Laughter is the biological reaction of humans to moments or occasions of humor. It is an outward expression of amusement. Laughter is the behavioral response to humor.1 The American Association for Therapeutic Humor (AATH) defines therapeutic humor as: “any intervention that promotes health and wellness by stimulating a playful discovery, expression or appreciation of the absurdity or incongruity of life’s situations. This intervention may enhance health or be used as a complementary treatment of illness to facilitate healing or coping, whether physical, emotional, cognitive, social, or spiritual.”2 Gelotology (from the Greek root gelos (to laugh), is a term coined in 1964 by Dr. Edith Trager and Dr. W.F. Fry to describe the scientific study of laughter.3

FACTS AND FIGURES

- On average, a child laughs 300 times a day while an adult laughs only 17 times a day.
- The majority of men report that their laughter is a chuckle, and the majority of women report that theirs is a giggle.
- Adults between the ages of 18 and 34 report laughing the most.
- Most laughter does not come from listening to jokes; it comes from spending time with family and friends.
- People tend to laugh more when in groups. People should surround themselves with others who laugh, because laughter is contagious.
- Smiling is a mild, silent form of laughing.
- Babies start to laugh at about four months of age.

THE MECHANISM

There are four potential mechanisms by which humor might influence physical health. First, physiological changes in the body may result from vigorous laughter, the results being relaxed muscles, improved respiration, enhanced circulation, increased production of endorphins, and decreased production of stress-related hormones. Second, a positive emotional state may increase pain tolerance, enhance immunity, and undo cardiovascular ill-effects. Third, using humor a moderating adverse effects of stress. Finally, humor may provide another indirect benefit to health by increasing one’s level of social support.

PSYCHOLOGICAL AND PHYSIOLOGICAL BENEFITS OF HUMOR

There are enumerable psychological and physiological benefits of humor.

Psychological benefits of humor
1. Reduces anxiety
2. Reduces tension
3. Reduces stress
4. Reduces depression
5. Reduces loneliness
6. Improves self-esteem
7. Restores hope and energy
8. Provides a sense of empowerment and control

Physiological benefits of laughter
1. Improves mental functioning
2. Exercises and relaxes muscles
3. Improves respiration
4. Stimulates circulation
5. Decreases stress hormones
6. Increases immune system defenses
7. Increases production of endorphins

THE HEALTH BENEFITS OF HUMOR AND LAUGHTER

Humor used therapeutically can enhance a patient’s well-being. Norman Cousins, a patient diagnosed with ankylosing spondylitis in 1964, was the first to formally study how it affects the quality of life. He developed his own therapy program including humor to treat himself when suffering with pain. He discovered a cumulative decrease in his inflammation. Further, he found he could enjoy two hours of pain-free sleep after ten minutes of sustained laughter. After his recovery, Cousins joined the staff at UCLA Medical School to establish a Humor Research Task force to pursue clinical research on humor.4

The following are some of the researched benefits of laughter

- Blood Pressure – People, who laugh heartily, on a regular basis, have a lower standing blood pressure
than does the average person. When people have a good laugh, initially the blood pressure increases, but then it decreases to levels below normal.⁵

- **Hormones** – Laughter reduces at least four of the neuro-endocrine hormones associated with stress. These are epinephrine, cortisol, dopamine, and growth hormone.

- **Immune System** – Clinical studies by Lee Berk at Loma Linda University have shown that laughter strengthens the immune system by increasing infection-fighting antibodies.⁶

- **Muscle Relaxation** – Belly laughs result in muscle relaxation. While you laugh, the muscles that do not participate in the belly laugh relax. After you finish laughing, those muscles involved in the laughter start to relax. Therefore, the action takes place in two stages.⁷

- **Pain Reduction** – Laughter allows a person to “forget” about pains such as those associated with aches, arthritis, etc. In 1987, Texas Tech psychologist Rosemary Cogan used the discomfort of a pressure cuff to test the medical benefits of laughter on pain management. Subjects who watched a 20-minute Lily Tomlin routine could tolerate a tighter cuff than those who had watched an informational tape or no tape at all.⁸

- **Brain Function** – Laughter stimulates both sides of the brain to enhance learning. It eases muscle tension and psychological stress, which keeps the brain alert and allows people to retain more information.

- **Respiration** – Frequent belly laughter empties your lungs of more air than it takes in, resulting in a cleansing effect – similar to deep-breathing. This deep breathing sends more oxygen-enriched blood and nutrients throughout the body.

- **The Heart** – Laughter, along with an active sense of humor, may help protect you against a heart attack, according to a study at the University of Maryland Medical Center. The study, which is the first to indicate that laughter may help prevent heart disease, found that people with heart disease were 40 percent less likely to laugh in a variety of situations compared to people of the same age without heart disease.⁹

### HUMOR AND THE HEALTH PROFESSIONAL

There is immense value of humor for health care professionals. 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. 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. One must not forget that smile is the shortest distance between the two people. By blending with humor and laughter we can bring health, happiness and harmony within ourselves and our patients.¹⁰

### REFERENCES