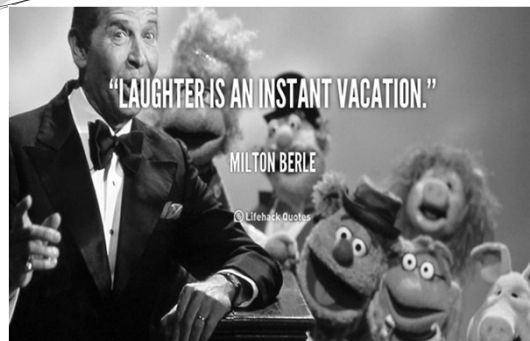


**USE OF HUMOR IN  
THERAPEUTIC SETTINGS FOR  
TBI SURVIVORS**

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Program Manager



**Think of your favorite  
joke. (Clean, please.)  
Tell it to someone  
around you.**

**Any one want to share  
the one you told...or  
heard?**

**I USED TO HATE FACIAL HAIR....BUT  
THEN IT STARTED TO GROW ON ME.**



- I. Introduction
- II. Global physiological effects of Humor
- III. Neuroanatomy of Humor comprehension and perception
- IV. Types of Humor
- V. Types of jokes
- VI. Examples of TBI survivors' senses of humor
- VII. Use of humor in shaping behaviors
- VIII. General use of humor (with TBI and peers)

WHAT DID THE BUFFALO SAY WHEN HIS SON LEFT ?

BISON!

**I. Introduction**

Humor is the quality of being funny or amusing.

Humor is subjective. (In the "right prefrontal lobe" of the beholder.)

Humor is generally considered positive.

Humor is a complicated experience.

Humor isn't the only thing that elicits laughter (e.g. tickling, pseudobulbar affect)

**II. Global Physiological Effects of Humor**

A. Intense laughter can cause spasmodic contraction of skeletal muscles throughout the body, triggering profound physiological effects. (Sahakian, A. & Frishman, W. H. 2007)

**II. Global Physiological Effects of Humor (cont'd)**

B. 10-15 minutes of genuine laughter a day produces a 10-20% increase in heart rate and energy expenditure; about 40 calories. (Buchowski, M.S., Majchrzak, K.M., B lomquist, K., Chen, K.Y., Byrne, D.W., Bachorowski, J.A. 2006)

## **II. Global Physiological Effects of Humor (cont'd)**

C. Learning ability improved by 14%, and delayed recall by 23% in a 2014 randomized, control study of a group of adults who self selected humorous videos, as opposed to a group who didn't. (Bains, G.S., Berks, L.S., Daher, N., Lohman, E., Schwab, E., Petrofsky, J., Deshpande, P. 2014)

## **II. Global Physiological Effects of Humor (cont'd)**

D. Natural killer cell (lymphocytes best known for killing virally infected cells, and detecting and controlling early signs of cancer) activity increased in a study's participants with laughter, as they watched a comedy, as opposed to a second group which watched a documentary. (Christie and Moore, 2005)

**I'M THINKING ABOUT GETTING MY  
SPINE REMOVED.....**

**I FEEL LIKE IT'S ONLY HOLDING ME  
BACK.**

## **III. Neuroanatomy of Humor comprehension and perception**

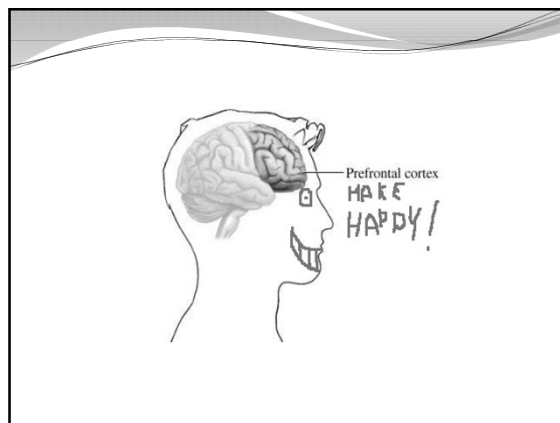
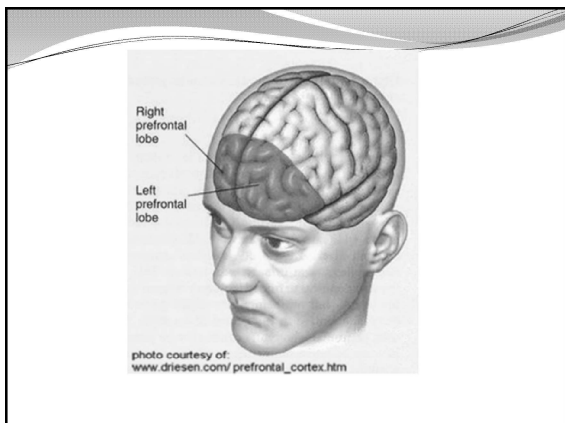
**A. Right, prefrontal cortex plays most important role in comprehension of humor. (P. Shammi, D. T. Stuss, 1999; Shibata M., Terasawa Y., Osumi T., Masui K., Ito Y., Sato A., Umeda S., 2016)**

1. Of patients who had focal damage in various areas of the brain, the right frontal lobe, most disrupted the ability to appreciate humor. The individuals with damage in this brain region also reacted less, with diminished physical or emotional responses (laughter, smiling). Performance on the humor appreciation tests used were correlated also with tests assessing cognition. The ability to hold information in mind (working memory) was related to both verbal (jokes) and non-verbal (cartoon) tests of humor appreciation. In MRI tests, jokes appeared to "tickle" the right frontal lobe.

## **III. Neuroanatomy of Humor comprehension and perception (cont'd)**

**B. Humor engages a core network of cortical and subcortical structures, including temporo-occipito-parietal areas involved in detecting and resolving incongruity (mismatch between expected and presented stimuli); and the mesocorticolimbic dopaminergic system and the amygdala, key structures for reward and salience processing. (Vrticka, Pascal, & Black, Jessica M., & Reiss, Alan L. 2013)**

1. Through MRI findings, determined a relationship between the aforementioned parts of the brain and humor perception. Correlation is significant because it shows the specific areas perceive incongruity, and the reward center of the brain.



**WHY DO MILKING STOOLS ONLY HAVE  
3 LEGS?**

**BECAUSE THE COW HAS THE UDDER.**

#### **IV. (Some) Types of Humor**

##### **A. Incongruity (Irony)**

1. A sudden shift from what was expected, to what is stated or shown.
2. For example, "When is a door not a door? When it's ajar."
3. Not all incongruity is humorous. (e.g. parental cruelty, Polish Muslims)

##### **B. Exaggeration (Hyperbole)**

1. Humor through exaggerating to the point of the absurd.
2. For example, "If I told you once, I told you a million times, 'Stop exaggerating!'"

##### **C. Superiority**

1. Makes one laugh because they feel superior to the subject of the joke.
2. For example, "Did you hear about the tragedy in Hamtramck? People were trapped on an escalator for 4 hours."

##### **D. Self deprecatory**

1. Humor created by criticizing, belittling, or undervaluing one's self.
2. For example, "My parents told me I could become anything I want in life, so I became a moron."

#### **V. Types of jokes**

##### **A. Question/Response**

1. Knock, knock (Examples)
2. Chicken crossed the road (Examples)
3. "How many \_\_\_\_\_ does it take?"

##### **B. Story Jokes**

1. A joke of two or more sentences that sets up a scenario, and ends with a "punchline".
2. "A pun, a play on words, and a limerick walk into a bar. No joke."

##### **C. Puns**

1. A joke exploiting the different possible meanings of a word or the fact that there are words that sound alike but have different meanings.
2. For example, "The shovel was a ground breaking invention." , or "Using anything with Velcro is a rip-off."


**IV. Types of jokes (cont'd)**  
D. Musical parodies  
1. Changing lyrics and/or musical styling of a song to achieve humor  
2. For example, Weird Al Yankovic; "Like A Surgeon" to "Like a Virgin", "Eat it" to "Beat It"  
3. Other Examples

**WHAT DID ONE DNA SAY TO THE OTHER DNA?**

**DO THESE GENES MAKE ME LOOK FAT?**

**VI. Examples of TBI survivors' senses of humor**


**EVERYONE HAS PHOTOGRAPHIC MEMORY SOME JUST DONT HAVE THE FILM**



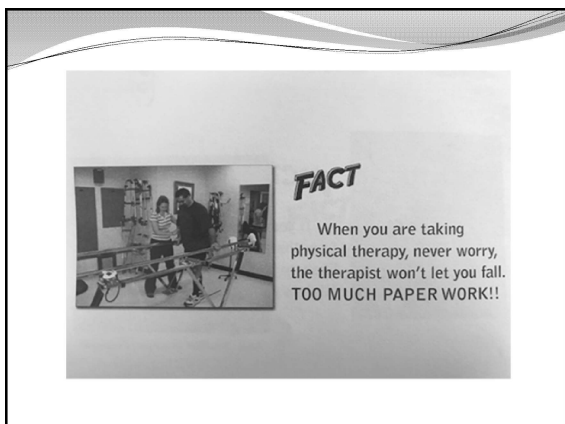
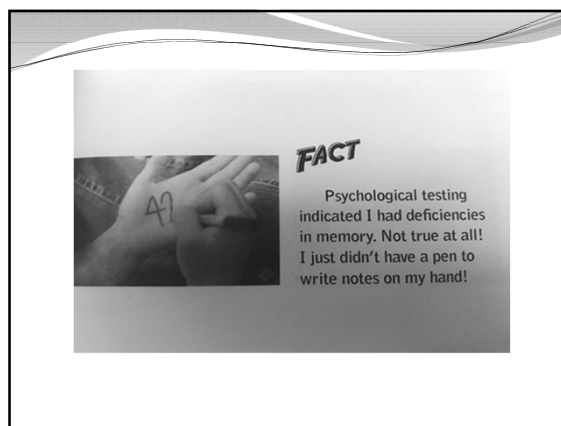
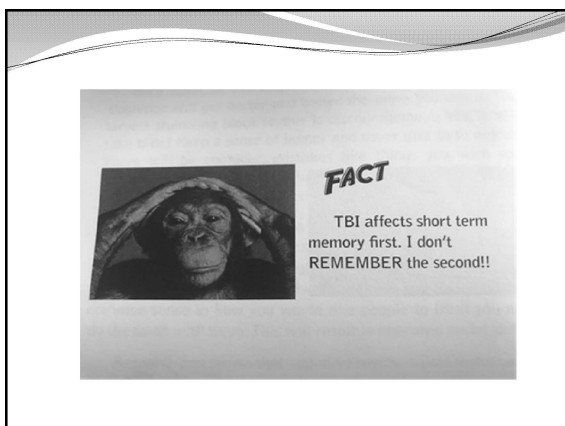
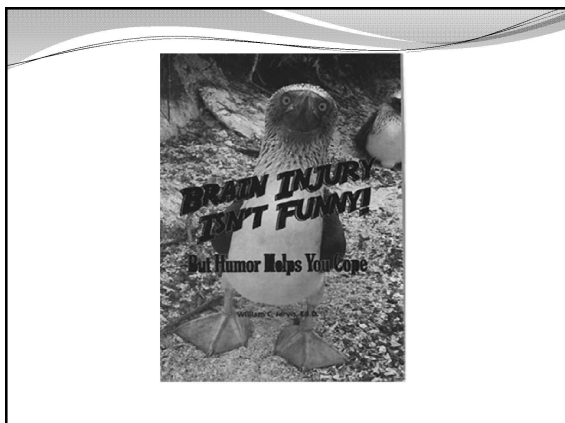
**TBI**  
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Life after Brain Injury...

**I now have the unique ability to hide my own Easter eggs.**



**TBIHOPE AND INSPIRATION**



**GREG**  
Our 65 year old "master of the pun"  
Ask him, what's up, he replies "The ceiling.", or "The sky."  
Ask him , if he's all right, he'll tell you "No; I'm half left."  
Ask him how he is, he'll tell you "Older."  
Ask him what's going on, he'll answer, "When?"  
Same old s \_ \_ t, different .....Dave.

**"JONAH"**

Our self deprecating master of the short jokes

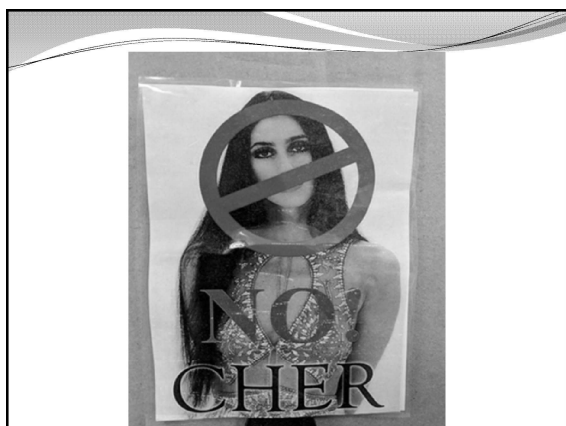
Nicknamed "Shorty"

"I'll see you shortly."

"Sorry; I didn't mean to get short with you."

"I'd borrow you money, but I'm a little short."

**NO SHARE  
POLICY!**



**VII. Use of humor in shaping behaviors**

**A. Identify the target behavior.** (e.g. Noncompliance of a task, dysregulation/outburst)

**B. With empathy, Attempt to assess the reason for the behavior, such as..**

1. Fatigue
2. Pain
3. Control
4. Negative experience earlier in day

**C. Try to deflect the behavior through humor to "break the ice", for example**

1. In voc setting, we'll use exaggeration; "Stop going so fast; the other workers can't keep up with you; we're going to run out of parts!"
2. In therapy setting, try self deprecation; "I'm getting tired just watching you work so hard."

**VII. Use of humor in shaping behaviors (cont'd)**

3. "Slapstick" humor (Video)

**VIII. General use of humor (with TBI and peers)**

A. Usual rules of "PC" conversation: No politics, religion, or salary/money.

B. Laugh *with*, not *at* them.

C. If someone else is telling a joke, and you know the punchline...let them finish it.

D. Laugh at yourself!

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## SPECIAL THANKS/CREDITS

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THANK YOU FOR  
 ATTENDING THIS  
 BREAKOUT SESSION!

