

# Humor in Medicine

Howard J. Bennett, MD

**Abstract:** Humor and laughter have been a focus of attention in the popular media and in the medical literature. Despite statements about the health benefits of humor, current research is insufficient to validate such claims. There is support in the literature for the role of humor and laughter in other areas, including patient-physician communication, psychological aspects of patient care, medical education, and as a means of reducing stress in medical professionals.

Humor in medicine is not a specialty in the traditional sense. Although admittedly subjective, the study of humor can be divided into the following areas: humor and health, humor and patient-physician communication, humor and patient care, humor and the health professional, humor in medical education, and humor in the medical literature. Although numerous articles have been written about these areas individually, no reviews have been published recently that are representative of the field.<sup>1</sup> Also, because humor is difficult to study, much of what is published consists of authors' opinions or anecdotal experiences rather than well-controlled research. The purpose of this article was to provide a brief overview of the field, with a focus on what is known and not known about the value of humor in medicine. Humor in psychotherapy, not the subject of this article, has been reviewed elsewhere.<sup>2</sup>

## Humor and Health

Although the notion that humor and laughter are good for one's health is not new,<sup>3</sup> the benefits of humor gained renewed interest with the publication of Norman Cousins' article "Anatomy of an Illness."<sup>4</sup> In that article, and later in a book,<sup>5</sup> Cousins described how laughter and vitamin C helped his recovery from ankylosing spondylitis. According to Cousins, 10 minutes of laughter resulted in 2 hours of pain-free sleep and a reduction in his erythrocyte sedimentation rate. Despite criticism that appeared in the medical literature,<sup>6,7</sup> Cousins' account worked its way into the national consciousness. In recent years,

numerous articles attesting to the benefits of humor have been published. In addition to studying the origins and physiology of laughter,<sup>8-10</sup> authors have credited humor with better health<sup>11-12</sup> and improved immune function.<sup>13-15</sup>

Despite the popularity of humor therapy in the media and among some health care professionals, this treatment modality has not gained wide acceptance in mainstream medicine. In addition, two recent reviews criticized most of the studies in the field. Independently, Provine<sup>16</sup> and Martin<sup>17</sup> reached similar conclusions—that the majority of humor research either negates or is insufficient to support the stated claims. Both authors noted that studies are often poorly designed, have inadequate controls, or involve sample populations that are too small to support their conclusions.

The area that has shown the most promise is the use of humor to moderate a patient's response to pain. Research in this area is divided into two groups. The first group consists of experimental studies in which a patient's pain tolerance is evaluated during or after exposure to comedy videotapes.<sup>18,19</sup> In most cases, the ability to tolerate pain is enhanced after exposure to humorous movies. The second group consists of field research in which a patient's need for pain medication is studied after viewing comedies. In one well-controlled study, humorous movies reduced the need for postoperative analgesia in orthopedic patients.<sup>20</sup> No effect was noted on the first postoperative day, but the experimental group showed a 61% decrease in requests for minor analgesics (eg, aspirin, minor tranquilizers) on the second day after surgery. Interestingly, patients who did not have a say in which movie they watched experienced no improvement compared with the control group. This suggests that for the humor to have a positive effect on pain control, patients need to be active participants in the type of material selected.

## Key Points

- The study of humor in medicine can be divided into the following areas: humor and health, humor and patient-physician communication, humor and patient care, humor and the health professional, humor in medical education, and humor in the medical literature.
- Humor has the potential to relieve stress in patients and medical professionals.
- The area that has shown the most promise is the use of humor to moderate a patient's response to pain.

From the Department of Pediatrics, The George Washington University Medical Center, Washington, DC.

Correspondence to Howard J. Bennett, MD, Chevy Chase Pediatric Center, 5225 Connecticut Avenue, NW, Washington, DC 20015.

Accepted January 17, 2003.

Copyright © 2003 by The Southern Medical Association

0038-4348/03/9612-1257

## Humor and Patient-Physician Communication

Wender<sup>21</sup> recently reviewed the importance of humor in family medicine. He sees humor as a means of narrowing interpersonal gaps, communicating caring, and relieving anxiety associated with medical care. Patients also use humor to express frustration with their health and with the medical establishment. When patients quip to the doctor, they not only “let off steam” but also reveal hidden agendas. Physicians should pay attention to these overtures and use them as jump-off points to discuss a patient’s deeper concerns.

Laughter is therapeutic with children. It relieves tension, increases curiosity, and gives children a sense of mastery over their surroundings.<sup>22</sup> Humor also helps children overcome fear and anxiety associated with seeing the doctor.<sup>23</sup> Young children respond to simple interactions such as tickling, playing peek-a-boo, and sharing small toys. Older children appreciate jokes and riddles and a type of office-based slapstick, such as getting caught up in curtains or making mistakes when palpating parts of the child’s body. There are times when humor is inappropriate, however. Some patients do not appreciate humor, and it can be counterproductive to use it in their presence. Also, if a child is ill or the parent is distressed or angry, humor should be avoided.

Although many articles have been published about the value of humor in patient-physician communication, this area has not been studied thoroughly. Nevertheless, some interesting work has been done in related areas. Studies have shown that patient satisfaction correlates with the length of visits<sup>24,25</sup> and the emotional tone of medical encounters.<sup>26</sup> When patients think that they have connected with the physician, they are more satisfied with their care and are more likely to follow the doctor’s advice.<sup>27</sup> Gross et al<sup>28</sup> found that patients feel less rushed if physicians spend even a brief time chatting with them. They concluded that “physicians may improve patients’ sense that the doctor has given them adequate time by simply talking about the weather, telling a joke, or evoking conversation about something other than the health of the patient” (p 136). A recent study examined patient-physician communication as it relates to malpractice risks.<sup>29</sup> Primary care physicians with no history of malpractice claims differed from those who had experienced claims in three areas—physicians with no claims history spent more time with patients, used facilitative statements more often, and relied on laughter and humor more often during their encounters than did physicians who had been sued for malpractice.

## Humor and Patient Care

Introducing humor and laughter into the health care setting is intended to improve a patient’s mood and quality of life. Nurses have traditionally played a more active role than physicians in bringing humor to patients.<sup>30,31</sup> Given that nurses spend more time with patients, especially during hospitalizations, this finding is not surprising. Authors stress the

importance of assessing a patient’s appreciation of humor before using it as a nursing intervention.<sup>32</sup> It is equally important to use humor at the right time and place and to avoid humor that might alienate people.<sup>33</sup> For example, ethnic and sexist humor as well as sarcastic humor should not be used with patients.

Some hospitals have formal humor programs in which staff members and volunteers bring laughter to patients by using humor carts and humor resource centers. Humor carts are similar to standard hospital carts, except in this case patients select humorous books, videotapes, and other paraphernalia to brighten their day. When patients are allowed to laugh and to play, humor has the potential to distract them, at least temporarily, from physical pain.<sup>34</sup> Humor should never be forced on patients, and volunteers are taught to be mindful that patients and family members may be coping with tragic news or grieving the loss of a loved one.

Few authors have examined how patients themselves use humor in medical settings. In one observational study of hospitalized patients, humor and laughter were commonly witnessed among patients.<sup>35</sup> Patients used humor as a coping mechanism to reduce the anxiety and frustration associated with being in the hospital—the insecurity of being sick, having to deal with hospital routines and submission to authority figures, and the loss of control over bodily functions. In many cases, patients used “jocular griping,” which involves patients’ trading complaints about the hospital to let off steam and amuse each other. This behavior served to socialize patients and allowed them to transform individual complaints into group pleasure.

## Humor and the Health Professional

Numerous authors have written about the value of humor to health care professionals.<sup>36,37</sup> Humor helps doctors and nurses deal with the stress of caring for patients who are in pain. It also fosters good working relationships among colleagues and improves morale.<sup>38</sup> Having a positive attitude at work can extend to colleagues and support staff, and health care workers who greet colleagues with a smile usually get one in return.<sup>39</sup>

Medical students respond to the stress of their education by making fun of their courses, their professors, and the process of becoming a physician. The culmination of medical school humor occurs when students put on their annual spring follies. From a sociological perspective, one can appreciate these shows within the context of the kind of folk drama found in many different communities and cultures.<sup>40</sup> People enjoy making fun of their superiors and their own foibles, and mocking the established social order has always been a part of group life.<sup>41</sup>

Keller and Koenig<sup>42</sup> examined the strategies that emergency room physicians use to manage stress and prevent burn-out. The coping mechanisms that were the most effective

included drawing on past experiences, ignoring the stressful event by becoming involved with other activities, or seeing humor in the situation. The doctors with the best coping skills also reported the highest level of job satisfaction and sense of personal accomplishment. Humor is also used as a coping strategy by residents,<sup>43</sup> physicians in other specialties,<sup>44–46</sup> and allied health personnel.<sup>47</sup>

The term *gallows humor* describes a type of morbid humor that people use in the face of tragedy or death. Gallows humor is based on Freud's theory that joking relieves anxiety or repressed impulses and that laughter converts unpleasant feelings into pleasant ones.<sup>48</sup> The use of gallows humor in medical settings raises an important point—that all humor exists within a certain culture or subculture. As a result, what is funny to one group may not be appreciated by others or in different settings. A recent study found that experienced paramedics do not share their work-related humor with family and friends for fear that it will not be understood.<sup>49</sup> Consequently, it is important that patients be shielded from this type of medical humor so that they do not misinterpret the laughter as cruel or uncaring.<sup>50,51</sup>

## Humor in Medical Education

Physicians often use humor in lectures and other presentations.<sup>52,53</sup> Ziegler<sup>54</sup> found that 75% of physicians at Sydney Children's Hospital used humor in teaching. The staff members think that **humor reduces stress, increases motivation and comprehension, and aids socialization into the profession.** Furthermore, the doctors surveyed did not think that humor is distracting or unprofessional or that it trivializes the education process. Even William Osler was known to use humor in teaching his students and colleagues at The Johns Hopkins University.<sup>55</sup>

Although widely practiced, the use of humor in higher education has not been studied adequately. Naftulin et al<sup>56</sup> found that "student" ratings could be influenced by a teacher's style. In their study, an actor was enlisted to lecture to a group of mental health professionals. The actor was coached to use humor to make the presentation enjoyable, even though the lecture included double-talk and contradictory statements. The participants rated the speaker highly despite the lack of substance in the presentation. This study was criticized, however, because the authors did not attempt to measure what the students learned.<sup>57</sup> Ware et al<sup>58</sup> extended Naftulin et al's work and showed that humor and an enthusiastic style affect student ratings of the instructor as well as student test performance immediately after a lecture.

Ziv<sup>59</sup> studied the effects of humor during a 14-week statistics course for college students. The subject matter and teacher for both the control and experimental groups were identical, except that the teacher included the use of humor in the experimental group. At the end of the course, on the final examination, the students who were exposed to humor per-

formed significantly better than the group with which humor was not used. Ziv emphasized that humor works best in small doses—usually four or five jokes or cartoons per lecture—and that the humor should be relevant to the material taught.

## Humor in the Medical Literature

Humor has been published in the medical literature for more than 100 years<sup>60</sup> in a wide range of journals. Areas targeted for humor include medical school and residency, academia, medical language, writing and publishing, research, and clinical practice. In the past decade, humor anthologies of the medical and nursing literature have been published.<sup>61–63</sup>

Although light material occasionally appears in columns, most of the humor published in medical journals turns up sporadically as brief reports, essays, or verse. Parodies and amusing case reports appear in the medical literature both as full-length articles and as letters to the editor. The most famous of these reports describes the therapeutic effects of chicken soup to treat pneumonia.<sup>64</sup> The "patient" featured in this article became acutely ill and improved quickly after the prompt initiation of treatment with 500 ml chicken soup every 4 hours. The patient relapsed when he declined further treatment and subsequently had to be managed with more conventional treatment (IV penicillin and thoracotomy). In the latter part of the 20th century, *The New England Journal of Medicine* was known for publishing case reports in its correspondence section that described unusual and sometimes entertaining maladies of daily living.<sup>65</sup> These items were presented as brief case reports that included an amusing title or a medical twist that spoofed medicine or the author himself.<sup>66,67</sup>

Despite the wide range of humor published in the medical literature, no one has studied what physicians think about this material. Alfred Soffer, the editor of *Chest* from 1968 to 1993, received more letters in response to the chicken soup parody than any other article he published in his 30 years as an editor.<sup>68</sup> Although written "tongue-in-cheek," the tone of these letters was positive about the article, and many authors added their own "documentation" of chicken soup's therapeutic efficacy. Some physicians use published humor to lighten the atmosphere during lectures, bedside teaching, and case conferences (H Fischer, personal communication, November 2001). Nevertheless, other physicians think the medical literature should not be a forum for humor.<sup>69,70</sup> Concerns have been raised that people might be offended by this material or that it will mislead physicians who are searching for serious work in the literature.

## Conclusions

Humor has the potential to relieve stress in patients and medical professionals. Humor gives patients the opportunity to forget about their anxiety and pain, if only for a brief period of time. When doctors share humor with patients, they create lines of communication that encourage patients to dis-



cuss difficult issues. In effect, humor can put both parties at ease in a way that more formal types of communication cannot.<sup>71</sup> Medical professionals also use humor to deal with the tension that results from working in the modern medical environment. Doctors acquire their signature humor while in medical school. This behavior continues as students complete their training and begin working in the health care system. It is seen in the banter and jokes one witnesses on the wards and even in the humor doctors publish in the medical literature. Despite the preliminary work in this area, many questions remain. Do patients want their physicians to use humor on a regular basis in clinical interactions? Do physicians think that the medical literature is an appropriate forum for humor that satirizes the profession? Will the health benefits of humor be substantiated in future, well-controlled research? Only time and effort will answer these questions. It seems that at least in some areas, however, humor is off to a good start.

## Acknowledgment

I thank Debbie Gilbert, MLS, AHIP, for her assistance with manuscript preparation.

## References

- Robinson VM. *Humor and the Health Professions*. Thorofare, NJ, Slack, Inc., 1991, ed 2.
- Franzini LR. Humor in therapy: The case for training therapists in its uses and risks. *J Gen Psychol* 2001;128:170–193.
- Goldstein JH. A laugh a day: Can mirth keep disease at bay? *Sciences (New York)* 1982;22:21–25.
- Cousins N. Anatomy of an illness (as perceived by the patient). *N Engl J Med* 1976;295:1458–1463.
- Cousins N. *Anatomy of an Illness as Perceived by the Patient: Reflections on Healing and Regeneration*. New York, W.W. Norton, 1979.
- Angell M. Disease as a reflection of the psyche. *N Engl J Med* 1985;312:1570–1572 (editorial).
- Elgee NJ. Norman Cousins' sick laughter redux. *Arch Intern Med* 1990;150:1588.
- Black DW. Laughter. *JAMA* 1984;252:2995–2998.
- Fry WF Jr. The physiologic effects of humor, mirth, and laughter. *JAMA* 1992;267:1857–1858.
- Provine RR. *Laughter: A Scientific Evaluation*. New York, Viking, 2000.
- Edwards JR, Cooper CL. The impacts of positive psychological states on physical health: A review and theoretical framework. *Soc Sci Med* 1988;27:1447–1459.
- Arygle M. Is happiness a cause of health? *Psychol Health* 1997;12:769–781.
- Martin RA, Dobbin JP. Sense of humor, hassles, and immunoglobulin A: Evidence for a stress-moderating effect of humor. *Int J Psychiatry Med* 1988;18:93–105.
- Yoshino S, Fujimori J, Kohda M. Effects of mirthful laughter on neuroendocrine and immune systems in patients with rheumatoid arthritis. *J Rheumatol* 1996;23:793–794 (letter).
- Berk LS, Felten DL, Tan SA, et al. Modulation of neuroimmune parameters during the eustress of humor-associated mirthful laughter. *Altern Ther Health Med* 2001;7:62–76.
- Provine RR. Laughing your way to health, in Provine RR: *Laughter: A Scientific Evaluation*. New York, Viking, 2000, pp 189–207.
- Martin RA. Humor, laughter, and physical health: Methodological issues and research findings. *Psychol Bull* 2001;127:504–519.
- Cogan R, Cogan D, Waltz W, et al. Effects of laughter and relaxation on discomfort thresholds. *J Behav Med* 1987;10:139–144.
- Hudak DA, Dale JA, Hudak MA, et al. Effects of humorous stimuli and sense of humor on discomfort. *Psychol Rep* 1991;69:779–786.
- Rotton J, Shats M. Effects of state humor, expectancies, and choice on postsurgical mood and self-medication: A field experiment. *J Applied Soc Psychol* 1996;26:1775–1794.
- Wender RC. Humor in medicine. *Prim Care* 1996;23:141–154.
- Rothbart MK. Laughter in young children. *Psychol Bull* 1973;80:247–256.
- Bennett HJ. Using humor in the office setting: A pediatric perspective. *J Fam Pract* 1996;42:462–464.
- Hughes D. Consultation length and outcome in two groups of general practices. *J R Coll Gen Pract* 1983;33:143–147.
- Morrel DC, Evans ME, Morris RW, et al. The “five minute” consultation: Effect of time constraint on clinical content and patient satisfaction. *BMJ* 1986;292:870–875.
- Roter D, Hall J, Katz N. Relations between physicians' behaviors and analogue patients' satisfaction, recall, and impressions. *Med Care* 1987;25:437–451.
- Lochman JE. Factors related to patient satisfaction with their medical care. *J Community Health* 1983;9:91–109.
- Gross DA, Zyzanski SJ, Borawski EA, et al. Patient satisfaction with time spent with their physician. *J Fam Pract* 1998;47:133–137.
- Levinson W, Roter DL, Mullooly JP, et al. Physician-patient communication: the relationship with malpractice claims among primary care physicians and surgeons. *JAMA* 1997;277:553–559.
- Simon JM. Humor techniques for oncology nurses. *Oncol Nurs Forum* 1989;16:667–670.
- Beck CT. Humor in nursing: A phenomenological study. *Int J Nurs Stud* 1997;34:346–352.
- Erdman L. Laughter therapy for patients with cancer. *Oncol Nurs Forum* 1991;18:1359–1363.
- Hunt AH. Humor as a nursing intervention. *Cancer Nurs* 1993;16:34–39.
- Gibson L. Comedy carts, baskets, and humor rooms, in Buxman K, LeMoine A (eds): *Nursing Perspectives on Humor*. Staten Island, NY, Power Publications, 1995, pp 113–124.
- Coser RL. Some social functions of laughter: A study of humor in a hospital setting. *Human Relat* 1959;12:171–182.
- Cushner FD, Friedman RJ. Humor and the physician. *South Med J* 1989;82:51–52.
- Goodman JB. Laughing matters: Taking your job seriously and yourself lightly. *JAMA* 1992;267:1858.
- Burchiel RN, King CA. Incorporating fun into the business of serious work: The use of humor in group process. *Semin Perioper Nurs* 1999;8:60–70.
- Henneman B, Hanc J, Henneman PL. Smiley's people. *JAMA* 1989;262:2541 (letter).
- Segal D. Playing doctor, seriously: Graduation follies at an American medical school. *Int J Health Serv* 1984;14:379–396.
- Burson-Tolpin A. A “travesty tonight”: Satiric skits in medicine. *Lit Med* 1993;12:81–110.
- Keller KL, Koenig WJ. Management of stress and prevention of burnout in emergency physicians. *Ann Emerg Med* 1989;18:42–47.
- Schwartz AJ, Black ER, Goldstein MG, et al. Levels and causes of stress among residents. *J Med Educ* 1987;62:744–753.
- Eisendrath SJ, Link N, Matthay M. Intensive care unit: How stressful for physicians? *Crit Care Med* 1986;14:95–98.
- Jackson SH. The role of stress in anaesthetist's health and well-being. *Acta Anaesthesiol Scand* 1999;43:583–602.

46. Kash KM, Holland JC, Breitbart W, et al. Stress and burnout in oncology. *Oncology (Huntingt)* 2000;14:1621–1637.
47. Keller KL. The management of stress and prevention of burnout in emergency nurses. *J Emerg Nurs* 1990;16:90–95.
48. Freud S. *Jokes and their Relationship to the Unconscious*. New York, W.W. Norton, 1960, pp 229–230.
49. Rosenberg L. A qualitative investigation of the use of humor by emergency personnel as a strategy for coping with stress. *J Emerg Nurs* 1991;17:197–203.
50. Mandell HN. Frivolity in medicine: Is there a place for it? *Postgrad Med* 1988;83(8):24–28.
51. Anonymous. A funny thing happened on the way to recovery. *JAMA* 1992;267:1856–1861 (editorial).
52. Ziegler JB. Use of humour in medical teaching. *Med Teach* 1998;20:341–348.
53. Bennett HJ (ed). *The Doctor's Book of Humorous Quotations: A Treasury of Quotes, Jokes, and One-liners about Doctors & Health Care*. Philadelphia, Hanley & Belfus, 2001.
54. Ziegler JB. Humour in medical teaching. *Med J Aust* 1999;171:579–580 (editorial).
55. Blumer G. The jocular side of Osler. *Arch Intern Med* 1949;84:34–39.
56. Naftulin DH, Ware JE, Donnelly FA. The Doctor Fox lecture: A paradigm of educational seduction. *J Med Educ* 1973;48:630–635.
57. Kaplan RM. Reflections on the Doctor Fox paradigm. *J Med Educ* 1974;49:310–312.
58. Ware JE Jr, Williams RG. The Dr. Fox effect: A study of lecturer effectiveness and ratings of instruction. *J Med Educ* 1975;50:149–156.
59. Ziv A. Teaching and learning with humor: Experiment and replication. *J Exp Educ* 1988;57:5–15.
60. Bennett HJ. Humor in the medical literature. *J Fam Pract* 1995;40:334–336.
61. Bennett HJ (ed). *The Best of Medical Humor: A Collection of Articles, Essays, Poetry, and Letters Published in the Medical Literature*. Philadelphia, Hanley & Belfus, 1997, ed 2.
62. Kenefick C, Young AY (eds). *The Best of Nursing Humor: A Collection of Articles, Essays, and Poetry Published in the Nursing Literature*. Philadelphia, Hanley & Belfus, 1993, vol 1.
63. Kenefick C, Young AY (eds). *The Best of Nursing Humor: A Collection of Articles, Essays, and Poetry Published in the Nursing Literature*. Philadelphia, Hanley & Belfus, 1999, vol 2.
64. Caroline NL, Schwartz H. Chicken soup rebound and relapse of pneumonia: Report of a case. *Chest* 1975;67:215–216.
65. Hunter KM. An N of 1: Syndrome letters in *The New England Journal of Medicine*. *Perspect Biol Med* 1990;33:237–251.
66. Hershkowitz M. Penile frostbite, an unforeseen hazard of jogging. *N Engl J Med* 1977;296:178 (letter).
67. Bateman D. Syndrome readers scowl. *N Engl J Med* 1981;305:1595.
68. Goldfarb B. When scholars get goofy. *Am Med News* 1990;33(27):31–34.
69. Lorin M. Teething virus. *Pediatr Infect Dis J* 1986;5:722.
70. Hammer SJ, Charney E, Asnes RS, Gordon SG. Saddened not amused. *Pediatrics* 1993;91:680–681.
71. Rakel RE. Humor and humanism. *Houston Med* 1989;5:7–9.

**|** *Patience is power. With time and patience, the mulberry leaf becomes silk.*

—Chinese proverb