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The features marked with a star (\*) are based entirely on material taken straight from standard research (and other Official and Therefore Always Correct) literature. Many of the other articles are genuine, too, but we don't know which ones.



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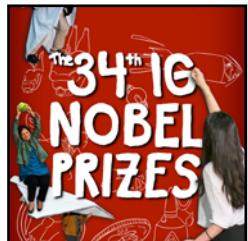
There's always new improbable — it's not what you expect! — stuff on the **Improbable Research blog** at [IMPROBABLE.COM](https://improbable.com)

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**On the Front Cover**  
Highlights from the  
24th First Annual Ig  
Nobel Prize ceremony



**On the Back Cover**  
During the Ig Nobel  
Prize Ceremony  
Kara Lee Rice drew  
blackboard tributes to  
the new winners. Here  
she is honoring the  
2024 Peace Prize.



### Notice!

Beginning with the next issue, the magazine price will increase, the first change in almost a decade.

### Some Coming Events

(See [IMPROBABLE.COM](https://improbable.com) for details of these and other events.)

**November 17, 2023** —  
Ig Nobel Face-to-Face,  
Miraikan, Tokyo, Japan

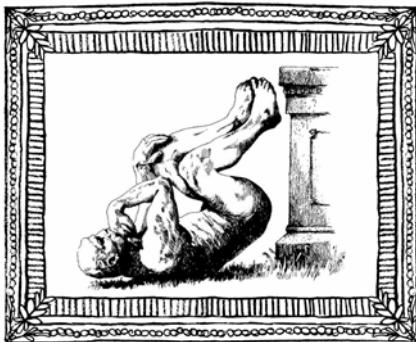
**January 2025** —  
Arisia,  
Boston, Massachusetts, USA

**February 14, 2025** —  
AAAS Annual Meeting,  
Boston, Massachusetts, USA

**March/April 2025** —  
Ig Nobel EuroTour

**May 23-26, 2025** —  
Balticon,  
Baltimore, Maryland, USA

**September 2025** —  
35th First Annual  
Ig Nobel Prize ceremony



# IMPROBABLE RESEARCH: FECES BOMB CALORIMETRY, FEAR OF FEAR

*Improbable theories, experiments, and conclusions*  
compiled by Evelyn Good, *Improbable Research staff*

## Lovelady and Stork's Improved Method for Preparation of Feces for Bomb Calorimetry

"An Improved Method for Preparation of Feces for Bomb Calorimetry," Hubert G. Lovelady and Emmett J. Stork, *Clinical Chemistry*, vol. 16, no. 3, March 1970, pp. 253-254. The authors, at the U.S. Air Force School of Aerospace Medicine, report:

As a preliminary to bomb calorimetry, weighed, homogenized fecal slurries are prefrozen and lyophilized. Advantages of this method over the method of drying in a vacuum oven include: more moisture is removed from the sample initially, drying time is reduced from 48 h to 16 h, grinding is eliminated and objectionable odors are eliminated during sample processing.

## Fear of Fear

"'Angst vor der Angst': Ein Neues Konzept in der Diagnostik der Angststörungen" ("'Fear of Fear': A New Concept in the Assessment of Anxiety Disorders"), A. Ehlers and J. Margraf, *Verhaltenstherapie*, vol. 3, 1993, pp. 14-24. The authors, at the University of Göttingen and at Freie University, Berlin, Germany, explain:

Overall, our studies support the relevance of the 'fear of fear' concept in explaining phobic avoidance and in the assessment of anxiety disorders.

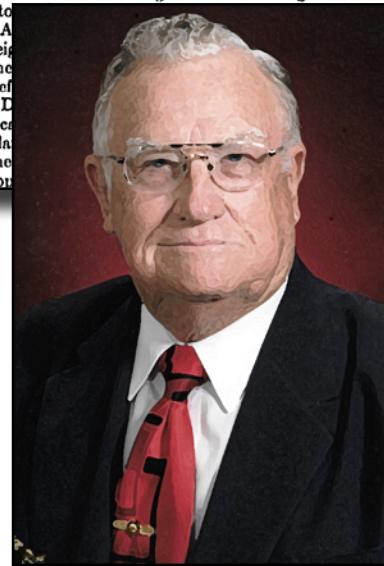
### An Improved Method for Preparation of Feces for Bomb Calorimetry<sup>1</sup>

Hubert G. Lovelady and Emmett J. Stork

As a preliminary to bomb calorimetry, weighed, homogenized fecal slurries are prefrozen and lyophilized. Advantages of this method over the method of drying in a vacuum oven include: more moisture is removed from the sample initially, drying time is reduced from 48 h to 16 h, grinding is eliminated and objectionable odors are eliminated during sample processing.

THE CLASSICAL PROCEDURE for preparing feces for

water mixture is homogenized in a Waring Blender for 3 to 5 minutes. A weighed amount of feces is weighed into a graduated cylinder. The sample is then dried in a vacuum oven at 60°C for 48 hours. The dried sample is then ground in a Wiley mill.



Emmett J. Stork, co-author of the study  
"An Improved Method for Preparation  
of Feces for Bomb Calorimetry."  
Drawing by Nan Swift.

Verhaltenstherapie 1993;3:14-24

### «Angst vor der Angst»: Ein neues Konzept in der Diagnostik der Angststörungen

#### 'Fear of Fear': A New Concept in the Assessment of Anxiety Disorders

A. Ehlers<sup>a</sup>, J. Margraf<sup>b</sup>

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#### Zusammenfassung und Schlüsselwörter

Bei der Diagnostik von Angststörungen finden in der jüngsten Zeit interne Angstauslöser, wie körperliche Symptome und katastrophische

#### Summary and Key Words

In the diagnosis of anxiety disorders, internal anxiety triggers such as physical symptoms or catastrophic cognitions have recently created