

## AJEV Figure File Specifications

Submitted figures must be high quality and ready for publication. Cite the first instance of each figure in numeric order in the manuscript. Captions must describe the contents so that each illustration is understandable when considered apart from the text. **If your artwork is from another source, you will need permission from the copyright holder.**

### Figure construction

- **Index marks:** For line graphs and frame graphs, affix index marks to the vertical axis (y axis, or ordinate) and to the horizontal axis (x axis, or abscissa).
- **Use symbols to indicate data points:** open circles for the first set of data and filled circles for the second; triangles, open and filled, are next; then squares, open and filled (○●△▲□■). If a graph requires more than six symbols, consider presenting the data in two graphs. Keys to symbols should be set in a small box in the graph (or next to it); do not place them within the caption.
- **Multipanel figures:** Place a capital A, B, C, etc. in the upper left or right corner of the panels. (Include all panels in the same file.)
- **Do not use special effects** such as 3-dimensional bar charts or graphs without prior permission from the AJEV managing editor.
- **Use solid gray shades or different colors in bar charts;** differentiate among the gray levels by at least 20%. We encourage our authors to be considerate of colorblind readers when deciding on contrasting colors. Please use different symbols (for data points) or patterns (for bar charts) in addition to chosen colors to increase accessibility.
- **Include error bars,** if appropriate.
- **Line weights:** Use line weights of 0.5 point. For prominent lines, such as graph plot lines, the weight should be approximately 1.0 point.
- **Fonts:** Use Arial, Helvetica, or Symbol fonts for the text in figures. Capitalize only the first letter of the first word in labels. Do not use boldface type, except for the “A,” “B,” “C,” etc., used in designating parts of multipanel graphics.

### Acceptable File Types

- **Recommended: Export figure files created in statistical or graphical software in pdf, svg, eps, or emf format. Save figure files created in Word, Excel, or PowerPoint in their native formats.** After being exported, figures in these formats are composed of workable text, lines, and fills that can be easily corrected and reproduced at any size.
- **Alternative (not preferred): Export or save figure files as tiff, jpg or png.** After being exported, figures are composed of pixels rather than text, lines, and fills. Any images submitted in these formats cannot be saved at higher resolutions, so you must be sure to export files with the correct resolution (see below), or dots per inch (DPI), at the size they will print.

### Saving images as tiff, jpeg, or png

- **Crop figures with only a small amount of white space bordering them** (this minimizes file size).
- **Use the correct resolution** (see below).
- **Select grayscale** (for black and white) or **CMYK and RGB** (for color).
- **Select LZW Compression** (to reduce file size) and **Byte Order: IBM PC**.

### Correct figure sizes

*Figures should be submitted at the size specified for either single- or double-column figures:*

- **Single-column figure:** 3.5 inches (8.9 cm) wide (at least 1050 pixels).
- **Double-column figure:** 7.25 inches (18.4 cm) wide (at least 2100 pixels).
- **Maximum figure height:** No more than 9.5 inches (24.5 cm), including space for figure caption underneath.

### Acceptable resolutions

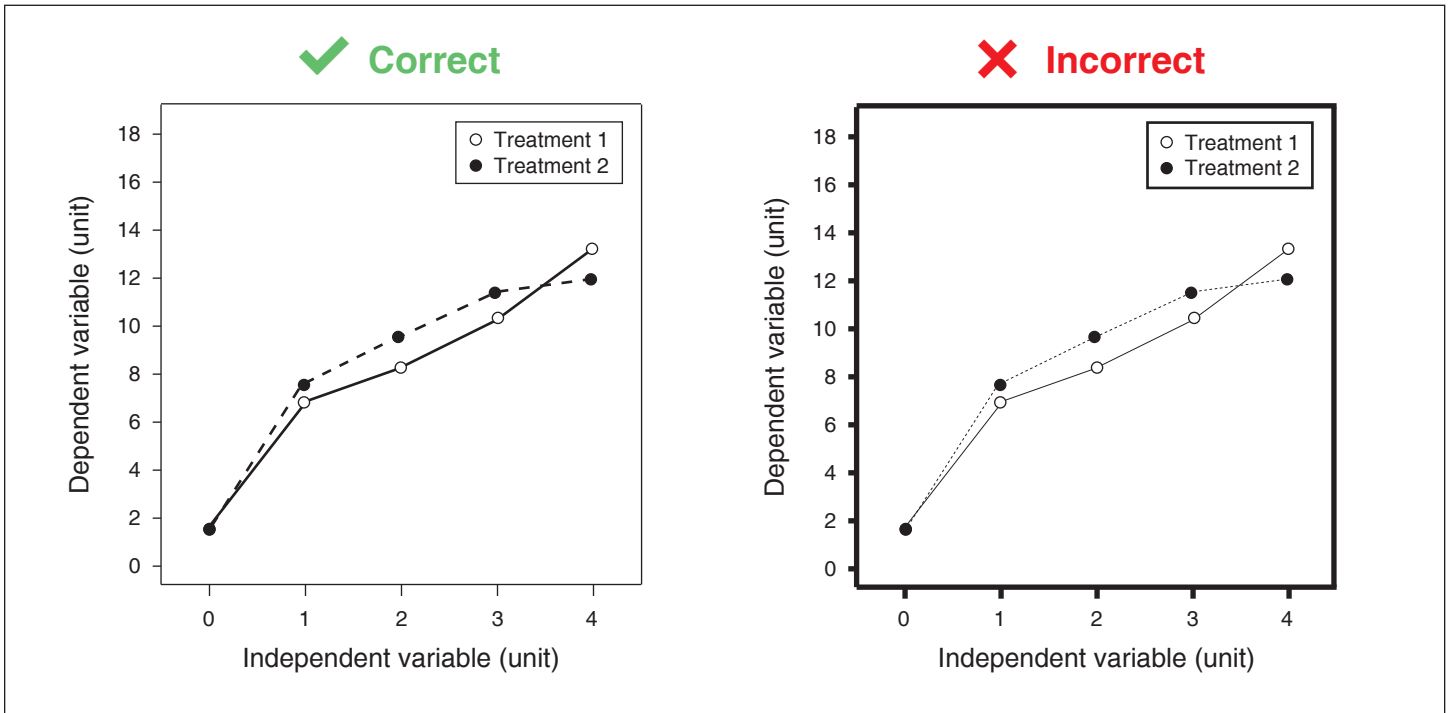
*The minimum requirements for resolutions in figure files are:*

- **600 DPI for monochrome:** For images that are purely black and white, such as line graphs.
- **300 DPI for halftones (CMYK/RGB/grayscale):** For images containing pictures or areas of gray or color shades only—an image not containing any text labeling or lines.
- **600 DPI for combination of lines or text with halftones:** For images containing pictures or areas of gray or color shades and text labeling and/or thin lines.

*If you have additional questions, please email the publications coordinator (raven@asev.org).*

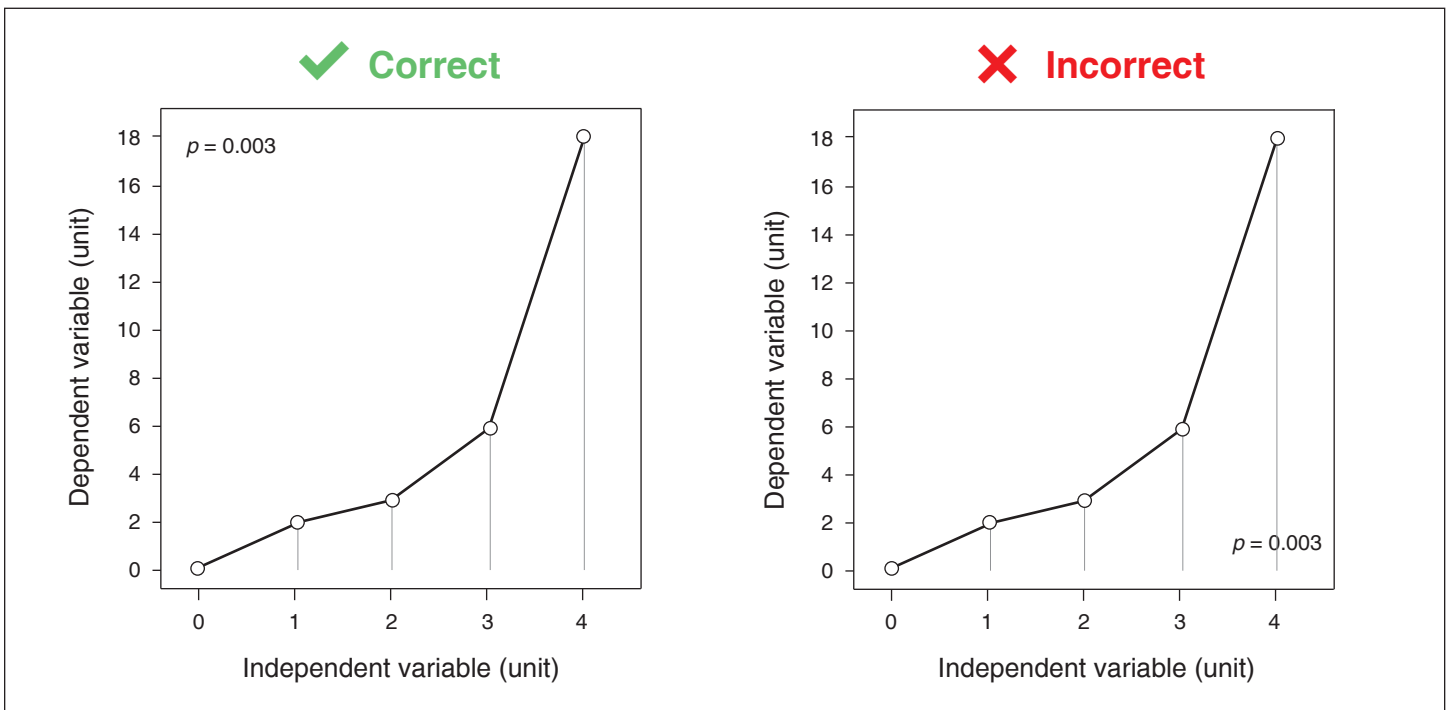
## Line Weights

Use line weights of 0.5 point for diagram elements such as legend boxes, axes, and index marks. For prominent lines, such as graph plot lines, the weight should be 1pt. Broken or dotted lines may require a slightly wider stroke to maintain contrast and legibility.



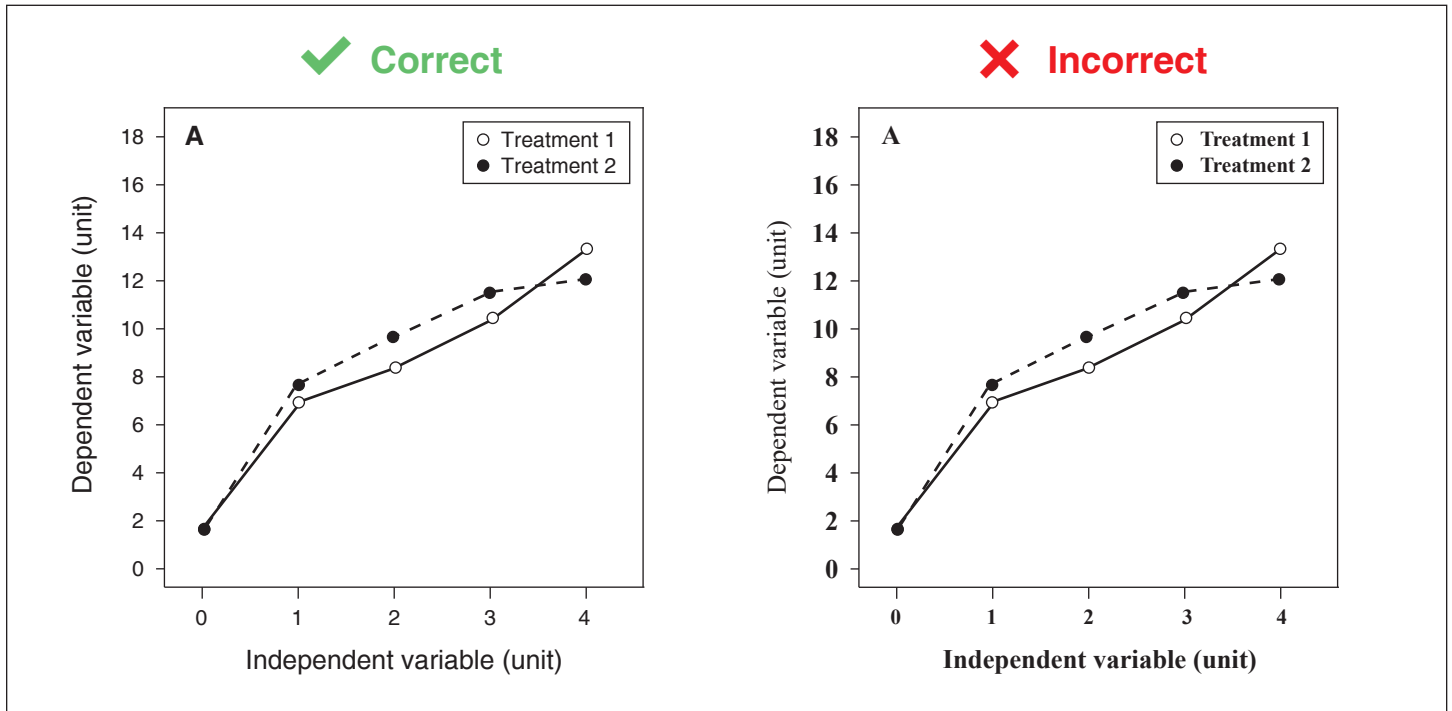
## Label Positioning

Unless absolutely necessary, text and lineart should not overlap. Overlapping text is less legible for readers and more difficult to edit for publication.



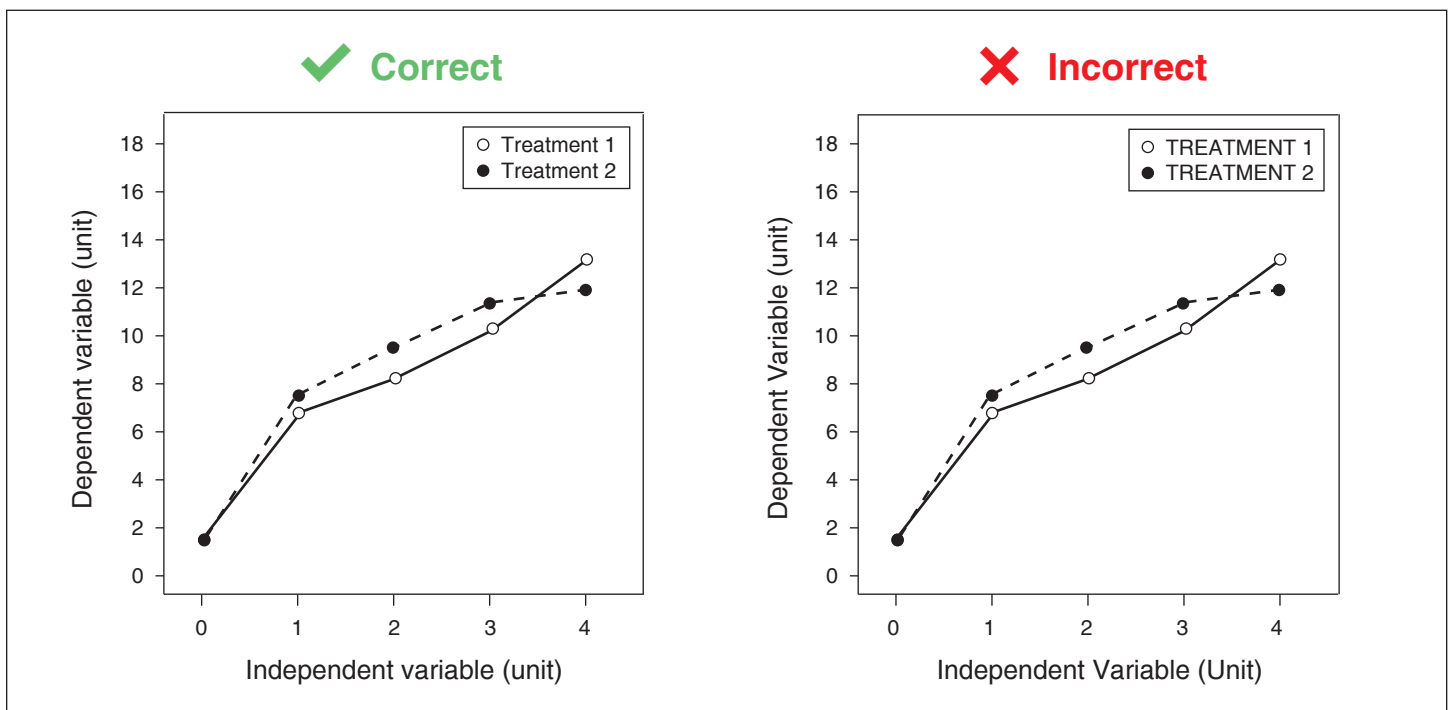
## Typefaces

Use Arial, Helvetica, or Symbol fonts for the text in figures. Do not use boldface type, except for the “A,” “B,” “C,” etc., used in designating parts of multipanel graphics.



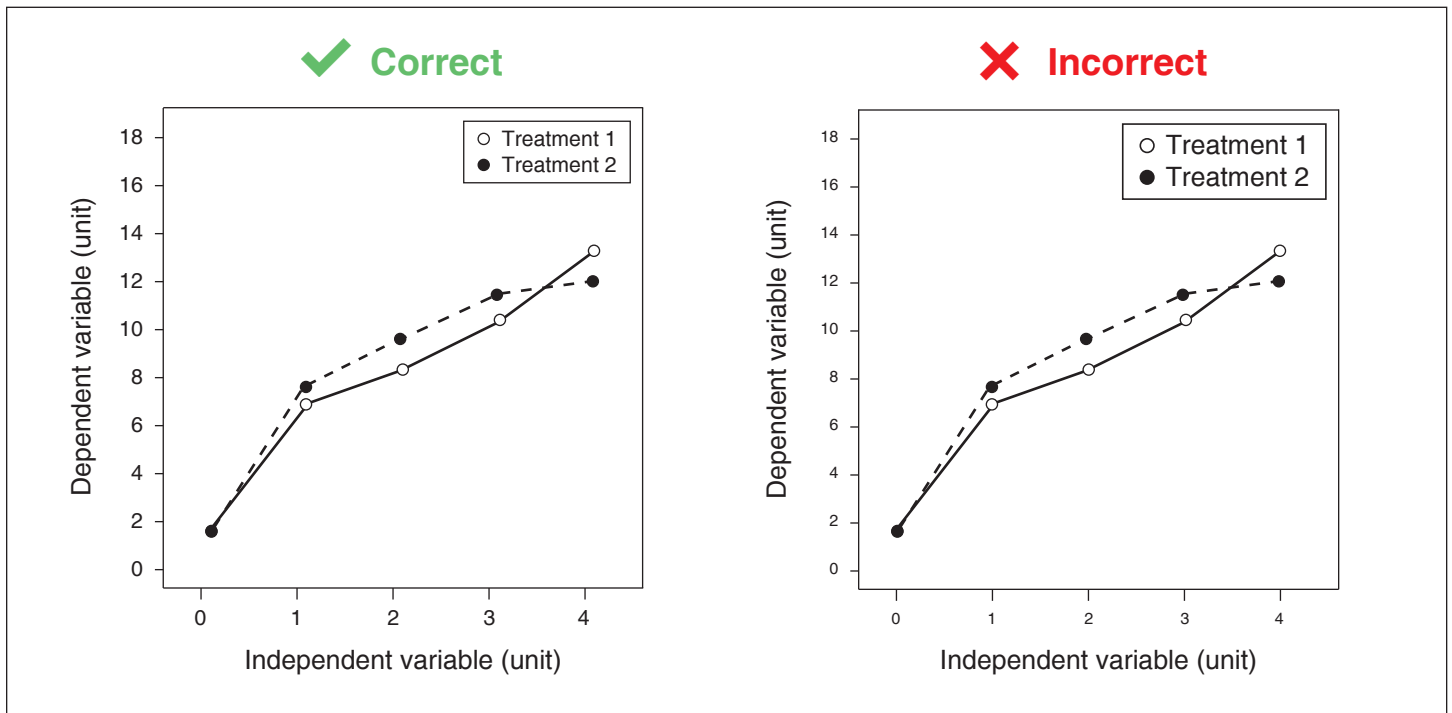
## Capitalization

Capitalize only the first letter of the first word in labels; all labels are sentence case.



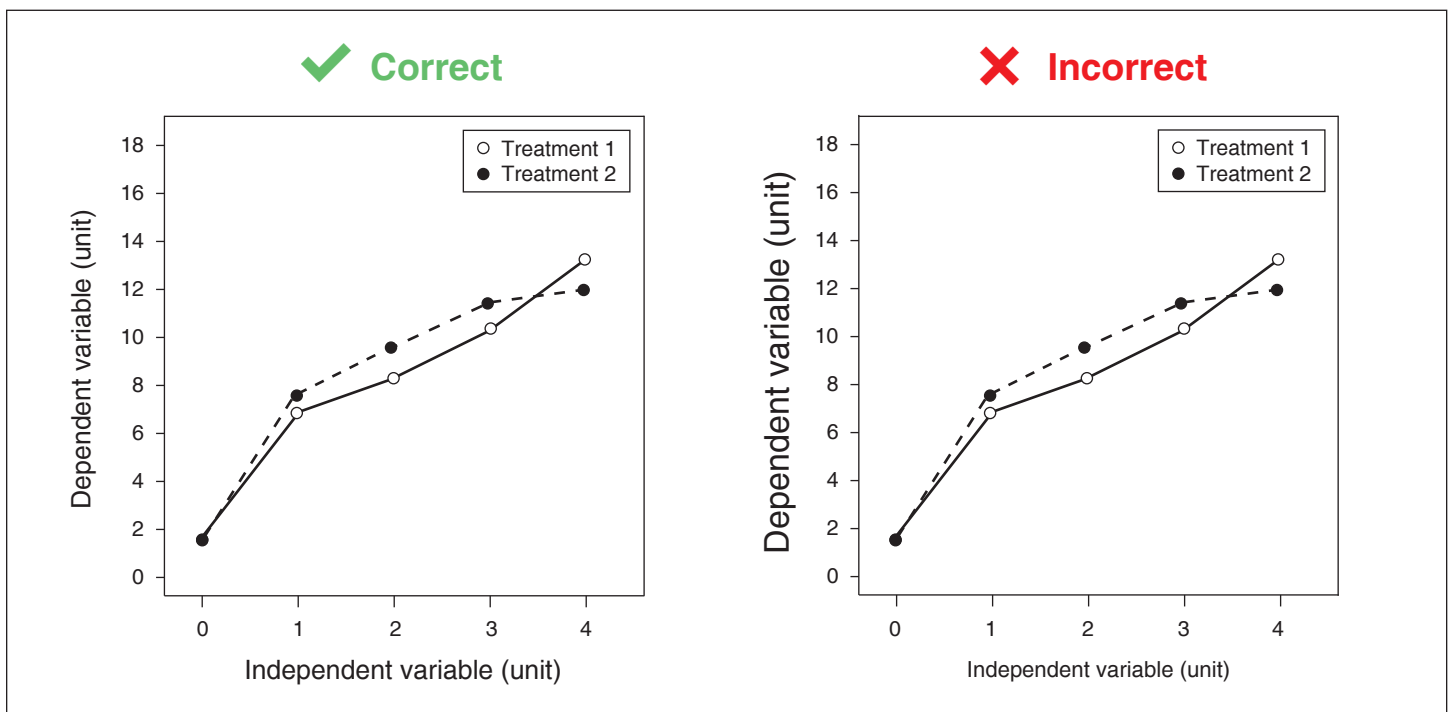
## Type Size - Relative Scale

There should be no more than 2pt between sizes. AJEV recommends size of 10 for axis labels, size 8 for values and legend text. For exceptionally compact figures, a size of 8 may be used for labels, and 6 for the remainder.



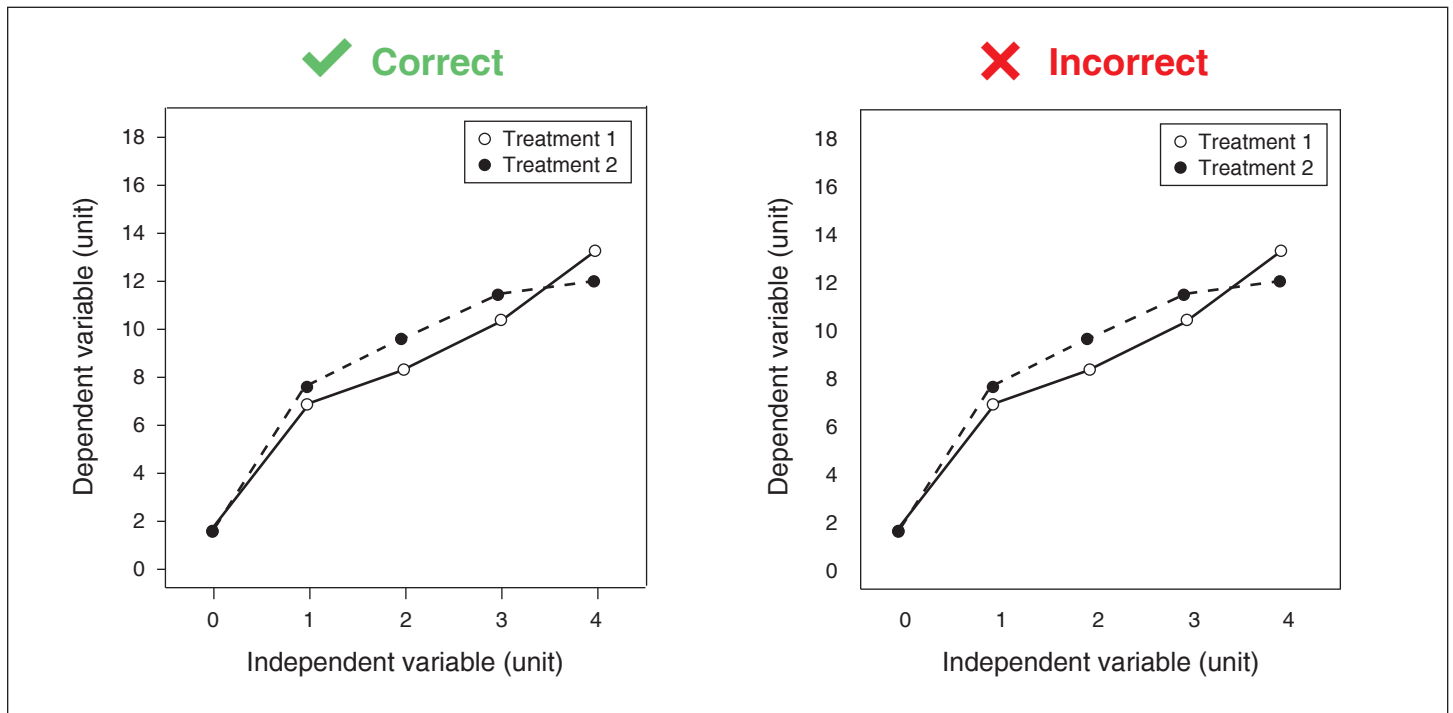
## Type Size - Axis Labels

x- and y- axis labels should be equally sized whenever possible.



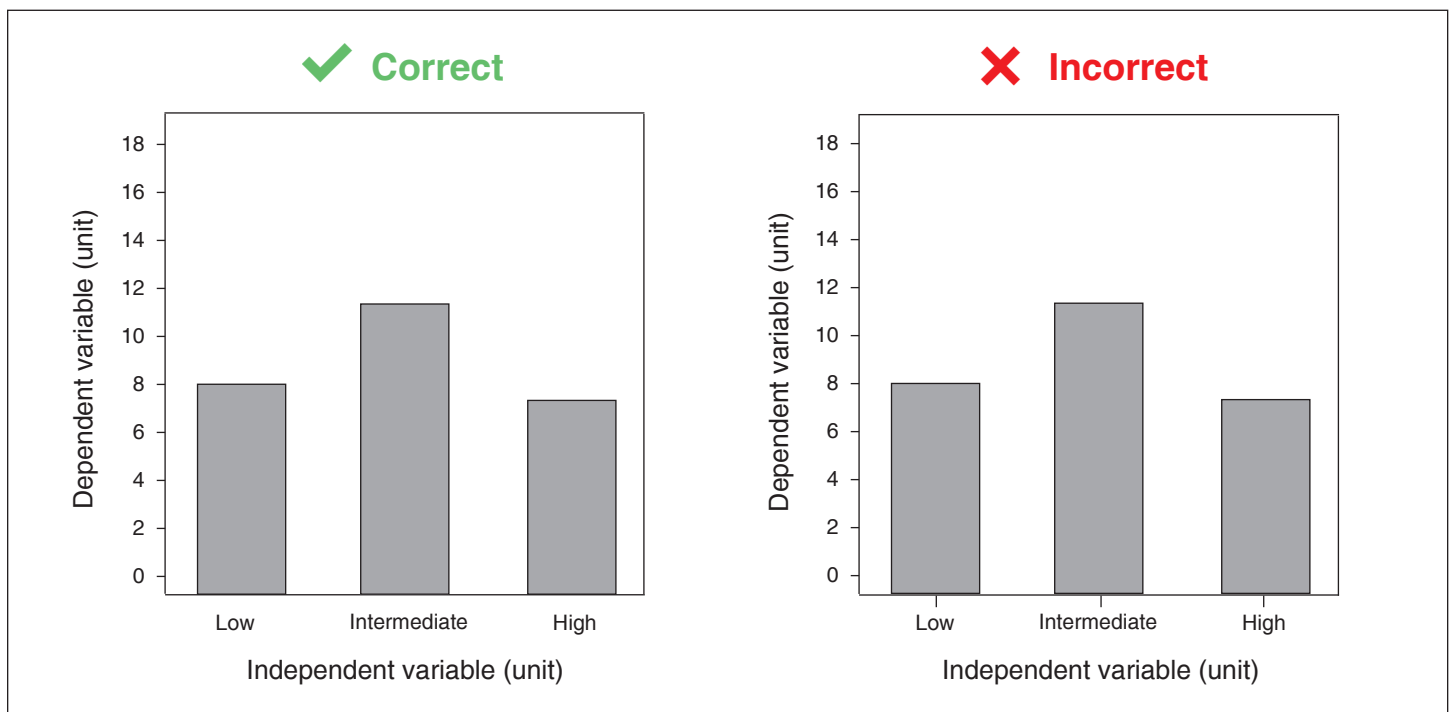
## Index Marks - Line and frame graphs

For line graphs and frame graphs, affix index (tick) marks to the vertical axis (y axis, or ordinate) and to the horizontal axis (x axis, or abscissa). Marks may be positioned inside or outside the axis, so long as the placement is consistent between figures within a submitted manuscript.



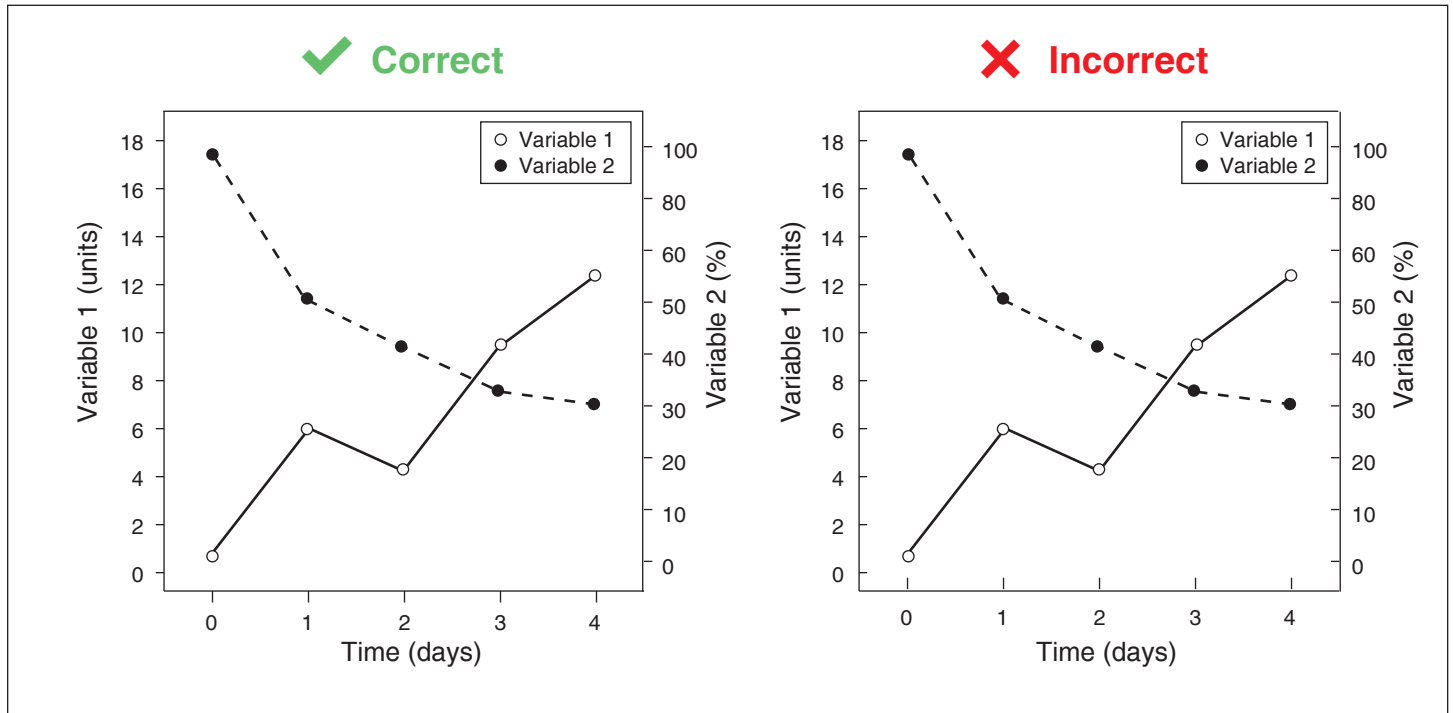
## Index Marks - Bar charts and box plots

For bar charts or box plots, the vertical axis (y axis, or ordinate) should have index (tick) marks affixed, but it is not necessary to mark the horizontal axis (x axis, or abscissa) when the distinction is categorical or qualitative.



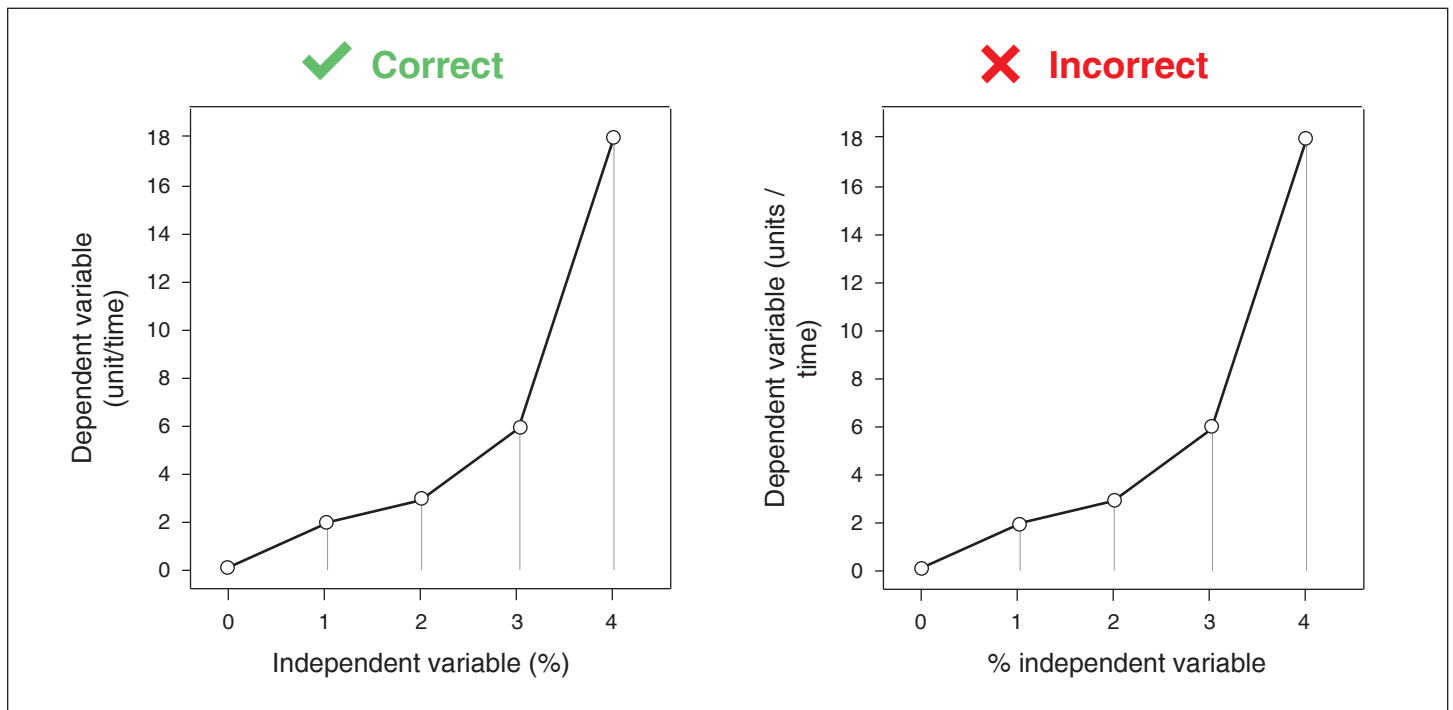
## Index Marks - Multiple y-axes

When including an additional y-axis, it is important that the index (tick) marks are pointed outside the body of the graph and toward the axis labels. This orientation provides readers the most clarity and reduces visual confusion.



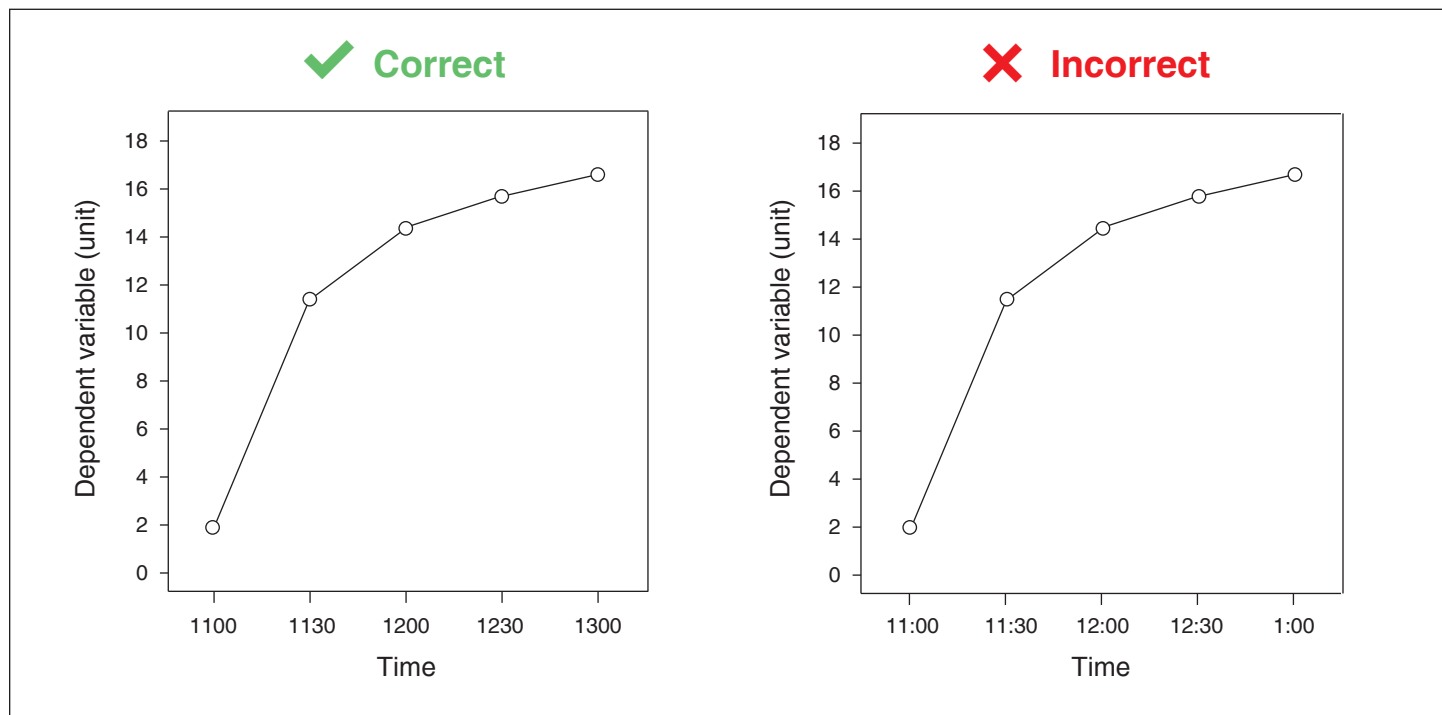
## Reporting Units - Label formatting

Percentile units should have a percent sign in parentheses placed after the unit name. Units of rate should be presented without spaces surrounding slashes; do not split the presentation of units with a line break.



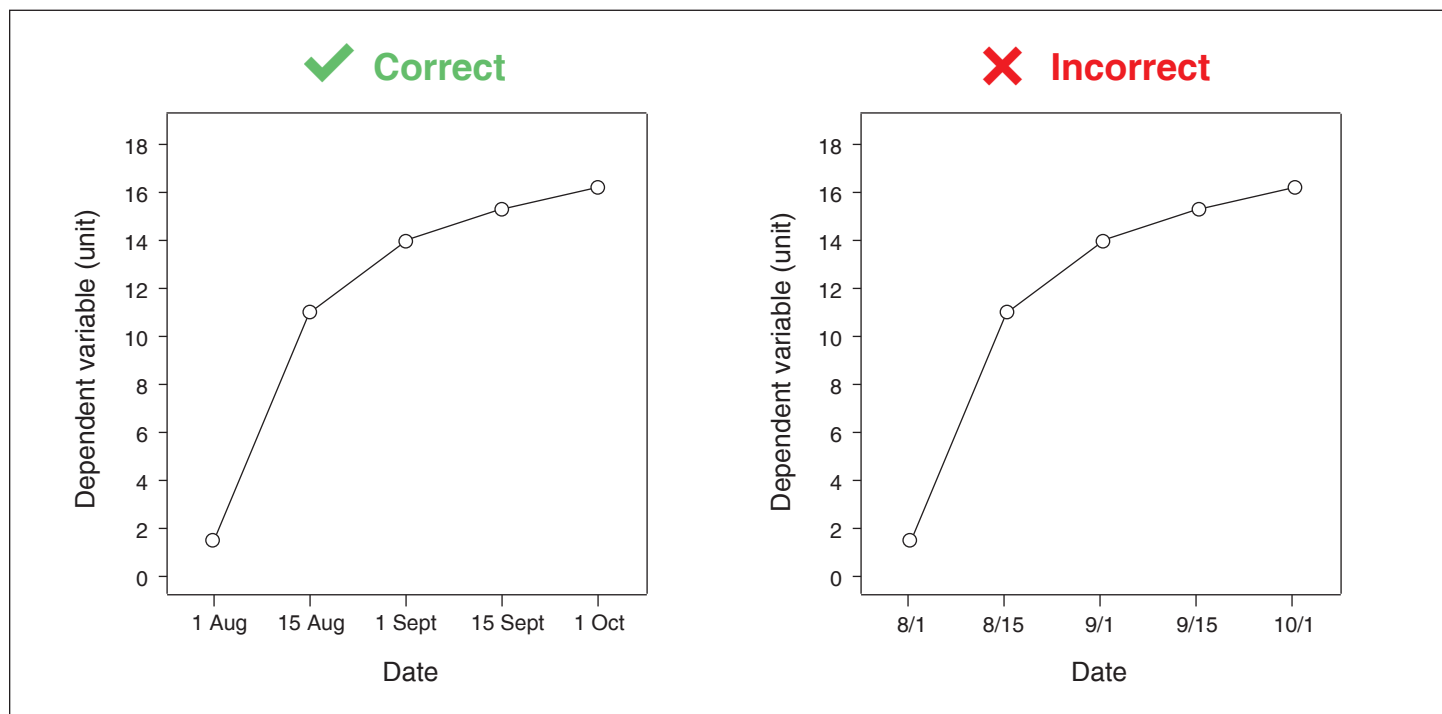
## Reporting Units - Time

When reporting time, use the 24-hour system with four digits (e.g., 0400 hr for 4:00 a.m., 1630 hr for 4:30 p.m.).



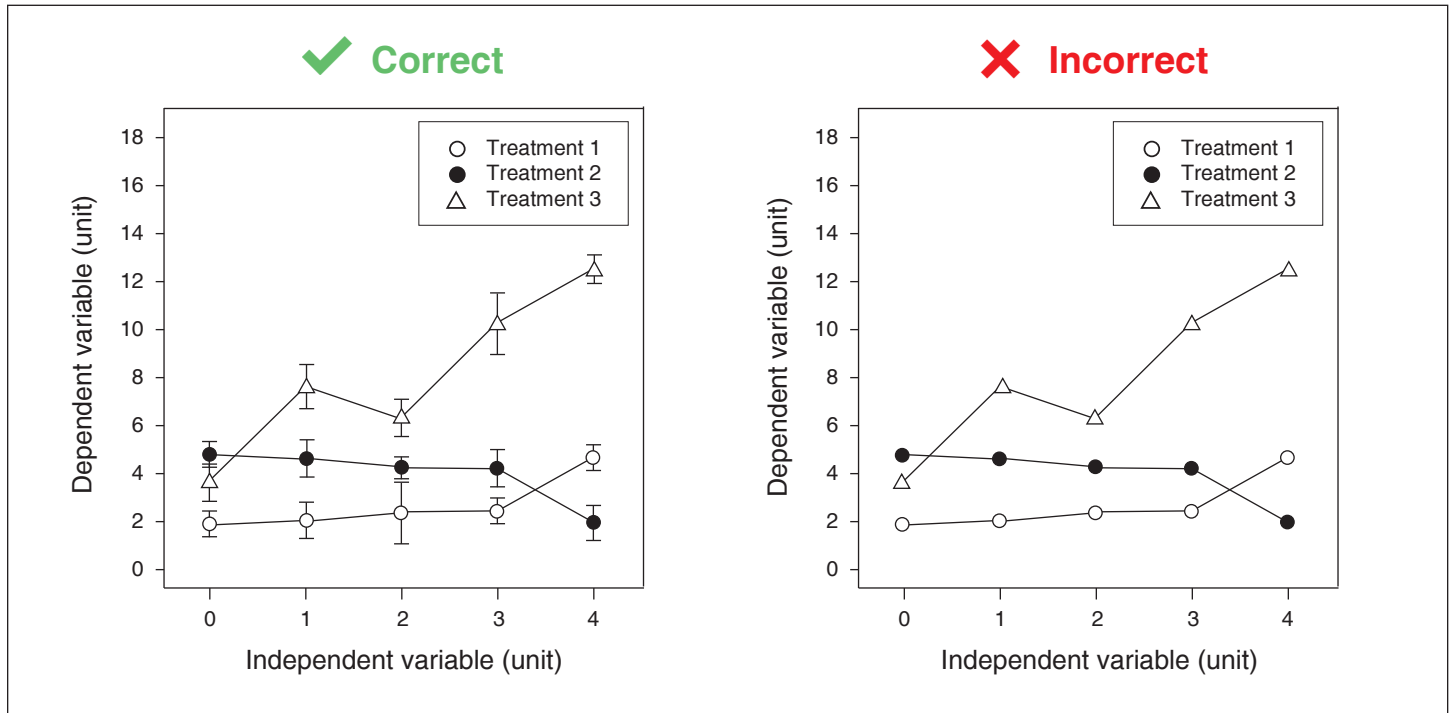
## Reporting Units - Dates

Dates are listed as DD Month YYYY or DD Month (e.g., 25 Sept 2024 or 25 Sept). Months should be abbreviated as follows: Jan, Feb, March, April, May, June, July, Aug, Sept, Oct, Nov, Dec.



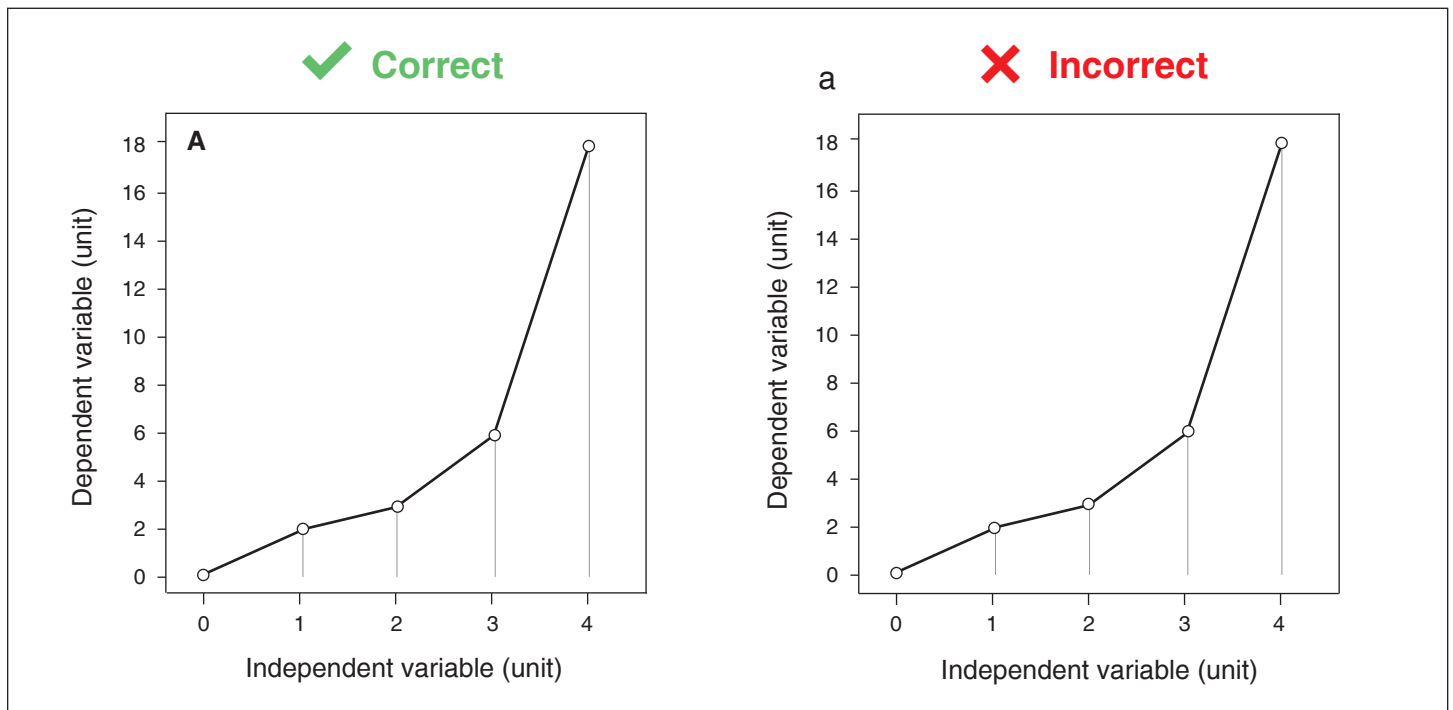
## Error Bars

Include error bars, if appropriate, for any and all data sets that apply.



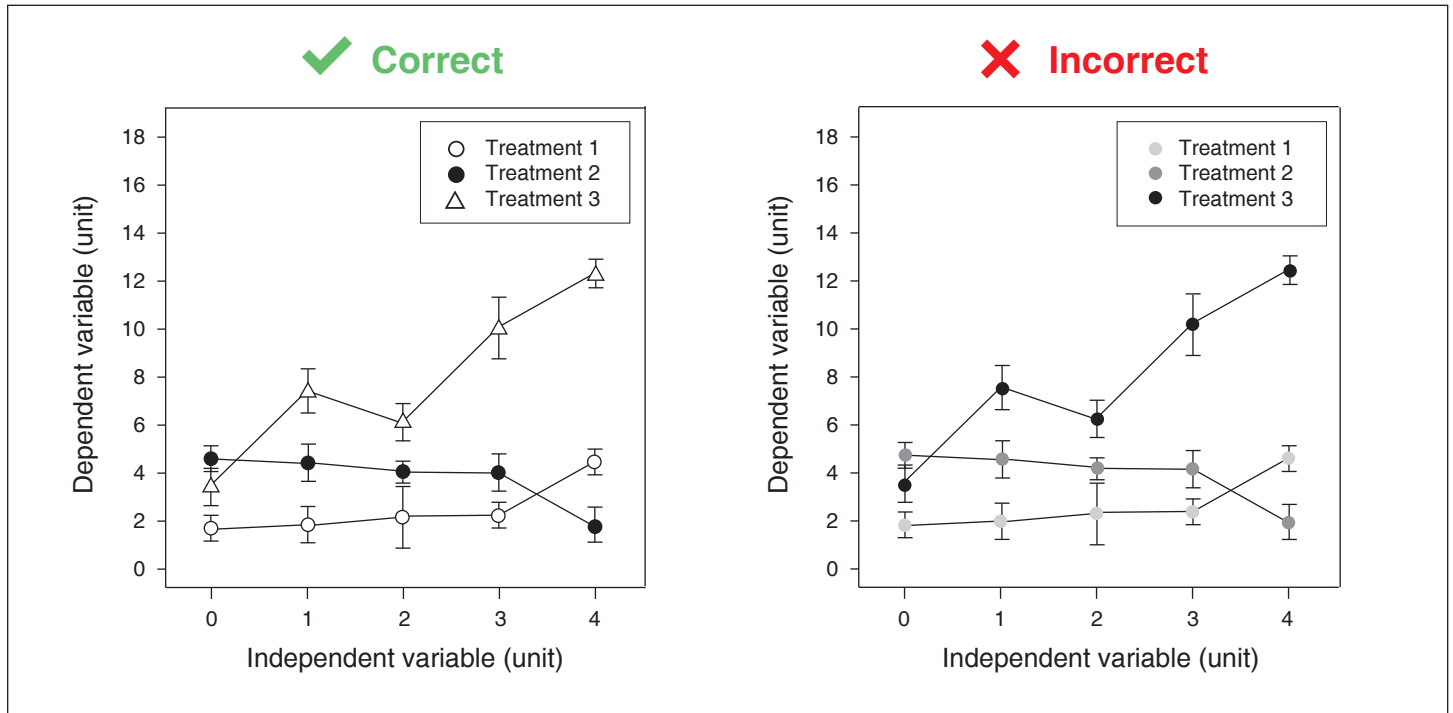
## Multipanel Figures

Place a bold, capital A, B, C, etc. in the upper left or right corner of the panels; evenly space with the top and side of the graph. Placement of this label should be as consistent as possible between panels. If possible, place the panel label within the panel itself. Include all panels in the same file if possible.



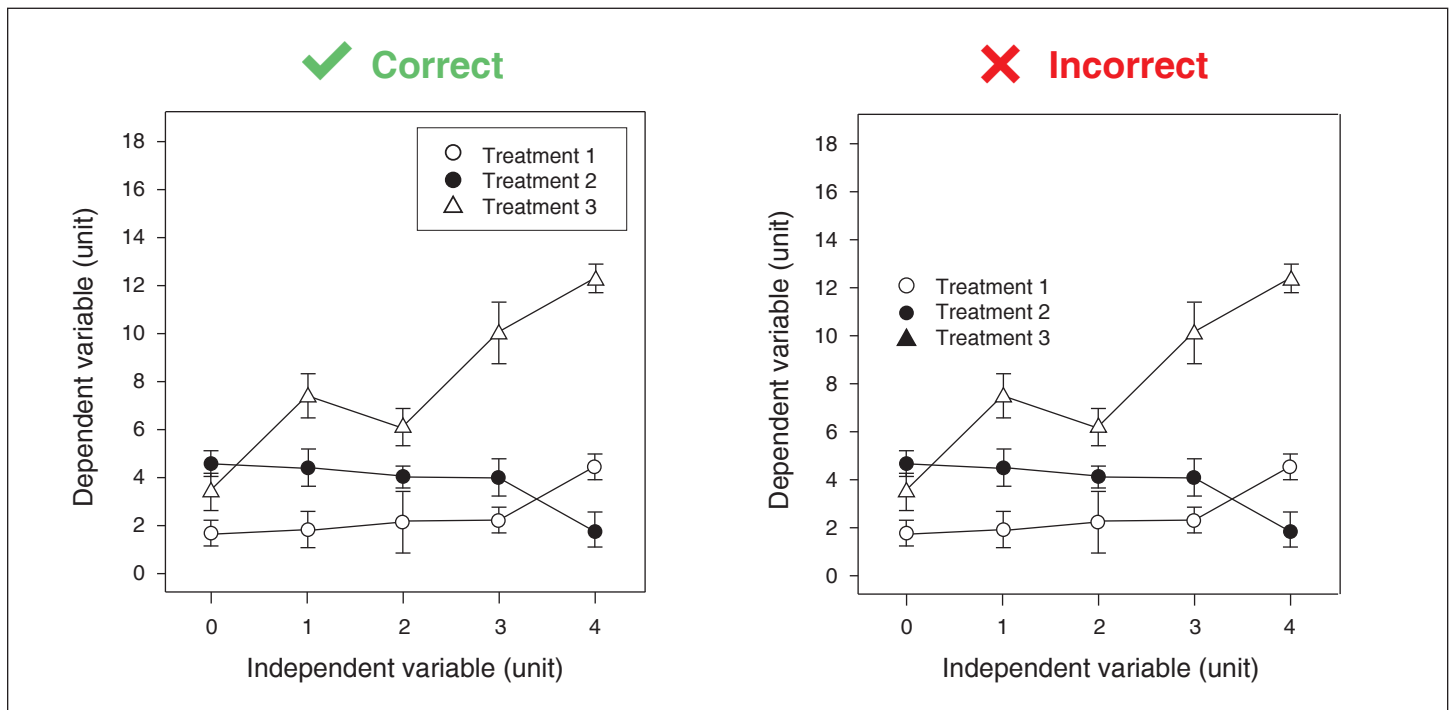
## Use of Symbols

Open circles for the first set of data and filled circles for the second; triangles, open then filled, are next; then squares, open then filled. This distinction reduces clutter and makes the data more legible. If a graph requires more than six symbols, consider presenting the data in multiple graphs.



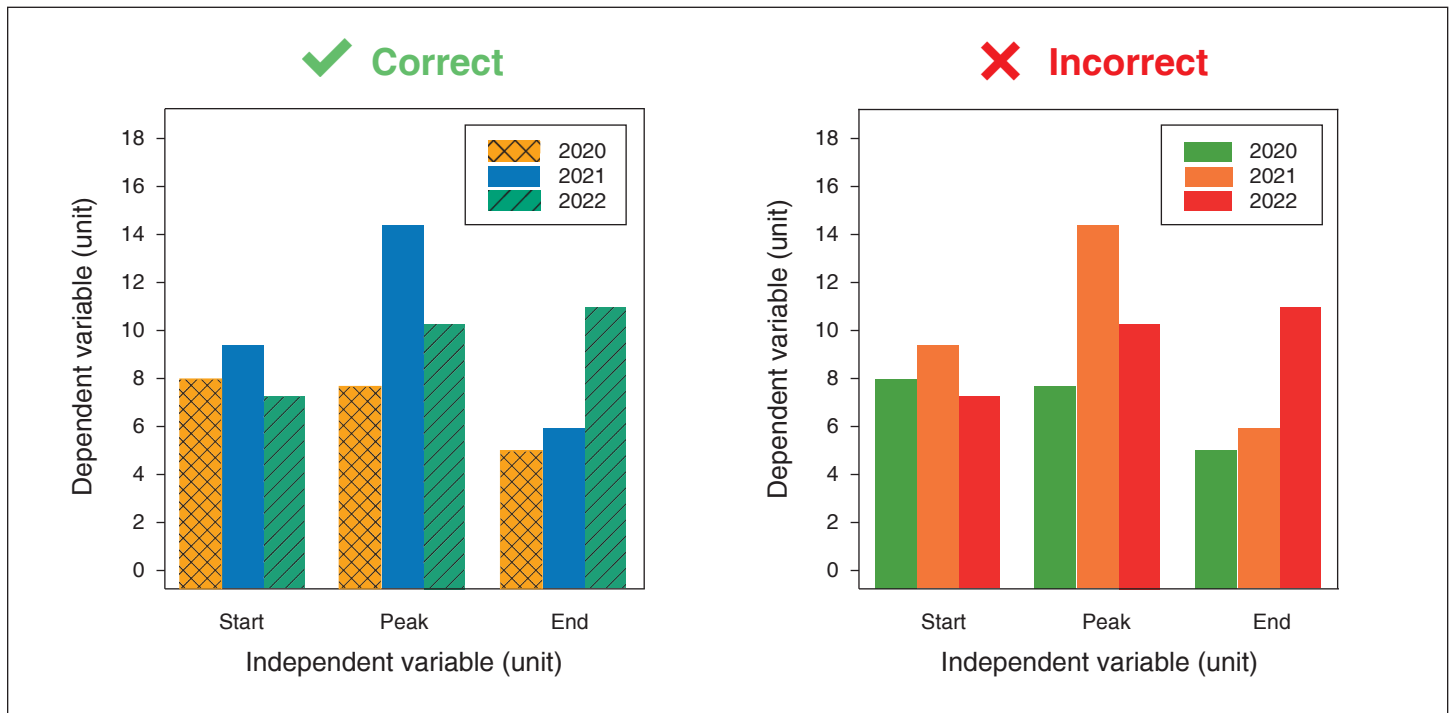
## Legend Placement

Keys to symbols should be set in a small box in the graph (or next to it) in order to keep the legend completely distinct from the data. Do not place them within the caption.



## Visual Distinction - Color figures

Figures should be designed so that color is not necessary to communicate the information included. Color alone should not be relied upon to convey meaning; redundant coding is necessary. Please use different symbols (for line graphs) or patterns (for bar charts) in addition to chosen colors to increase accessibility.



## Visual distinction - Monochrome figures

We suggest using white for the first bar, black for the last bar, and solid gray shades for any bars in between, differentiated from each other by at least 20% for visual distinction. Add a thin black outline (0.25 pt) to better define the boundaries of bars with under 20% gray value.

