"Good Enough" Research Data Management
(a brief guide for busy people)

This brief guide presents a set of good data management practices that researchers can adopt, regardless of their data management skills and levels of expertise.

1
Save your raw data in original format

1.1 Don't overwrite your original data with a cleaned version.

1.2 Protect your original data by locking them or making them read-only.

1.3 Refer to this original data if things go wrong (as they often do).

2
Backup your data

2.1 **Use the 3-2-1 rule:** Save three copies of your data, on two different storage mediums, and one copy off site.

2.2 Do not backup or store sensitive data on a commercial cloud (Dropbox, Google Drive, etc.).

3
Describe your data

3.1 **Machine Friendly:** Describe your dataset with a metadata standard for discovery.

3.2 **Human Friendly:** Describe your variables, so your colleagues will understand what you meant. Data without good metadata is useless. Give your variables clear names.

3.3 Do not leave cells blank - use numeric values clearly out of range to define missing (e.g. '99999') or not applicable (e.g. '88888') data, and describe these in your data dictionary.

3.4 Convert your data to open, non-proprietary formats.

3.5 Name your files well with basic metadata in file names.

4
Process your data

4.1 Make each column a variable.

4.2 Make each row an observation.

4.3 Store units (e.g. kg or cm) as metadata (in their own column).

4.4 Document each step processing your data in a README file.

5
Archive and preserve your data

5.1 Submit final data files to a repository assigning a persistent identifier (e.g. handles or DOIs).

5.2 Provide good metadata for your study so others could find it (use your discipline's metadata standard, e.g. Darwin Core, DDI, etc.).