Brent et al. (1999) measured baseline plasma glycolate and arterial pH on 18 patients admitted for ethylene glycol poisoning (ethylene glycol is a colorless, odorless, sweet-tasting chemical found in many household products, including antifreeze, detergents, paints, and cosmetics).

- ```
  > ethpois.dat <- read.table("poison.csv", header=T, sep=",")
  > attach(ethpois.dat)
  > names(ethpois.dat)
  [1] "glyco" "ph"
  > plot(ph,glyco, xlab="Arterial pH", ylab="Plasma Glycolate (mg/dl)",
        main="ethlyene glycol poisoning", pch=18)
  ```

- To create a linear model, we use the `lm` command:
  ```
  > pois.reg <- lm(glyco ~ ph)
  Residuals:
      Min      1Q  Median      3Q     Max
  -59.953 -29.463  -2.525  28.045  60.341

  Coefficients:
              Estimate Std. Error t value Pr(>|t|)
  (Intercept)  3082.58     381.02   8.090 4.79e-07 ***
  ph           -414.97      52.83  -7.855 7.02e-07 ***
  ---
  Signif. codes:  0 *** 0.001 ** 0.01 * 0.05 . 0.1   1

  Residual standard error: 37.69 on 16 degrees of freedom
  Multiple R-squared: 0.7941,     Adjusted R-squared: 0.7812
  F-statistic:  61.7 on 1 and 16 DF,  p-value: 7.023e-07
  > resid(pois.reg)      # to get the residual values
  > fitted(pois.reg)     # to get the predicted values
  > abline(pois.reg)     # to add the regression line to your plot
  > plot(pois.reg, resid(pois.reg), xlab="Plasma Glycolate (mg/dl)",
      ylab="lm residuals", main="residuals, ethlyene glycol poisoning", pch=18)
  > abline(h=0)
  ```