

Guinea pig

guinea pig *n* - [Origin unknown; according to *The Oxford English Dictionary*, perhaps because the animal was thought to resemble the young of the Guinea Hog (species *Potamochoerus porcus*; according to 1996 electronic *Encyclopedia Britannica* the species is a member of the family Suidae resembling a hog but with long body hair and tassels of hair on its ears; coat color ranges from reddish brown to blackish, with black and white face markings and a white crest on the back; native to African forest and scrub regions of Guinea and other regions south of the Sahara); or the name of Guinea may have been applied loosely, as in some instances, as a designation for an unknown distant country. Confusion with Guiana seems unlikely.¹] 1. Any of variously colored, stout-bodied, short-eared, nearly tailless, South American burrowing rodents of the genus *Cavia cobaya* widely domesticated as pets and for use in **research**. 2. A person needlessly or frivolously experimented upon. 3. A person subjected to untested procedures. 4. A person exposed to procedures having no intrinsic **benefit**. 5. A person exposed to procedures considered to entail more **risks** than benefits. 6. A person enrolled into a **trial** considered to violate existing **ethics** or **norms** or **standards** for care. **Usage note:** In regard to people, use with caution, especially in relation to implied claims or assertions of wrong doing. Usually evocative and emotion-laden and intended to suggest needless experimentation, experimentation so poorly done so as to have no benefit, or use of persons as objects of experimentation in settings involving undo risk or sacrifice. In the context of **trials**, often used in regard to a subset of persons considered to have been denied adequate **treatment** or to have been needlessly exposed to risk without the prospect of offsetting benefit; often in references to the subset receiving the **control treatment** in a **placebo-controlled** trial. Most uses in the context of trials, whether or not intentional, have the effect of impugning the judgment of **sponsors** of the trial for having funded it and of **institutional review boards** and **ethics committees** for having approved the trial.

A *guinea pig*, is any of variously colored, stout-bodied, short-eared, nearly tailless, South American burrowing rodents of the genus *Cavia cobaya* widely domesticated as pets and for use in research. It is curiously named because, although the animal is native to South America, its name would suggest African origins. According to *The Oxford English Dictionary* (1970), its name may be due to the fact that the animal was thought to resemble the young of the Guinea Hog (species *Potamochoerus porcus*; according to 1996 electronic *Encyclopedia Britannica* the species is a member of the family Suidae resembling a hog but with long body hair and tassels of hair on its ears; coat color ranges from reddish brown to blackish, with black and white face markings and a white crest on the back; native to African forest and scrub regions of Guinea and other regions south of the Sahara) or the name of Guinea may have been applied loosely, as in some instances as a designation for an unknown distant country.

Ellis Parker Butler in his story, *Pigs is pigs* (1906, McClure, Phillips and Company, New York) takes advantage of the confusion. The story centers on a dispute between a man and a railway agent when the man appears with his son to claim a shipment of a pair of guinea pigs for his son. The agent contended that "pigs is pigs" and insists on charging for the shipment as "pigs". The agent is unaffected by efforts of the father to "educate" as to the nature of the species. He steadfastly refuses to release the animals until the shipping fee for "pigs" is paid. The standoff means that the agent is keeper of the animals until the dispute can be resolved – by writing to his boss and his boss, in turn, writing a professor of zoology who just happened to be in South America at the time. Months drag by with no resolution in sight. Eventually the agent relents, but only after having seen the number of animals in his care grow from 2 to 984! (The expression, *pigs is pigs and data is data*, after the title of the book, was coined by Jerome Cornfield²; biostatistician: 1912 - 1979)

But guinea pig is also a *subject of research, experimentation, or testing* (*Webster's 9th New*

Collegiate Dictionary) and more specifically sometimes *a person who is used as a subject for experimentation* (*The American Heritage Dictionary*; 2nd ed).

Examples of usage in this context, as contained in the Oxford English Dictionary (1973) include:
 GB Shaw (1913): Quintessence of Ibsenism Now Completed: The ... folly which sees in the child nothing more than the vivisector sees in a guinea pig: something to experiment on with a view to rearranging the world.

U Sinclair (1920) Brass Check (xviii): Say to yourself that Upton Sinclair is a guinea-pig.

HG Wells (1923) Men Like Gods: And may I ask...the nature of this treatment of yours, these experiments of which we are to be the guinea pigs, so to speak? Is it to be anything in the nature of a vaccination?

R Bannister (1955) First Four Minutes: In some of my experiments I used other athletes as guinea pigs.

Daily Tel (1961; 13 Oct): 'You can't detect any difference unless you know it's synthetic material,' one guinea-pig commented yesterday.

The typical usage in the context of trials is pejorative, implying needless, frivolous, or even dangerous experimentation on persons as objects of research. The term is justified in references to persons made to participate in experimentation against their will, eg, as in Nazi Germany, or who are experimented upon without their knowledge or consent, but most other uses are intended to be evocative as seen below by sample headlines and quotes from newspaper articles as identified in the LEXIS-NEXIS database.

Headlines

Swallowing bitter pills for pay: The trials of guinea pigs (NY Times, 29 September 1996)

Testing drugs for pay or posterity; Phoenix full of 'guinea pigs' (The Arizona Republic; 26 June 1996)

These little guinea pigs went to market (The Scotsman Publications Ltd; 12 May 1996)

Elderly patients used as guinea pigs (The Independent; 20 March 1996)

Excerpts from articles

Its approval, she said, would send "a message that it's all right to use women's lives in a guinea-pig fashion." (*Panel advises FDA to allow abortion pill*; NY Times, 20 July 1996)

"... quality of life of our ill loved ones is an important issue. ... I doubt anyone wants to feel they are simply a guinea pig." (*Psychiatric research raises legal red flags*; The Dallas Morning News, 29 April 1996)

"African-Americans have an almost inherent suspicion of research," she said. "They're afraid of being guinea pigs." (*Blacks' kidney study may prove vital force*; Chicago Tribune, 18 March 1996)

... group was against the testing not only because of an opposition to abortion but also because the tests amounted to "experimenting on women, using them as guinea pigs for a drug that is extremely toxic." (*Giving push to abortion pill*; The New York Times, 14 March 1996).

The difficulty with the term from the perspective of a trialist is in the implication that there is something inherently abusive in experimentation on human beings. The implication is that those labeled as guinea pigs are somehow or other abused, mistreated, or denied. To label someone as a guinea pig in a randomized trial presupposes that the trial was undertaken to demonstrate that which is already known rather than to determine the value of one treatment relative to another. Further, its use presupposes that the alternative or standard form of therapy is safe and effective and that failure to use it constitutes a breach of ethics.

In this context one has to wonder who the guinea pigs are. Are they those who are treated by a declared standard or are they those who are treated within the context of a randomized trial? Who were the guinea pigs on Ambroise Paré’s (surgeon; 1510-1590) battlefield in 1537?³ Was it those gunshot victims to whom he applied boiling oil or those to whom he applied an ointment? A randomized trial in Paré’s day would have been unthinkable and one surmises that even if Paré had wanted to do one he would have been roundly criticized for his ethics in deigning to deny gunshot victims their due dose of boiling oil.

References

- 1 *The Oxford English Dictionary: A New English Dictionary on Historical Principles (in 13 vols)* (Murray JAH, Bradley H, Craigie WA, Onion CT; eds). Clarendon Press, Oxford, **1970**. (Murray et al, 1970) **1**
- 2 **Cornfield J**: Recent methodological contributions to clinical trials Am J Epidemiol 104:408 - 421 **1976**. (Cornfield, 1976)
- 3 **Packard FR**: *Life and Times of Ambroise Paré, 1510 - 1590*. Paul B Hoeber, New York, **1921**. (Packard, 1921)