When writing up your results, you should make sure that the resulting publication will "represent with veracity, with accuracy, [and] with truthfulness the data you have obtained." -- Adil Shamoo.

Acquiring sound data

Responsible Conduct of Research

Office of Research Integrity (http://ori.dhhs.gov/)  "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results."
(http://ori.hhs.gov/misconduct/definition_misconduct.shtml)
(http://ori.dhhs.gov/education/)

National Postdoctoral Association (http://www.nationalpostdoc.org/)
(http://www.nationalpostdoc.org/publications/toolkits/rcr-toolkit)
“People are adding things all the time when they come up with their internal list for their institutions,” says Daniel Vasgird, director of the Research Integrity and Compliance Office (http://oric.research.wvu.edu/) of West Virginia University in Morgantown. Some argue for adding financial responsibility and environmental health and safety, for example, he adds.

We are continuing to discuss these and other issues on Science Careers as part of our rolling feature (http://sciencecareers.sciam.org/gate1.inist.fr/career_magazine/previous_issues/articles/2010_11_05/caredit.a1000108) on research integrity.

The pressure to cut corners can be high; in a 2002 national survey (http://www.nature.com/gate1.inist.fr/nature/journal/v435/n7043/full/435737a.html) of National Institutes of Health (NIH)–funded scientists, 23% admitted (http://caliber.ucpress.net/doi/pdf/10.1525/jer.2006.1.1.43) to “cutting corners in a hurry to complete a project.” But cutting corners can be risky, says Melissa Anderson, a research-ethics researcher at the University of Minnesota (http://www1.umn.edu/twincities/index.php), Twin Cities, and a co-author of that survey. Researchers who leave those last few essential tests until later “may forget that they skipped some steps, and then they present results as though they did them, or they may never have time to go back and make the changes.” Or, once the project is funded, they get caught up in the moment and “they don’t realize that their preliminary results weren’t on quite as solid ground as they thought they were.”

Record everything

One cornerstone of science is the necessity to keep thorough records so that you and others can go back and redo the work. Yet 27.5% of the respondents to Anderson’s 2002 survey admitted to inadequate record keeping.
Use statistics properly

Represent your data truthfully

Write with fidelity
Treat animals and human subjects with care

Points of reference

Recognize your mistakes

Further reading

On Being a Scientist: A Guide to Responsible Conduct in Research

Online Ethics Center for Engineering and Research
Responsible Conduct of Research

Online course

Teaching the Responsible Conduct of Research in Humans

Data Acquisition, Management, Sharing and Ownership

Communication and Difficult Conversations

Guidelines for Responsible Data Management in Scientific Research

Do's and Don'ts for Keeping Lab Notebooks

Do's and Don'ts for e-Lab Notebooks

Plagiarism and self-plagiarism: What every author should know

What's in a picture? The temptation of image manipulation

Stop Misbehaving

(top) John Haslam (http://www.flickr.com/people/foxypar4/)