau of Investigation continues to issue warnings of nonspecific threats. There are repeated airport and airplane security breaches, and confiscated computers and manuals depict future grand-scale biological, chemical, and nuclear terrorism plots. Such occurrences can riddle even the most psychologically resilient individual with feelings of alarm, vulnerability, and helplessness.

Fortunately, almost half of individuals will cope well with even extreme trauma and threat; although appropriately saddened and indignant, these hardy persons will “roll with the punches.”⁴ Another 30% are likely to feel somewhat anxious or depressed, but will return to normal levels of psychological health. In contrast, about 18% are vulnerable to persistently engaging in behaviors most Americans only briefly if ever considered or engaged in post-September 11: avoiding airplanes and other public transportation; steering

clear of tall buildings, national landmarks, tunnels, and bridges; stockpiling food, water, and Cipro (ciprofloxacin hydrochloride); purchasing gas masks; discarding their mail unopened; and/or retreating into their homes in an attempt to assert personal control over the uncontrollable and assuage fears of the unpredictable. It is *this* type of person, experiencing unrelenting fear and hyperarousal, who, often silently, may develop multiple serious health consequences. In fact, those who remain anxious, but use public transportation or work in tall buildings despite their specific fear of these activities and places may also be at risk.

NEW TIMES, NEW ILLNESS

Based on studies following previous disasters, the incidence and severity of psychiatric disorders may rise dramatically in the current stressful environment⁵⁻⁷; stress reactive disease states may worsen⁸; health-threatening behaviors may increase⁵; and medically unexplained symptoms and syndromes will likely emerge or worsen.⁹⁻¹¹ Some psychiatric consequences are already apparent. According to NDCHealth,¹² a health care information services company, at 5 months post-September 11, new prescriptions for antidepressant medications remain elevated in New York City (21.3%) and nationally (8.7%), with similar sustained increases for anti-anxiety medications and prescription sleep aids. Further, health care workers should be alert to delayed-onset PTSD and anniversary reactions.

Research conducted since September 11 indicates that stress reactions have been detected at “Ground Zero” and across the country. While physicians in Lower Manhattan have observed that many of their patients report both psychiat-

ric and somatic manifestations of posttraumatic stress,¹³ Schuster and colleagues¹⁴ reported that 3 to 5 days after the attacks, 90% of those surveyed nationally experienced at least 1 moderate symptom of stress and 44% reported experiencing a substantial symptom. Notably, substantial stress reactions were associated with extensive television watching on September 11—that day the average American adult watched 8.1 hours of coverage.¹⁴ Based on these early findings, one might expect an increase in the incidence and severity of conditions and diseases known to be worsened by psychological distress, eg, coronary artery disease,¹⁵ diabetes mellitus,¹⁶ peptic ulcer disease,¹⁷ hypertension,¹⁸ upper respiratory tract infections,¹⁹ asthma,²⁰ psoriasis,^{21,22} autoimmune diseases,^{23,24} Graves disease,²⁵ and medically unexplained symptom illnesses such as fibromyalgia,²⁶ irritable bowel syndrome,²⁷ and chronic fatigue syndrome.^{9,28}

The actions we take and do not take contribute significantly to overall health. Unfortunately, when under extreme stress people tend to engage in more primitive coping strategies that can actually be harmful, including the use of alcohol and drugs, increased smoking, and poor eating habits.^{5,29,30} Similarly, people may choose to forgo health-enhancing activities such as following medical regimens, getting exercise, obtaining adequate sleep, and pursuing hobbies and other relaxing activities. Health care providers should be aware of and address recent, current, and future changes in positive and negative health behaviors in all of their patients.

Each of the aforementioned potential health consequences deserves in-depth attention; our focus in this presentation is on the somatic manifestations of chronic, intense psychological and emotional stress. Based on the literature describing responses to previous natural and manmade disasters and our clinical observations, we predict a significant increase in the number of patients with medically unexplained symptoms presenting to physicians. Health care professionals must appreciate the psychological underpinnings and causes of these new or

worsening complaints and not inappropriately “medicalize” these symptoms. By ascribing a solely medical diagnosis, one may miss the underlying stress, depression, and anxiety at the roots of this groundswell of symptoms and requests and demands for physician response.

SOMATIC COMPLAINTS RELATED TO OTHER DISASTERS

The National Center for Post-Traumatic Stress Disorder, Department of Veterans Affairs, reviewed 177 articles examining the psychological effects of disasters for 130 samples of more than 50 000 subjects.³¹ While in 74% of the samples a specific psychiatric problem like PTSD was identified, in 39% of the samples, subjects presented with non-specific distress often in the form of psychosomatic symptoms.³¹ Further, in 25% of the samples, related health problems and concerns, including self-reported somatic complaints, verified medical conditions, elevated physiological indicators of stress, decreased immune function, sleep disturbance, and increased use of sick leave were identified.³¹ A study assessing the relationship between disaster exposure and a somatization-associated medical syndrome compared patients with chronic fatigue syndrome who were and were not exposed to Hurricane Andrew. In the 4 months following the hurricane, Lutgendorf et al⁹ found exposed patients were more likely to “relapse,” according to their physician, and report more symptoms and illness burden than nonexposed patients.

Somatic manifestations of stress following natural and man-made disasters are common and may appear or persist months to years later.^{29,32-36} When presenting to physicians, patients with PTSD often do not have psychiatric chief complaints; rather their complaints can be musculoskeletal, digestive, neurological, gynecological, cardiovascular, or pulmonary, or related to the ear, nose, and throat.³² For example, Australian firefighters exposed to a bushfire were assessed as long as 49 months after the disaster³³; those with PTSD were more likely to report cardiovascular, respiratory, musculoskeletal, and

neurological symptoms than firefighters without PTSD.³³ In many studies exposure to significant stressors, including terrorism, has been associated with mild to moderate levels of bodily complaints including headaches, back and neck aches, fatigue, sleep disturbance, pulmonary difficulties, gastrointestinal complaints, and neurological symptoms.^{29,34-36} In 2 prospective studies, subjects exposed to a natural disaster reported higher rates of somatic complaints at 12 to 18 months after the disaster,^{35,36} including gastrointestinal symptoms (abdominal pain, vomiting, nausea, and excessive gas), and pseudoneurological symptoms such as amnesia, double vision, paralysis, and fainting.³⁵

Comay³⁷ observed that the main aim of international terrorism is psychological: spreading fear and undermining morale for political objectives. Compared with natural or technological disasters, disasters involving mass violence associated with terrorism proffer the greatest magnitude of psychological effects.³¹ These psychological effects may be magnified by our need to find meaning in our experiences. Natural disasters are often considered “acts of God”—they strike without preference, target, or malice. Conversely, terrorism involves the volition of human perpetrators, is intentional, personal, and hateful—thus much more difficult to assimilate psychologically. This is speculation because little is known about the short- or long-term health effects of terrorism; it is difficult to predict who might be particularly vulnerable and how physical and mental health effects may ultimately manifest.³⁸

Perhaps our best insights are drawn from studies in Israel where the impact of local terrorism has become a part of the fabric of everyday life for 50 years. Studies on the psychological effects of terrorism in Israel indicated that (1) PTSD is common in those directly affected³⁹; (2) women tend to report more anxiety, insomnia, fatigue, and change in eating habits than men³⁴; (3) adolescents may be particularly at risk for developing psychological and functional difficulties in adulthood^{34,40,41}; and (4) level of exposure may not be the best predictor of health effects.²⁹

The degree of exposure to missile attacks during the Persian Gulf War was assessed by comparing 545 residents of Tel Aviv (high risk for SCUD missile attacks) with 406 residents of Jerusalem (lower risk).²⁹ Compared with before the war, during the war both groups assessed their health to be worse, reported more acute diseases, smoked more, exercised less, and used more tranquilizers. Interestingly, level of exposure was only weakly correlated with most measures. However, the residents in the high-risk area were more likely to report anxiety and insomnia than the residents of the lower-risk area. Finally, Gidron and colleagues⁴² found that problem-focused coping that included primarily checking behavior (eg, watching for suspicious persons) and engaging in preventive acts (eg, avoiding public transportation) was positively associated with anxiety related to terrorism. Instead, calming and distracting oneself, as well as reducing one's sense of vulnerability, may be most beneficial.⁴²

PAST TERRORISM IN AMERICA

Fortunately, there have been few terrorist attacks on American soil; however, trends can be identified from the Oklahoma City and World Trade Center bombings. Difede et al³⁸ found that among World Trade Center bombing survivors seeking mental health treatment, typical symptoms associated with PTSD such as intrusive recollections, sleep disturbance, and heightened startle response failed to capture the subjective experience of their patients. Instead, patients were most distressed by the fact that their fundamental belief systems about themselves, others, and the world had been shattered. Survivors tended to feel vulnerable and isolated, hesitant to connect with and trust others in a world that was now considered unpredictable and unsafe. These types of thoughts and feelings are anxiety provoking, leaving individuals tense and constantly on guard believing that they have little control over their environment.

Most of what we understand about the reactions of Americans to terrorism derives from studies following the bombing of the Alfred P.

Murrah Federal Building in Oklahoma City. North et al,⁴³ assessing rates of postdisaster psychopathology and functional impairment approximately 6 months after the bombing, determined 45% of the 182 direct survivors surveyed had a psychiatric disorder at some time since the attack. Survivors manifested elevated postdisaster rates of PTSD (34.3%), major depression (22.5%), and panic disorder (6.6%). Predictors of disaster-related PTSD included degree of disaster exposure, female sex, premorbid psychopathological condition, and secondary exposure through the injury or death of loved ones.⁴³

Other findings may provide additional clues about which US citizens may be most at risk for poor psychological adjustment, anniversary reactions, and negative health outcomes in the coming months. In addition to sustaining an injury during a terrorist attack, intense anxiety, fear, or grief at the time of the event are strong predictors of subsequent PTSD symptoms.⁴⁴⁻⁴⁶ Another "at-risk" group could be war veterans. Following the Oklahoma City bombing, the PTSD symptoms of World War II, Korean, and Vietnam war veterans worsened.⁴⁷ Conversely, Benight et al⁴⁸ found that victims of the Oklahoma City bombing who judged their "coping self-efficacy" (belief in their ability to cope effectively) to be high were less likely to experience general and trauma-related distress.

Consistent with other research, the psychological and physical health effects of terrorism are not short-lived or isolated to those directly involved. A follow-up study conducted 1½ to 3 years after the Oklahoma City bombing indicated that up to one third of survivors reported worsening of preexisting medical conditions or a new diagnosis by a physician of audiologic changes, depression, or anxiety.⁸ Others found that for more than a year after the bombing, Oklahomans in general had almost double the rates of psychological distress, PTSD symptoms, alcohol use, smoking, and smoking initiation that persisted.⁵ Children may be particularly vulnerable to long-term effects of psychological stress related to terrorism and the continuing uncertain state of

affairs.^{1,2} In a survey of children and adolescents living approximately 100 miles (160 km) from Oklahoma City, 16% reported significant PTSD symptoms 2 years after the bombing even though they were neither directly exposed to the trauma nor knew anybody injured or killed.⁴⁹ Instead PTSD symptoms were more closely related to level of media exposure than even indirect interpersonal exposure such as a friend who had a family member injured or killed in the attack.⁴⁹

LESSONS LEARNED FROM PATIENTS WITH FIBROMYALGIA SYNDROME

The mystery enshrouding "sleeper" agents who allegedly still live in our midst, vague warnings of imminent attacks provided by prisoners of the Afghan war, the aftermath of the spread of anthrax, and the threat of more devastating attacks by weapons of mass destruction continue to keep Americans off balance and on guard. Humans depend predominantly on sight to detect danger; we need to *see* the threat. Once seen, we may be frightened, but we can prepare—it is what we cannot see, the unknown, that terrifies us. Our work in the past years with patients experiencing fibromyalgia suggests the most challenging aspect of this psychological assault will be fear, more specifically, fear of the unknown.

Fibromyalgia is a noninflammatory musculoskeletal pain syndrome of unknown cause and thus far unclear pathophysiology often associated with sleep disorder.⁵⁰ Patients complain of diffuse musculoskeletal pain, "I feel like I've been hit by a truck,"⁵¹ while laboratory tests are negative and physical examination reveals only multiple tender points. Fibromyalgia is much more common in women than in men.⁵⁰ Many patients note onset of symptoms following significant emotional trauma, injury, or febrile illness.^{52,53} Psychiatric comorbidity is common,⁵⁴ and recent studies, although methodologically flawed, suggest antecedent sexual or physical abuse in many women with fibromyalgia.^{55,56} Fibromyalgia is often overlooked in patients misdiagnosed as having "chronic Lyme disease" or lupus; in both examples, false-

positive or incorrectly interpreted tests done for unclear or incorrect reasons led to and falsely substantiate the incorrect diagnosis.⁵⁷ Multisystem disorders are mistakenly diagnosed in patients with fibromyalgia because these patients have what appears to be a multisystem disease; in fact, they have other “medically unexplained symptom” syndromes,⁵⁸ eg, irritable bowel syndrome, interstitial cystitis, multiple chemical sensitivity, and chronic fatigue syndrome.

In retrospect, many of our fibromyalgia patients experienced a “prefibromyalgia” state, a considerable period of time wherein they manifested psychological distress and minor myalgias and arthralgias. Their anguish seemed to stem from a fear that something was wrong with them, lurking just beyond their awareness, something unknown, but threatening. Rather than addressing the psychological distress, they set out to understand their suffering in solely medical terms. Driven by their fear of the unknown, many were happy to finally receive a diagnosis that could account for their symptoms, medical and psychological. This type of patient represents fertile ground in which to plant an incorrect medical diagnosis and provide care that is doomed to fail because the root cause of the illness is not being addressed.

EARLY DETECTION AND TREATMENT

Violent acts can have significant psychological consequences for those in the community through vicarious victimization,⁵⁹ which may result in somatic reactions.⁶⁰ Many of the risk factors associated with adverse outcomes in natural or man-made disasters are the same demographic characteristics associated with fibromyalgia and similar syndromes, including female sex, aged between 40 and 60 years, married, high levels of “neuroticism” (trait anxiety), and having a history of previous psychiatric disorders.⁶¹

Health care workers need to be aware of symptoms that could be warning signs of impending or current somatization: sleep distur-

bance, headaches, concentration and memory complaints, anxiety, poor mood, fatigue, gastrointestinal complaints, and diffuse musculoskeletal pain. In addition, look for patients with intense immediate reactions to the attacks, poor coping skills, a history of somatization, and new avoidance behaviors. When a patient presents with symptoms without observable medical explanations, especially multiorgan symptoms in the absence of objectifiable abnormalities, avoid further “medicalizing” their complaints. A patient seeking a medical explanation for symptoms with psychological roots can be convincing in his or her pleas for unnecessary tests and drugs, but will be best served by health care workers who are willing to explore emotional factors in the context of their contribution to the patient’s very real symptoms. Asking an open-ended and nonjudgmental question like, “What’s going on in your life?” demonstrates your concern for the *person* and may elicit key information relevant to their medical complaints.⁶² Although there may not be a clear medical explanation, the presence of symptoms always indicates *something* is wrong.⁶² Should comorbid depression or anxiety be discovered, they can be treated in conjunction with palliative care for physical symptoms. Addressing both overt and covert manifestations of a patient’s psychological distress validates the personal experience of illness without suggesting the symptoms are fictitious.

FINAL WORD

The willful perpetration of mass murder of thousands of innocent victims for political or religious objectives is a concept many Americans cannot adequately process. An undercurrent of worry for the future driven by fear of the unknown can pose a major health risk for vulnerable individuals to which we must attend. Encouragingly, studies of the resilience of civilians enduring years of terrorism in Israel⁶³ and Northern Ireland⁶⁴ suggest that in spite of living under long-term threat and resultant stress, society as a whole has not “broken down” and has generally coped well with unseen dan-

ger. Further, US citizens are a resilient lot demonstrating the least severe impairment after disasters when compared with other developed and developing countries.³¹

However, conflicting reports by government officials about advanced knowledge of the attacks, the true level of toxic exposure at Ground Zero, and the scope and exact target of our war on terrorism decrease public trust and increase anxiety that citizens are not being kept fully informed. Moreover, new threats of violence on a scale equal to or greater than that of September 11 continue to fuel fears. Health care providers must be aware of the physiological manifestations of persistent psychological stress, especially anniversary reactions, which may mimic and suggest to patients organic medical disease. In contrast to the suddenness of the terrorist attacks, slowly, but steadily, ill-defined medically unexplainable symptoms will emerge in many of our at-risk patients, requiring proper identification and appropriate treatment to avoid medicalization and attendant unnecessary costs and iatrogenic effects. By anticipating an increase in psychosomatic symptoms, another unknown is eliminated. After all, as noted by the Director of Homeland Security, Tom Ridge, “. . . the fear of the unknown is the greatest challenge that we face. . . .”⁶⁵

Afton L. Hassett, PsyD
Departments of Medicine, Family
Medicine, and Psychiatry
Division of Rheumatology
and Connective Tissue Research
UMDNJ–Robert Wood Johnson
Medical School
One Robert Wood Johnson Place,
MEB-484
New Brunswick, NJ 08903
(e-mail: a.hassett@umdnj.edu)
Leonard H. Sigal, MD
New Brunswick

REFERENCES

1. Nader K, Pynoos R, Fairbanks L, Al-Ajeel M, Al-Asfour A. A preliminary study of PTSD and grief among the children of Kuwait following the Gulf crisis. *Br J Clin Psychol*. 1993;32:407-416.
2. Pfefferbaum B, Moore V, McDonald N, Maynard B, Gurwitsch R, Nixon S. The role of exposure in posttraumatic stress in youths following the 1995 bombing. *J Okla State Med Assoc*. 1999;92:164-167.

3. Sloan M. Response to media coverage of terrorism. *J Conflict Resolution*. 2000;44:508-522.
4. Wortman CB, Silver RC. The myths of coping with loss. *J Consult Clin Psychol*. 1989;57:349-357.
5. Smith DW, Christiansen EH, Vincent R, Hann NE. Population effects of the bombing of Oklahoma City. *J Okla State Med Assoc*. 1999;92:193-198.
6. Bleich A, Dycian A, Koslowsky M, Solomon Z, Wiener M. Psychiatric implications of missile attacks on a civilian population: Israeli lessons from the Persian Gulf War. *JAMA*. 1992;268:613-615.
7. Mollica RF, McInnes K, Sarajlic N, Lavelle J, Sarajlic I, Massagli MP. Disability associated with psychiatric comorbidity and health status in Bosnian refugees living in Croatia. *JAMA*. 1999;282:433-439.
8. Shariat S, Mallonee S, Kruger E, Farmer K, North C. A prospective study of long-term health outcomes among Oklahoma City bombing survivors. *J Okla State Assoc*. 1999;92:178-186.
9. Lutgendorf SK, Antoni MH, Ironson G, et al. Physical symptoms of chronic fatigue syndrome are exacerbated by the stress of Hurricane Andrew. *Psychosom Med*. 1995;57:310-323.
10. Hassett AL, Cone JC, Patella SJ, Sigal LH. The role of catastrophizing in the pain and depression of women with fibromyalgia syndrome. *Arthritis Rheum*. 2000;43:2493-2500.
11. Fiedler N, Lange G, Tiersky L, et al. Stressors, personality traits, and coping of Gulf War veterans with chronic fatigue. *J Psychosom Res*. 2000;48:525-535.
12. NDCHealth Web site. Praxis Health Query 2001. Available at: <http://www.ndchealth.com/home.htm>. Accessed February 2002.
13. Horowitz ME. From a physician in Lower Manhattan. *N Engl J Med*. 2001;345:1504.
14. Schuster MA, Stein BD, Jaycox LH, et al. A national survey of stress reactions after the September 11, 2001, terrorist attacks. *N Engl J Med*. 2001;345:1507-1512.
15. Rozanski A, Blumenthal JA, Kaplan J. Impact of psychological factors on the pathogenesis of cardiovascular disease and implications for therapy. *Circulation*. 1999;99:2192-2217.
16. Goldston DB, Kovacs M, Obrosky DS, Iyengar S. A longitudinal study of life events and metabolic control among youths with insulin-dependent diabetes mellitus [special section: the interface of mental and physical health]. *Health Psychol*. 1995;14:409-414.
17. Raiha I, Kemppainen H, Kaprio J, Koskenvuo M, Sourander L. Lifestyle, stress, and genes in peptic ulcer disease: a nationwide twin cohort study. *Arch Intern Med*. 1998;158:698-704.
18. Carroll D, Smith GD, Shipley MJ, Steptoe A, Brunner EJ, Marmot MG. Blood pressure reactions to acute psychological stress and future blood pressure status: a 10-year follow-up of men in the Whitehall II study. *Psychosom Med*. 2001;63:737-743.
19. Cohen S, Tyrrell DA, Smith AP. Negative life events, perceived stress, negative affect, and susceptibility to the common cold. *J Pers Soc Psychol*. 1993;64:131-140.
20. Wright RJ, Rodriguez M, Cohen S. Review of psychosocial stress and asthma. *Thorax*. 1998;53:1066-1074.
21. Schmidt-Ott G, Jacobs R, Jager B, et al. Stress induced endocrine and immunological changes in psoriasis patients and healthy controls. *Psychother Psychosom*. 1998;67:37-42.
22. Al'Abadie MS, Kent GG, Gawkrödger DJ. The relationship between stress and the onset and exacerbation of psoriasis and other skin conditions. *Br J Dermatol*. 1994;130:199-203.
23. Zautra AJ, Smith BW. Depression and reactivity to stress in older women with rheumatoid arthritis and osteoarthritis. *Psychosom Med*. 2001;63:687-696.
24. Da Costa D, Dobkin PL, Pinard L, et al. The role of stress in functional disability among women with systemic lupus erythematosus: a prospective study. *Arthritis Care Res*. 1999;12:112-119.
25. Kung AWC. Life events, daily stresses and coping in patients with Graves' disease. *Clin Endocrinol*. 1995;42:303-308.
26. Davis MC, Zautra AJ, Reich JW. Vulnerability to stress among women in chronic pain from fibromyalgia and osteoarthritis. *Ann Behav Med*. 2001;3:215-226.
27. Levy RL, Cain KC, Jarrett M, Heitkemper MM. The relationship between daily life stress and gastrointestinal symptoms in women with irritable bowel syndrome. *J Behav Med*. 1997;20:177-193.
28. LaManca JJ, Peckerman A, Sisto SA, DeLuca J, Cook S, Natelson BH. Cardiovascular responses of women with chronic fatigue syndrome to stressful cognitive testing before and after strenuous exercise. *Psychosom Med*. 2001;63:756-764.
29. Soskolne V, Baras M, Palti H, Epstein L. Exposure to missile attacks: the impact of the Persian Gulf War on physical health behaviours and psychological distress in high and low risk areas in Israel. *Soc Sci Med*. 1996;42:1039-1047.
30. Ward A, Mann T. Don't mind if I do: disinhibited eating under cognitive load. *J Pers Soc Psychol*. 2000;78:753-763.
31. Norris FH. The range, magnitude, and duration of effects of natural and human-caused disasters: a review of the empirical literature. National Center for Post-Traumatic Stress Disorder, Department of Veterans Affairs [updated October 4, 2001]. Available at: http://www.ncptsd.org/facts/disasters/fs_range.html?printable=yes. Accessed October 17, 2001.
32. Samson AY, Bensen S, Beck A, Price D, Nimmer C. Posttraumatic stress disorder in primary care. *J Fam Pract*. 1999;48:222-227.
33. McFarlane AC, Atchison M, Rafalowicz E, Papay P. Physical symptoms in post-traumatic stress disorder. *J Psychosom Res*. 1994;38:715-726.
34. Ben-Zur H, Zeidner M. Anxiety and bodily symptoms under the threat of missile attacks: the Israeli scene. *Anxiety Res*. 1991;4:79-95.
35. Escobar Ji, Canino G, Rubio-Stipec M, Bravo M. Somatic symptoms after a natural disaster: a prospective study. *Am J Psychiatry*. 1992;149:965-967.
36. Phifer JF. Psychological distress and somatic symptoms after natural disaster: differential vulnerability among older adults. *Psychol Aging*. 1990;5:412-420.
37. Comay M. Political terrorism. *Ment Health Soc*. 1976;3:249-261.
38. Difede J, Apfeldorf WJ, Cloitre M, Spielman LA, Perry SW. Acute psychiatric responses to the explosion at the World Trade Center: a case series. *J Nerv Ment Dis*. 1997;185:519-522.
39. Shalev AY. Posttraumatic stress disorder among injured survivors of a terrorist attack: predictive value of early intrusion and avoidance symptoms. *J Nerv Ment Dis*. 1992;180:505-509.
40. Dremans S. Children of victims of terrorism in Israel: coping and adjustment in the face of trauma. *Isr J Psychiatry Relat Sci*. 1989;26:212-222.
41. Desivilya HS, Gal R, Ayalon O. Long-term effects of trauma in adolescence: comparison between survivors of a terrorist attack and control counterparts. *Anxiety Stress Coping Int J*. 1996;9:135-150.
42. Gidron Y, Gal R, Zahavi S. Bus commuters' coping strategies and anxiety from terrorism: an example of the Israeli experience. *J Trauma Stress*. 1999;12:185-192.
43. North CS, Nixon SJ, Shariat S, et al. Psychiatric disorders among survivors of the Oklahoma City bombing. *JAMA*. 1999;282:755-762.
44. Tucker P, Dickson W, Pfefferbaum B, McDonald NB, Allen G. Traumatic reactions as predictors of posttraumatic stress six months after the Oklahoma City bombing. *Psychiatr Serv*. 1997;48:1191-1194.
45. Tucker P, Pfefferbaum B, Nixon SJ, Dickson W. Predictors of post-traumatic stress symptoms in Oklahoma City: exposure, social support, peritraumatic responses. *J Behav Health Serv Res*. 2000;27:406-416.
46. Pfefferbaum B, Call JA, Lensgraf SJ, et al. Traumatic grief in a convenience sample of victims seeking support services after a terrorist incident. *Ann Clin Psychiatry*. 2001;13:19-24.
47. Moyers F. Oklahoma City bombing: exacerbation of symptoms in veterans with PTSD. *Arch Psychiatr Nurs*. 1996;10:55-59.
48. Benight CC, Freyaldenhoven RW, Hughes J, Ruiz JM, Zoschke TA, Lovallo WR. Coping self-efficacy and psychological distress following the Oklahoma City bombing. *J Appl Soc Psychol*. 2000;30:1331-1344.
49. Pfefferbaum B, Gurwirth R, McDonald N, Leftwich M, Sconzo G, Messenbaugh A, Schultz R. Post-traumatic stress among children after the death of a friend or acquaintance in a terrorist bombing. *Psychiatr Serv*. 2000;51:386-388.
50. Wolfe F, Smythe HA, Yunus MB, et al. The American College of Rheumatology 1990 criteria for the classification of fibromyalgia: report of the multicenter criteria committee. *Arthritis Rheum*. 1990;33:160-172.
51. Sigal LH, Chang DJ, Sloan V. 18 Tender points and the "18-wheeler" sign: clues to the diagnosis of fibromyalgia. *JAMA*. 1998;279:434.
52. Aaron LA, Bradley LA, Alarcon GS, et al. Perceived physical and emotional trauma as precipitating events in fibromyalgia: associations with health care seeking and disability status but not pain severity. *Arthritis Rheum*. 1997;40:453-460.
53. Steere AC. Musculoskeletal manifestations of Lyme disease. *Am J Med*. 1995;98:44S-51S.
54. Epstein SZ, Kay G, Clauw D, et al. Psychiatric disorders in patients with fibromyalgia: a multicenter investigation. *Psychosomatics*. 1999;40:57-63.
55. Taylor ML, Trotter DR, Csuka ME. The prevalence of sexual abuse in women with fibromyalgia. *Arthritis Rheum*. 1995;2:229-234.
56. Walker EA, Keegan D, Gardner G, Sullivan M, Bernstein D, Katon WJ. Psychosocial factors in fibromyalgia compared with rheumatoid arthritis, II: sexual, physical, and emotional abuse and neglect. *Psychosom Med*. 1997;59:572-577.
57. Sigal LH. The Lyme disease controversy: social and financial costs of misdiagnosis and mismanagement. *Arch Intern Med*. 1996;156:1493-1500.
58. Aaron LA, Buchwald D. A review of the evidence for overlap among unexplained conditions. *Ann Intern Med*. 2001;134:868-881.
59. Herkov MJ, Biernat M. Assessment of PTSD symptoms in a community exposed to serial murder. *J Clin Psychol*. 1997;53:809-815.
60. Crenniter D, Crocq L, Louville P, et al. Posttraumatic reactions of hostages after an aircraft hijacking. *J Nerv Ment Dis*. 1997;185:344-346.
61. Norris FH. Risk factors for adverse outcomes in natural and human-caused disasters: a review of the empirical literature. National Center for Post-Traumatic Stress Disorder, Department of Veterans Affairs [updated October 4, 2001]. Available at: http://www.ncptsd.org/facts/disasters/fs_riskfactors.html?printable=yes. Accessed October 17, 2001.
62. Stuart MR, Lieberman JA III. *The Fifteen Minute Hour: Practical Therapeutic Interventions in Primary Care*. 3rd ed. Philadelphia, Pa: WB Saunders Co; 2002.
63. Milgram NA. Stress and coping in Israel during the Persian Gulf War. *J Soc Issues*. 1993;49:103-123.
64. Curran PS. Psychiatric aspects of terrorist violence: Northern Ireland 1969-1987. *Br J Psychiatry*. 1988;153:470-475.
65. Director Tom Ridge Homeland Security Press Briefing [transcript]. CNNfn-Market Call. October 30, 2001. Transcript 103009cb.105.