

**The GraphPad Prism Solution**

**Analyze and  
Visualize Your  
Scientific  
Research.  
*Effortlessly.***



# The leading solution for analyzing and graphing your scientific data.

## → Streamline Your Workflow & Increase Productivity

A versatile statistics tool purpose-built for scientists—not statisticians. Easy to learn. Easy to use. No coding required.

## → Make Accurate, Informed Analysis Choices

Explanations of statistical approaches offer insights and guidance at every step so you make the right analysis choices, understand the underlying assumptions, and accurately interpret your data.

## → Discover the Story in Your Data

Go from raw data to publication-quality graphs—with ease. Prism offers countless ways to customize your graphs, from color schemes to how you organize data.

More than **1,000,000** scientists in **110 countries** use — and love — Prism

**8 out of 10** users “extremely likely” to recommend Prism to peers

**9 out of 10** users consider Prism “essential” to their daily work



"I have used Prism and many of its competitors extensively and I think Prism is by far the most intuitive and approachable software of its class."

**Jessica H. Hartman, Ph.D | Duke University**



"It is the best graphing and statistics analysis software I know for data manipulations."

**Raul Sanoja, Associate Principal Scientist | Merck**



# Focus on Your Research, Not Your Software

Manipulating spreadsheets or diving into complex statistical programs diverts your time and attention from what matters: **your research**.

When you're immersed in scientific investigations, you need to stay focused on experimental improvement, data collection, and continuous progress.

That's why Prism was purpose-built for researchers like you.

## → Work Smarter, Not Harder

- Easy to learn
- Easy to use
- Easy to get right
- Easy to complete tasks
- Easy to incorporate into your workflow
- Easy for you to get your research done

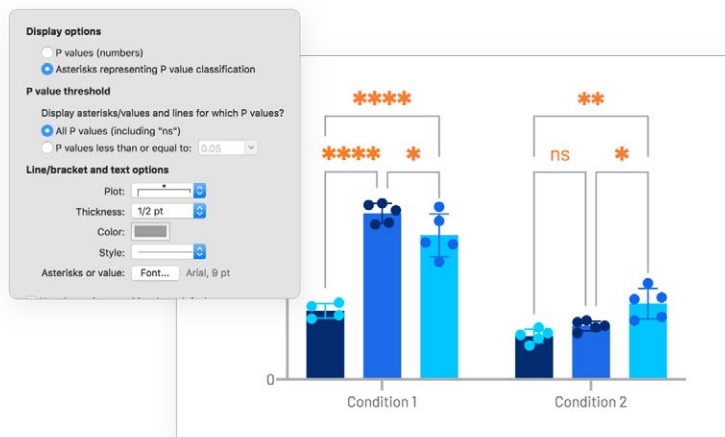
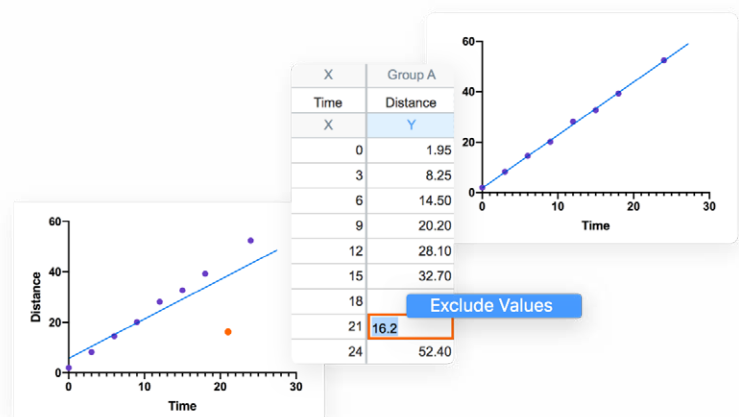
Variable A	Variable B	Variable C	Variable D	Variable E	Variable F	Variable G
ID	Glycosylated hemoglobin %	Total cholesterol	Glucose	HDL	Age in years	Sex
^v	^v	^v	^v	^v	^v	.  v

## Organize Your Data Effectively

Prism is specifically formatted for the analyses you want to run, making it easier to enter data correctly, choose the right analyses, and create stunning graphs.

## Automate Your Work

Graphs and results are automatically updated in real time. Any changes to the data and analyses—direct entry of data, omitting erroneous data, correcting typos, or changing analysis choices—are reflected in results, graphs, and layouts instantaneously.



## Increase Productivity

Automatically add multiple pairwise comparisons to your analysis with a single click. For customization options of these lines and asterisks, simply click the toolbar button again. Make adjustments to the data or the analysis, and the results displayed on the graph will update automatically.



# Reduce the Complexity of Statistics

Prism is a statistics tool for non-statisticians.

Developed by Dr. Harvey Motulsky—a renowned pharmacologist, biostatistician, professor, and author—Prism fills a sizeable gap in the scientific toolset.

Generic spreadsheets don't provide the formatting, descriptive and inferential statistical analyses, or presentation-ready graphs needed for scientific investigations. And programming languages built for statisticians and data miners are highly complex, requiring deep domain expertise and software coding.

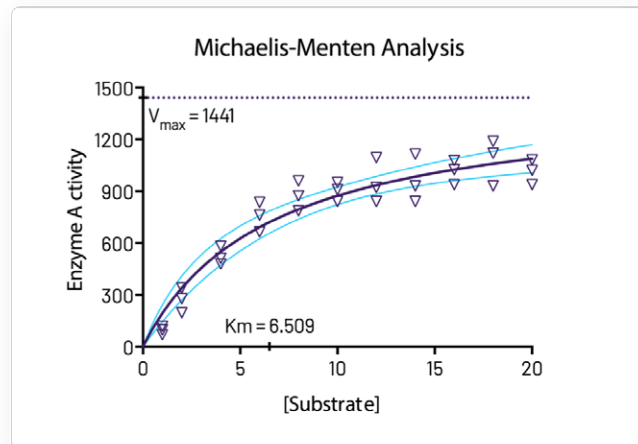
Prism offers the best of both worlds, combining the ease-of-use and familiarity of a spreadsheet with the analytical rigor of statistical programming languages.

## → Prism streamlines every step of the analysis process:

- Organize your data
- Prepare your data for analysis
- Choose analysis models and parameters
- Calculate and interpret results
- Explore your data visually
- Create and customize graphs
- Prepare layouts and presentations

## One-Click Analysis

No other program simplifies statistics like Prism. Select the analytical models and parameters and Prism does the rest.



Which analysis?

- Fraction of Total
- XY analyses
- Column analyses
- t tests (and nonparametric tests)**
- One-way ANOVA (and nonparametric or mixed)
- One sample t and Wilcoxon test
- Descriptive statistics
- Normality and Lognormality Tests
- Frequency distribution
- ROC Curve
- Bland-Altman method comparison
- Identify outliers
- Analyze a stack of P values
- Grouped analyses
- Contingency table analyses
- Survival analyses
- Parts of whole analyses
- Multiple variable analyses
- Nested analyses
- Generate curve
- Scatter data

Analyze which data sets?

A: Male

B: Female

Unpaired t test	
Tabular results	
Table Analyzed	My Data
Column B	Female
vs.	vs.
Column A	Male
Unpaired t test	
P value	0.0038
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3.316, df=18
How big is the difference?	
Mean of column A	24.90
Mean of column B	28.10
Difference between means (B - A) ± SEM	3.200 ± 0.9649
95% confidence interval	1.173 to 5.227
R squared (eta squared)	0.3793

## Perform The Right Analysis

Avoid statistical jargon. In clear language, Prism presents an extensive library of analyses from common to highly specific. Each analysis has a checklist to help you understand the required statistical assumptions and confirm you have selected an appropriate test.

## Get Actionable Help As You Go

Prism's online help goes beyond your expectations. At every step, access thousands of pages from the online Prism Guides.

**NEW TABLE & GRAPH**

- XY
- Column
- Grouped
- Contingency
- Survival
- Parts of whole
- Multiple variables
- Nested

**EXISTING FILE**

- Open a File
- LabArchives
- Clone a Graph
- Graph Portfolio

Life Expectancy at Birth

GDP Per Capita (PPP)

Continent

- Asia
- North America
- Africa
- South America
- Europe
- Oceania

Population (Millions)

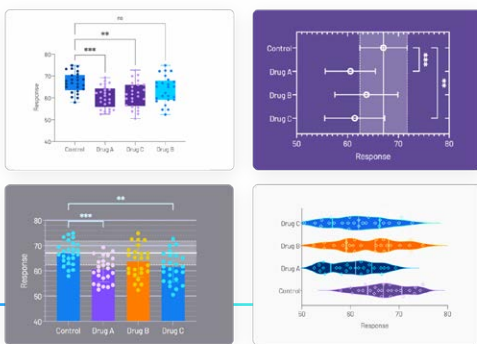
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# Create publication-quality graphs and presentations

If there is one thing Prism is known for it would be the ability to create stunning graphs.

Prism makes it easy to collaborate with colleagues, receive feedback from peers, and share your research with the world.

Go from data to elegant, publication-quality graphs—with ease. Prism offers countless ways to customize your graphs, from color schemes to how you organize data. Export into almost any format, send to PowerPoint, or email directly from the application.

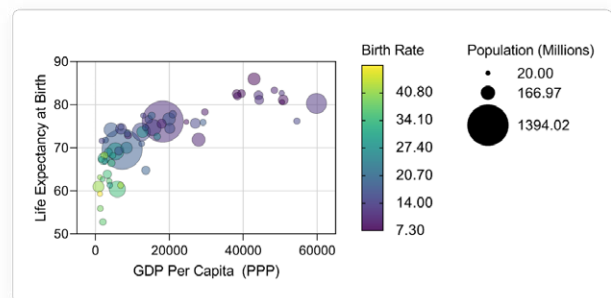


## Countless Ways to Customize Your Graphs

Focus on the story in your data. Prism makes it easy to create the graphs you want. Choose the type of graph, and customize any part—how the data is arranged, the style of your data points, labels, fonts, colors, and much more. The customization options are endless.

## Explore Your Data

Focus your efforts on analyzing the most relevant data. Customize how you present the relationships in the data to effectively explore large data sets.



## Export Publication-Quality Graphs With One Click

Reduce time to publish. Prism allows you to customize your exports (file type, resolution, transparency, dimensions, color space RGB/CMYK) to meet the requirements of journals. Set your defaults to save time.



## From students to Nobel Prize winners, researchers around the world love GraphPad Prism.



"I absolutely love your program. Ease of handling is unmatched and results are perfectly explained. Just what we non-computer geeks need."

"GraphPad Prism is a pleasure to use, very intuitive, and perfectly suited to my boss' needs and my abilities. I don't know how I could do my work without it."

"Thanks so much for making my life 1,000,000,000x easier with your awesome program!"

"As a non-statistician, I really enjoy working with Prism because it is so much easier and much more intuitive than other programs."

"Prism has incredible sophistication and complexity that the user never senses because the interface is so superbly designed. Thank you for a tremendous tool!"

"Prism has simplified my data analysis and taught me statistics at the same time!"

"No more #%^%\$% Excel for analyzing scientific data! I've become a Prism evangelist."

"Prism is a really great program, and very user-friendly for us non-math geniuses."

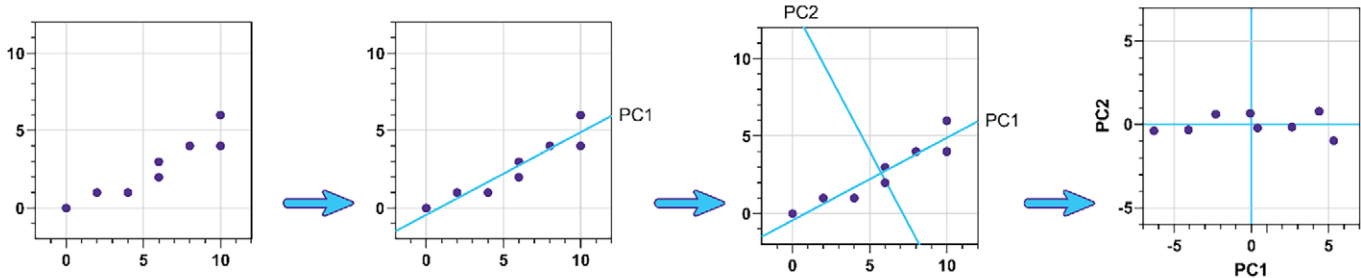
"It blows the other statistical programs out of the water for the construction of clear and attractive tables, graphs, and figures for publication. I would be lost without Prism."

"This is exactly what we needed. You have saved us a ton of time in re-doing our calculations in Excel!"

"Because Prism is so user-friendly, intuitive, and informative, I now am much more confident in performing statistical analyses."

## Introducing Prism 9

# Taking your analyses and graphs to higher dimensions



### Data on a higher dimension

Prism 9 introduces a number of improvements to the Multiple Variables data table. Explore larger data sets using a standard structure, and perform new and improved analyses with the following improvements:

- Automatic identification of variable types - continuous, categorical, or label values
- Text information in the data table - Enter data directly as text (ie "Male" and "Female")
- Automatic variable encoding - Enter your data and Prism will automatically encode categorical text variables into numeric "dummy" variables

### Introducing Principal Component Analysis (PCA)

Often in research there are simply too many variables to fit a model to the data. However, selecting some variables to exclude from the analysis is throwing information away that could be useful. PCA is a technique of "dimensionality reduction" that can be used to reduce the number of variables required to describe the data while eliminating as little information from the data as possible.

### Adding new dimensions to your graphs

Several enhancements and popular new graph styles have been introduced:

- Create Bubble Plots directly from raw data, encoding variables for symbol position (X- and Y-coordinates), size, and fill color
- Automatically add multiple comparison results to graphs
- Better Visualization of T Test Results with Estimation Plots

**Plus much more!**

# Discover the Breadth of Statistical Features Available in Prism

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## Statistical Comparisons

- Paired or unpaired t tests, multiple paired t tests, multiple ratio t tests, multiple (nonparametric) Mann-Whitney tests, multiple (nonparametric) Kolmogorov-Smirnov tests, and multiple (nonparametric) paired Wilcoxon tests. Reports P values and confidence intervals.
- Automatically generate volcano plot (difference vs. P value) from multiple t test analysis.
- Nonparametric Mann-Whitney test, including confidence interval of difference of medians.
- Kolmogorov-Smirnov test to compare two groups.
- Wilcoxon test with confidence interval of median.
- Perform many t tests at once, using False Discovery Rate (or Bonferroni multiple comparisons) to choose which comparisons are discoveries to study further.
- Ordinary or repeated measures ANOVA followed by the Tukey, Newman-Keuls, Dunnett, Bonferroni or Holm-Sidak multiple comparison tests, the post-test for trend, or Fisher's Least Significant tests.
- One-way ANOVA without assuming populations with equal standard deviations using Brown-Forsythe and Welch ANOVA, followed by appropriate comparisons tests (Games-Howell, Tamhane T2, Dunnett T3)
- Many multiple comparisons tests are accompanied by confidence intervals and multiplicity adjusted P values.
- Greenhouse-Geisser correction so repeated measures one-, two-, and three-way ANOVA do not have to assume sphericity. When this is chosen, multiple comparison tests also do not assume sphericity.
- Kruskal-Wallis or Friedman nonparametric one-way ANOVA with Dunn's post test.
- Fisher's exact test or the chi-square test. Calculate the relative risk and odds ratio with confidence intervals.
- Two-way ANOVA, even with missing values with some post tests.
- Two-way ANOVA, with repeated measures in one or both factors. Tukey, Newman-Keuls, Dunnett, Bonferroni, Holm-Sidak, or Fisher's LSD multiple comparisons testing main effects.
- Three-way ANOVA (limited to two levels in two of the factors, and any number of levels in the third).
- Analysis of repeated measures data (one-, two-, and three-way) using a mixed effects model (similar to repeated measures ANOVA, but capable of handling missing data).
- Kaplan-Meier survival analysis. Compare curves with the log-rank test (including test for trend).
- Comparison of data from nested data tables using nested t test or nested one-way ANOVA (using mixed effects model).

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## Nonlinear Regression

- Fit one of our 105 built-in equations, or enter your own. Now including family of growth equations: exponential growth, exponential plateau, Gompertz, logistic, and beta (growth and then decay).
- Enter differential or implicit equations.
- Enter different equations for different data sets.
- Global nonlinear regression – share parameters between data sets.
- Robust nonlinear regression.
- Automatic outlier identification or elimination.

- Compare models using extra sum-of-squares F test or AICc.
- Compare parameters between data sets.
- Apply constraints.
- Differentially weight points by several methods and assess how well your weighting method worked.
- Accept automatic initial estimated values or enter your own.
- Automatically graph curve over specified range of X values.
- Quantify precision of fits with SE or CI of parameters. Confidence intervals can be symmetrical (as is traditional) or asymmetrical (which is more accurate).
- Quantify symmetry of imprecision with Hougaard's skewness.
- Plot confidence or prediction bands.
- Test normality of residuals.
- Runs or replicates test of adequacy of model.
- Report the covariance matrix or set of dependencies.
- Easily interpolate points from the best fit curve.
- Fit straight lines to two data sets and determine the intersection point and both slopes.

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## Principal Component Analysis (PCA)

- Component selection via Parallel Analysis (Monte Carlo simulation), Kaiser criterion (Eigenvalue threshold), Proportion of Variance threshold, and more.
- Automatically generated Scree Plots, Loading Plots, Biplots, and more.
- Use results in downstream applications like Principal Component Regression.

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## Multiple Variable Graphing

- Specify variables defining axis coordinates, color, and size.
- Create Bubble Plots.

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## Column Statistics

- Calculate descriptive statistics: min, max, quartiles, mean, SD, SEM, CI, CV, skewness, kurtosis.
- Mean or geometric mean with confidence intervals.
- Frequency distributions (bin to histogram), including cumulative histograms.
- Normality testing by four methods (new: Anderson-Darling).
- Lognormality test and likelihood of sampling from normal (Gaussian) vs. lognormal distribution.
- Create QQ Plot as part of normality testing.
- One sample t test or Wilcoxon test to compare the column mean (or median) with a theoretical value.
- Identify outliers using Grubbs or ROUT method.
- Analyze a stack of P values, using Bonferroni multiple comparisons or the FDR approach to identify "significant" findings or discoveries.

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## Simple Linear Regression and Correlation

- Calculate slope and intercept with confidence intervals.
- Force the regression line through a specified point.
- Fit to replicate Y values or mean Y.
- Test for departure from linearity with a runs test.
- Calculate and graph residuals in four different ways (including QQ plot).

- Compare slopes and intercepts of two or more regression lines.
- Interpolate new points along the standard curve.
- Pearson or Spearman (nonparametric) correlation.

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## Generalized Linear Models (GLMs)

- Generate models relating multiple independent variables to a single dependent variable using the new multiple variables data table.
- Multiple linear regression (when Y is continuous). Include categorical (text) variables directly in the model. Specify reference levels for each categorical variable. Interpolate values for response variable from multiple linear regression.
- Poisson regression (when Y is counts; 0, 1, 2, ...).
- Logistic regression (when Y is binary; yes/no, pass/fail, etc.).

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## Clinical (Diagnostic) Lab Statistics

- Bland-Altman plots.
- Receiver operator characteristic (ROC) curves.
- Deming regression (type II linear regression).

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## Simulations

- Simulate XY, Column or Contingency tables.
- Repeat analyses of simulated data as a Monte-Carlo analysis.
- Plot functions from equations you select or enter and parameter values you choose.

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## Other Calculations

- Area under the curve, with confidence interval.
- Transform data.
- Normalize.
- Identify outliers.
- Normality tests.
- Transpose tables.
- Subtract baseline (and combine columns).
- Compute each value as a fraction of its row, column or grand total.

**Start using Prism today  
with a free 30 day trial.**

No credit card, no commitment required.

[Start a Free Trial](#)

