

# USING VARIABLES

- Variables can hold many things, allowing you to organize your work:
  - ▶ text, vectors, data-frames, arrays, matrices, lists, ...
  - ▶ **fit results**
  - ▶ plot characteristics
- Suggestion: Make use of this wherever possible
  - ▶ Create data-frames to hold data for plots.
  - ▶ Include new variables in the relevant data-frames.
  - ▶ **When fitting, save the results in unique variables.**

## R input and response:

```
fit1 <- lm (GGALTB ~ GGALT, data=Data)
names(fit1)
## [1] "coefficients" "residuals"      "effects"
## [5] "fitted.values" "assign"          "qr"
## [9] "xlevels"       "call"           "terms"
summary(fit1)
##
## Call:
## lm(formula = GGALTB ~ GGALT, data = Data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.77737 -0.00101 -0.00004  0.00094  0.37749
##
## Coefficients:
##              Estimate Std. Error    t value Pr(>|t|)
## (Intercept) -1.936e-03  4.312e-04 -4.491e+00 7.14e-05
## GGALT        1.000e+00  3.539e-08  2.826e+07 < 2e-16
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.01321 on 21359 degrees of freedom
## Multiple R-squared:  1, Adjusted R-squared:
## F-statistic: 7.986e+14 on 1 and 21359 DF, p-value:
##
## coefficients(fit1) #or summary(fit1)$coefficients
## (Intercept)      GGALT
## -0.00193629  1.00000016
```