

Investment in research saves lives and money



facts about:

Eating Disorders

What is an eating disorder?

The term eating disorder (ED) refers to a range of psychological disorders characterized by serious disturbances in eating behavior and weight regulation. Two common EDs are *anorexia nervosa* and *bulimia nervosa*. Anorexia nervosa (AN) is characterized by low weight brought on by excessive food restriction and exercise, and in extreme cases can result in organ failure. Bulimia nervosa (BN) is characterized by periods of binge eating followed by periods of purging, and in severe cases can result in electrolyte imbalance and heart attack. With limited research on EDs, no clear cause is known and the data is lacking. However, genetic, environmental, and psychological factors all appear to play a role.

NATIONAL INSTITUTES OF HEALTH, 2014.

The Cost:

- From 1999 to 2009, total hospital costs for EDs increased 68%.[‡]
- An average hospital stay to treat an ED lasts 8.1 days and costs \$9,400.[‡]
- Mental health comorbidities like anxiety and depression occur in almost half of all ED patients and are associated with lower odds of employment and \$19,374 lost in average annual earnings.⁺

[‡] AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, 2011.
^{*} SULLIVAN, F ET AL. AM JOURNAL OF PSYCHIATRY. 1995;152(7):1073-1074.
⁺ SAMNALIEV, M ET AL. PREVENTIVE MEDICINE REPORTS, 2015: 2: 32-34.
[^] WORLD HEALTH ORGANIZATION, 2014.
[•] MARQUES, L ET AL. INT J OF EATING DISORDERS. 2011;44(5):412-420.

SAVING LIVES
SAVING MONEY

HOW RESEARCH SAVES LIVES:

- Without treatment, as many as 20% of ED patients may die because of heart failure, suicide or starvation. With treatment, this number drops to 2-3%.^{*}
- Treatment for EDs can last months and years. However, increased research into early intervention with evidence-based care is improving and shortening the process for more and more patients.^{*}
- Health services research has indicated a 39% decline in cardiac dysrhythmias among ED patients between 2007 and 2009.[‡]

HOW RESEARCH SAVES MONEY:

- Patients with mental health comorbidities have an average of \$1,993 more in annual medical costs, pointing to the need for further research into comprehensive treatment options.[^]
- FDA-approved antidepressant medications may help in treating co-occurring anxiety or depression in ED patients, allowing for more effective treatment and reducing hospitalization time and healthcare costs.[‡]

^{*} NATIONAL ASSOCIATION OF ANOREXIA NERVOSA AND ASSOCIATED DISORDERS, 2014.
⁺ AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, 2011.
[^] SAMNALIEV, M ET AL. PREVENTIVE MEDICINE REPORTS, 2015: 2: 32-34.
[‡] NATIONAL INSTITUTES OF HEALTH, 2014.

"If you think research is expensive, try disease."

- Mary Lasker 1901-1994

Today:

- Total number of hospitalizations for EDs rose 24% between 1999 and 2009. For children under 12, the number increased by 72%.[‡]
- AN has the highest mortality rate of any psychiatric disorder. The annual mortality rate associated with AN is more than 12 times higher than the annual death rate for all causes for females 15-24 years old.^{*}
- From 1999-2009, the share of hospitalizations for males with EDs rose from 6.5% to 10%.[‡]
- According to a 2014 World Health Organization report, as many as 1,200 people died from EDs in the U.S. in 2012.[^]
- The prevalence of AN is similar across all ethnic groups. However, BN is more prevalent among Latinos and African Americans than non-Latino whites.[•]

survivor:



NAME: Naomi Charalambakis
 AGE: 25
 CONDITION: Anorexia Nervosa (AN)

Naomi first started her battle with an eating disorder when she was in the 8th grade. She remembers seeing her body mature at a faster pace than her peers and thinking that she must do something and would do anything to fight against biology. She began restricting calories, sometimes down to 200 a day, and running excessively. With every pound lost, she felt prettier and more perfect.

She finally received help when her weight dropped to 60 pounds. Her doctor told her that it was a miracle that her heart was even still beating. He helped her recover and explained to her that AN was not her fault, but rather a very real and serious disease, and through countless counseling sessions he worked to "re-train" her brain. Thanks to her doctor's understanding of the inherent complexities of EDs, he and Naomi identified the reasons for the negative thoughts that led to her unhealthy relationship with food and he helped her to fully understand how important being healthy is; a process she describes as liberating. These sessions coupled with daily checkups for her heart rate, blood pressure, and white blood cell counts allowed her to finally get on a path to recovery.

Her fight is still a daily struggle, but it reminds her that she is fortunate to be alive. Naomi is now studying to become a neuroscientist and with her story, she hopes to highlight the need for more research into this debilitating, often deadly, disease and to give a voice to those who are still trapped in an ED.

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Hope for the Future:

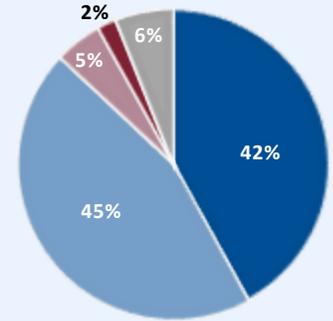
- **GETTING TO THE SOURCE:** Most treatments for EDs focus on therapy to restore the body to a healthy weight, but treatments for the root physiological and psychological causes of eating disorders are still rare. There is a growing body of research on the serotonin receptors 5-HT1A and 5-HT2A and their unique roles in mood regulation and self-control. Treatment for AN may one day include drugs that interact with these receptors.*
- **MORE EFFECTIVE TREATMENTS:** Researchers at Stanford University School of Medicine are dedicated to developing evidence-based interventions for EDs. Among the topics being addressed by this research are improving the cost-effectiveness of treatment options and exploring the underlying causes through the use of neuropsychological testing and fMRI. The researchers in the program are committed to finding effective treatment options and have even developed a training program for clinicians treating EDs.^

* RIKANI, A ET AL. ANNALS OF NEUROSCIENCES. 2013;20(4):157-161.
 ^ STANFORD UNIVERSITY ED RESEARCH PROGRAM, 2015.

National Poll: Majority Agree Scientific Innovations Improve Standard of Living

Do you agree with the following statement – Scientific innovations are improving our standard of living.

■ Strongly Agree ■ Somewhat Agree
■ Somewhat Disagree ■ Strongly Disagree
■ Don't Know



A RESEARCH!AMERICA AND SCIENCE DEBATE POLL OF U.S. ADULTS CONDUCTED IN PARTNERSHIP WITH ZOGBY ANALYTICS IN SEPTEMBER 2015.

Research Dollars per Affected Individual:



SOURCES: NATIONAL INSTITUTES OF HEALTH, 2014.
 CENTERS FOR DISEASE CONTROL AND PREVENTION, 2014.

Patient Advocate Testimonial:

Christie, now 32, battled an eating disorder in her teens and early twenties. Thanks to a strong support network, she fully recovered and has dedicated her life to helping others recover. Christie now leads an organization that bridges gaps in treatment for those suffering from EDs in the Washington, DC area.

“From here on out, my passion is to reach others who are struggling and to let them know they are not alone. There is always hope, and freedom is possible.”



CHRISTIE DONDERO
 EXECUTIVE DIRECTOR, ROCK RECOVERY
 EATING DISORDER SURVIVOR

The Bottom Line:

Eating disorders are very real and very serious diseases that affect all ages and ethnicities. Research has brought us closer to understanding the causes of eating disorders, but there is still much work to be done. Continued research is the key to improving the health and recovery of millions of individuals who are still suffering.

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