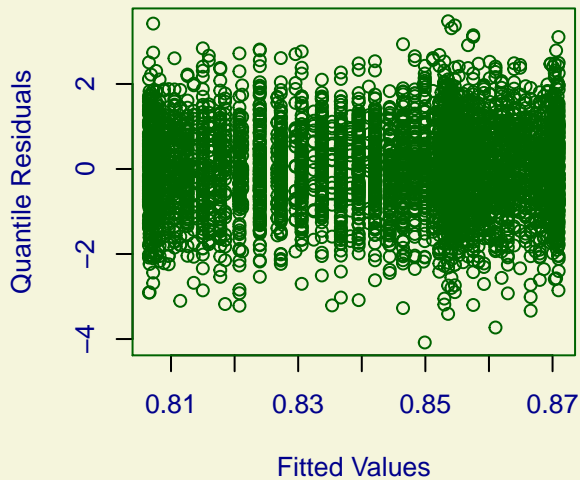
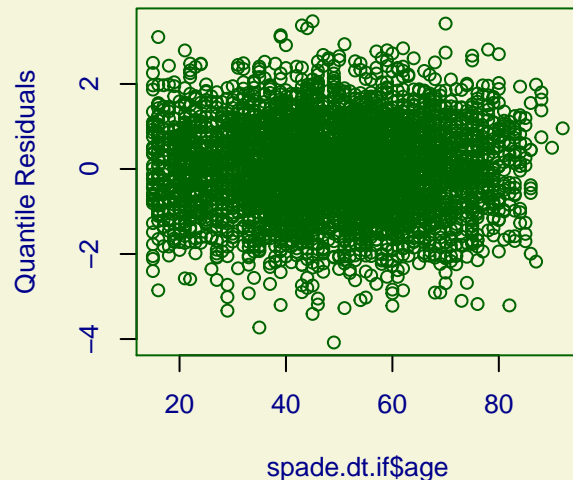


Diagnostic plot for Beta-Binomial model fit of  
b12 in china\_men\_b12 men age 15 – 92

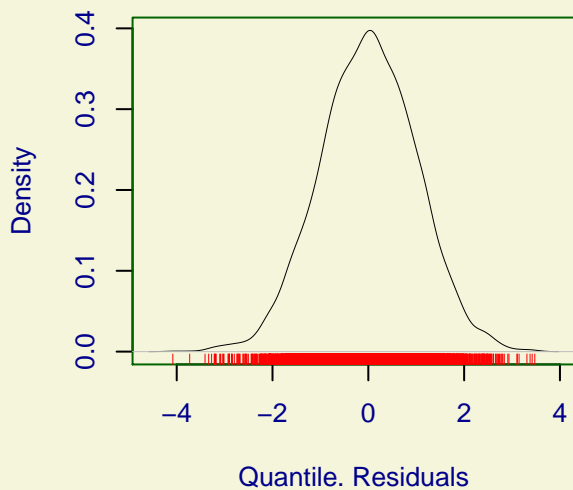
Against Fitted Values



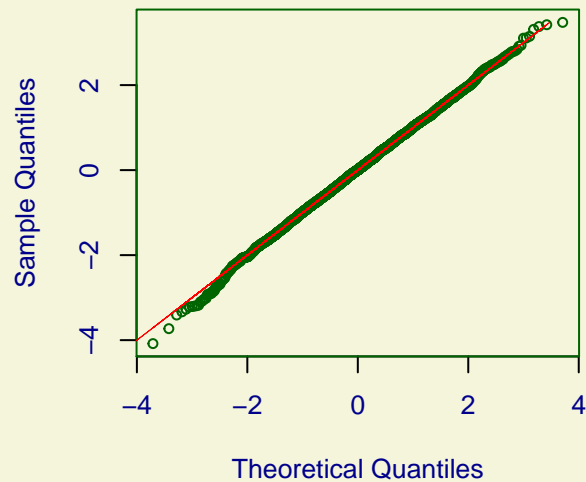
Against spade.dt.if\$age



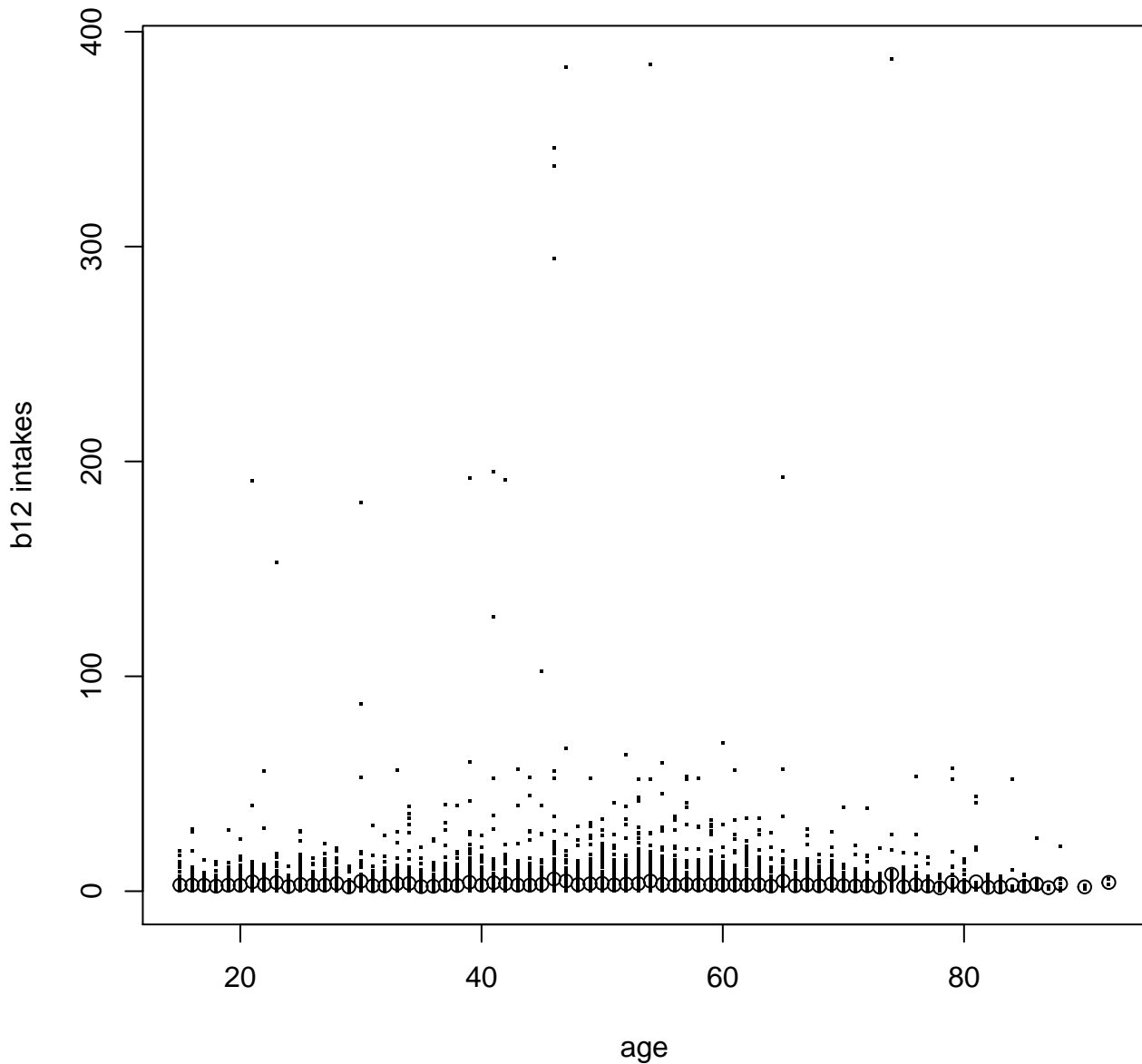
Density Estimate



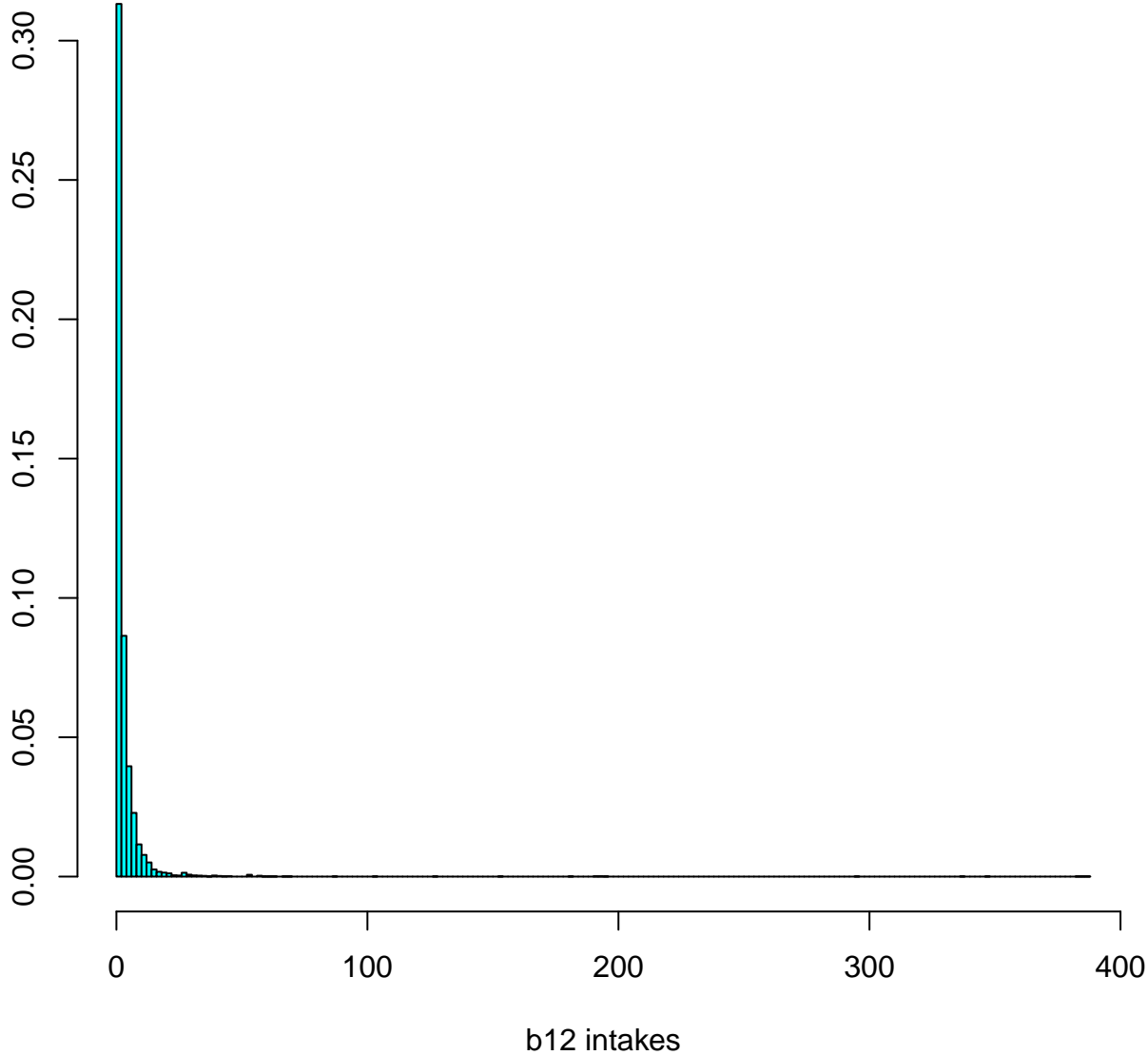
Normal Q-Q Plot



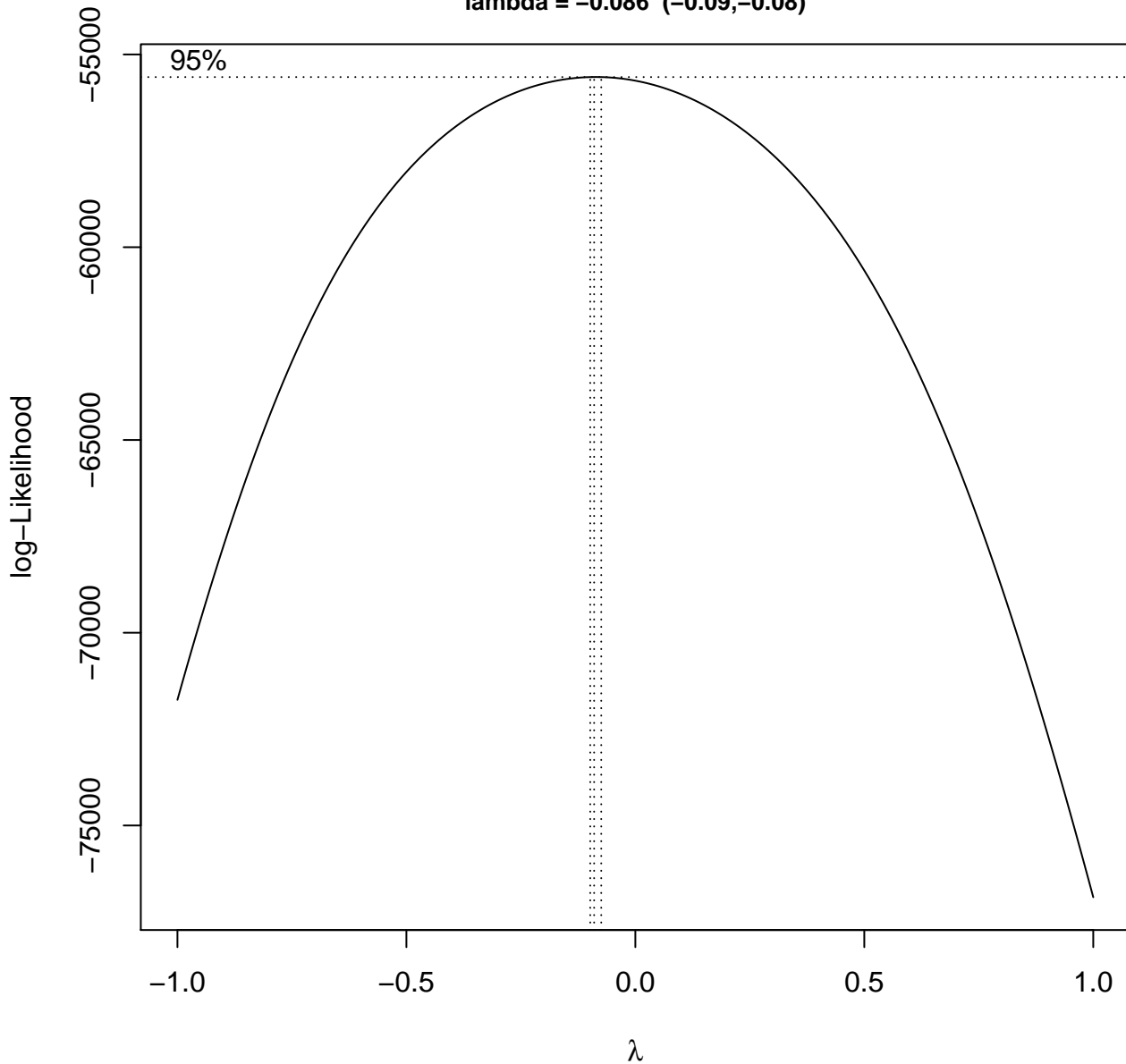
Original data for b12 in china\_men\_b12  
men ; age 15-92



**Original data for b12 in china\_men\_b12**  
**men ; age 15–92**

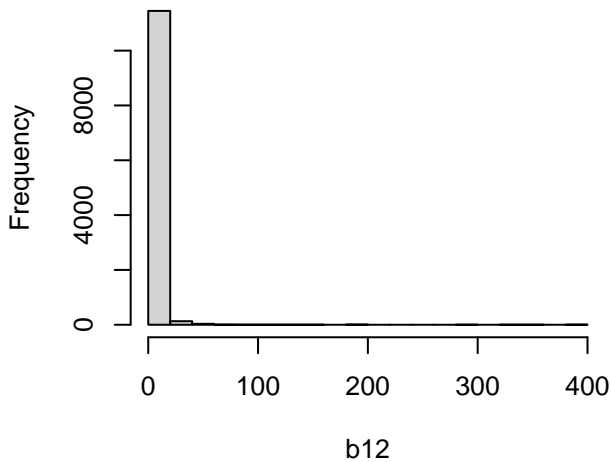


Box-Cox plot for original data for b12 in china\_men\_b12  
men ; age 15-92  
 $\lambda = -0.086$   $(-0.09, -0.08)$

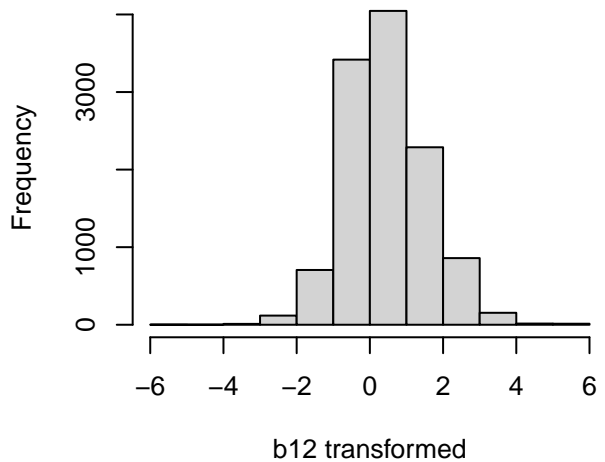


Diagnostic plots for b12 in china\_men\_b12  
men ; age 15–92

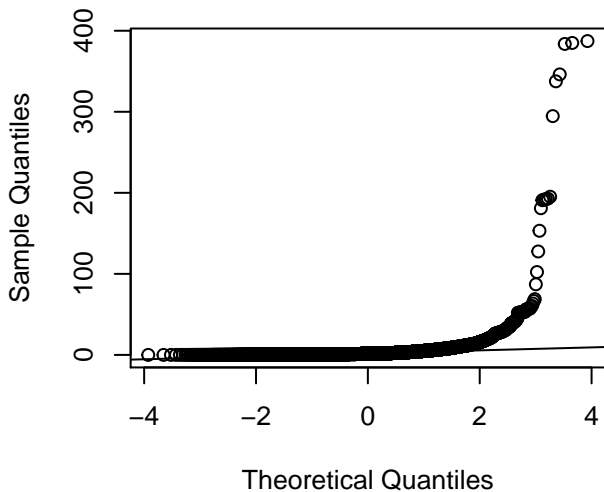
**Intakes before  
Box–Cox trans.**



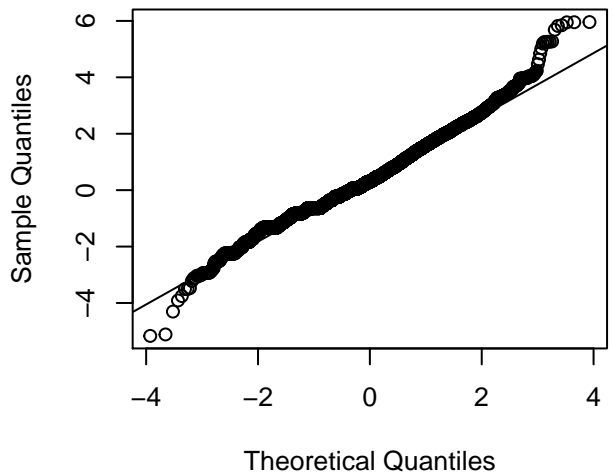
**Intakes after  
Box–Cox trans.**



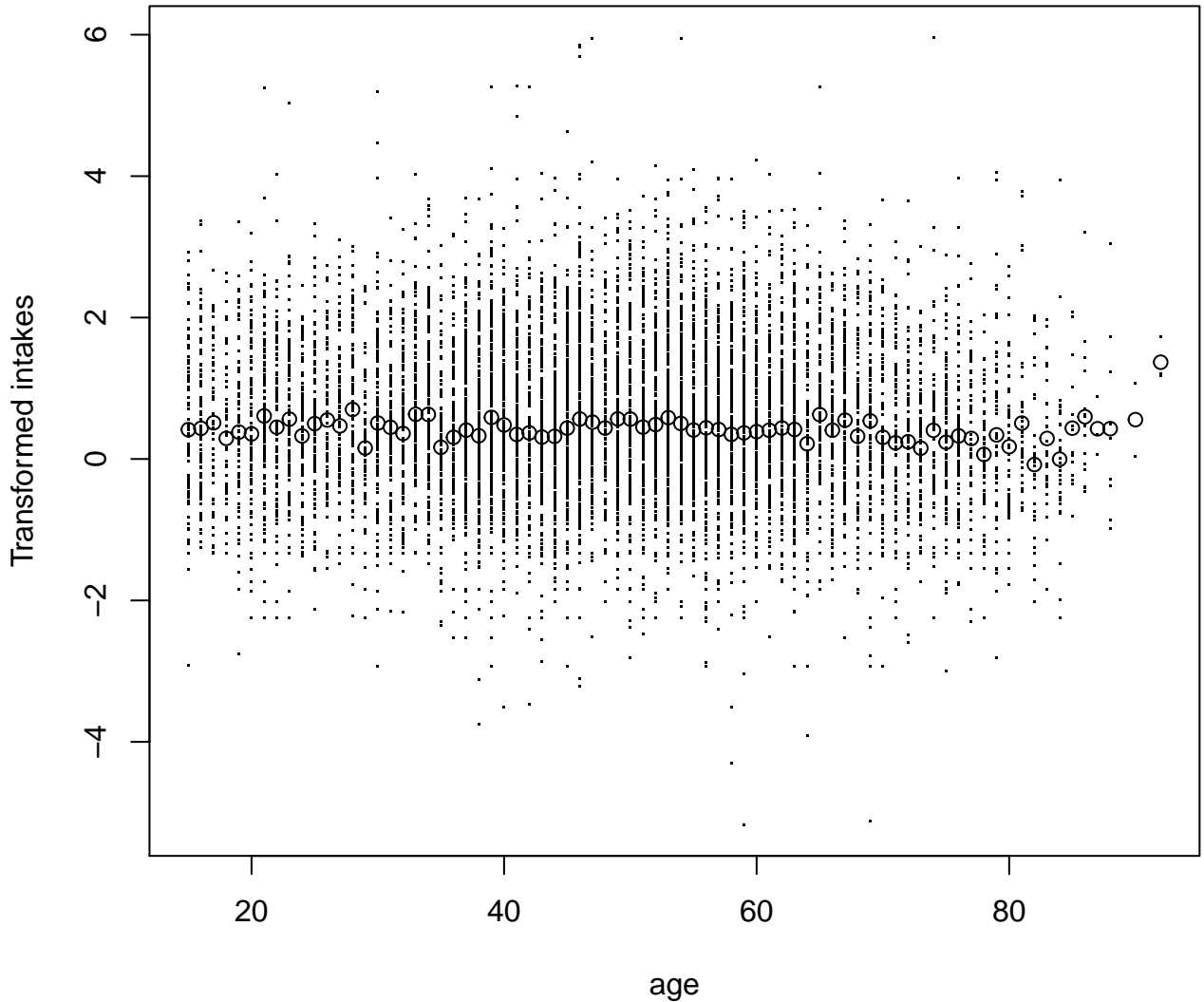
**Normal Q–Q plot  
Original intakes**



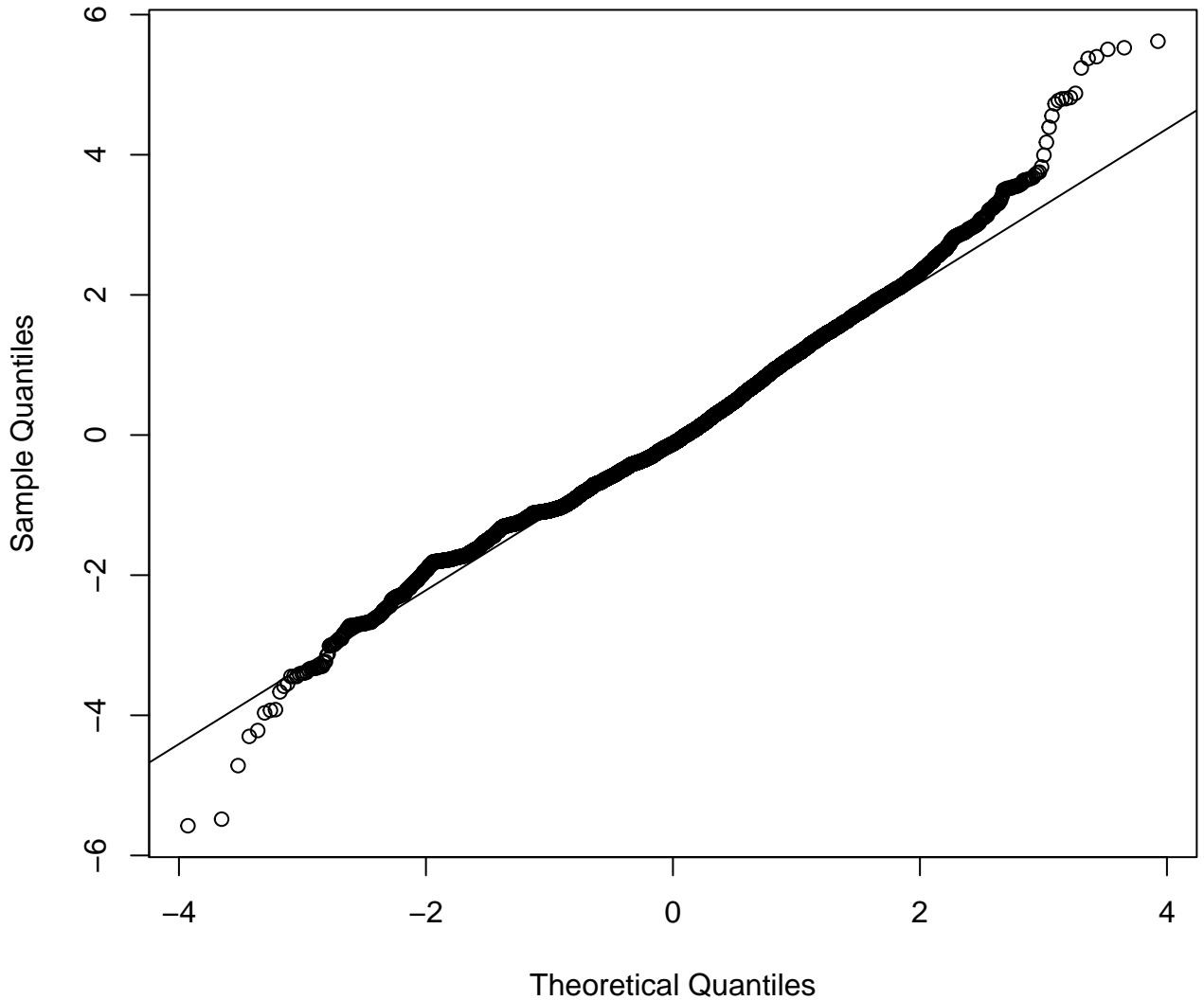
**BoxCox transformed intakes  
lambda = 0**



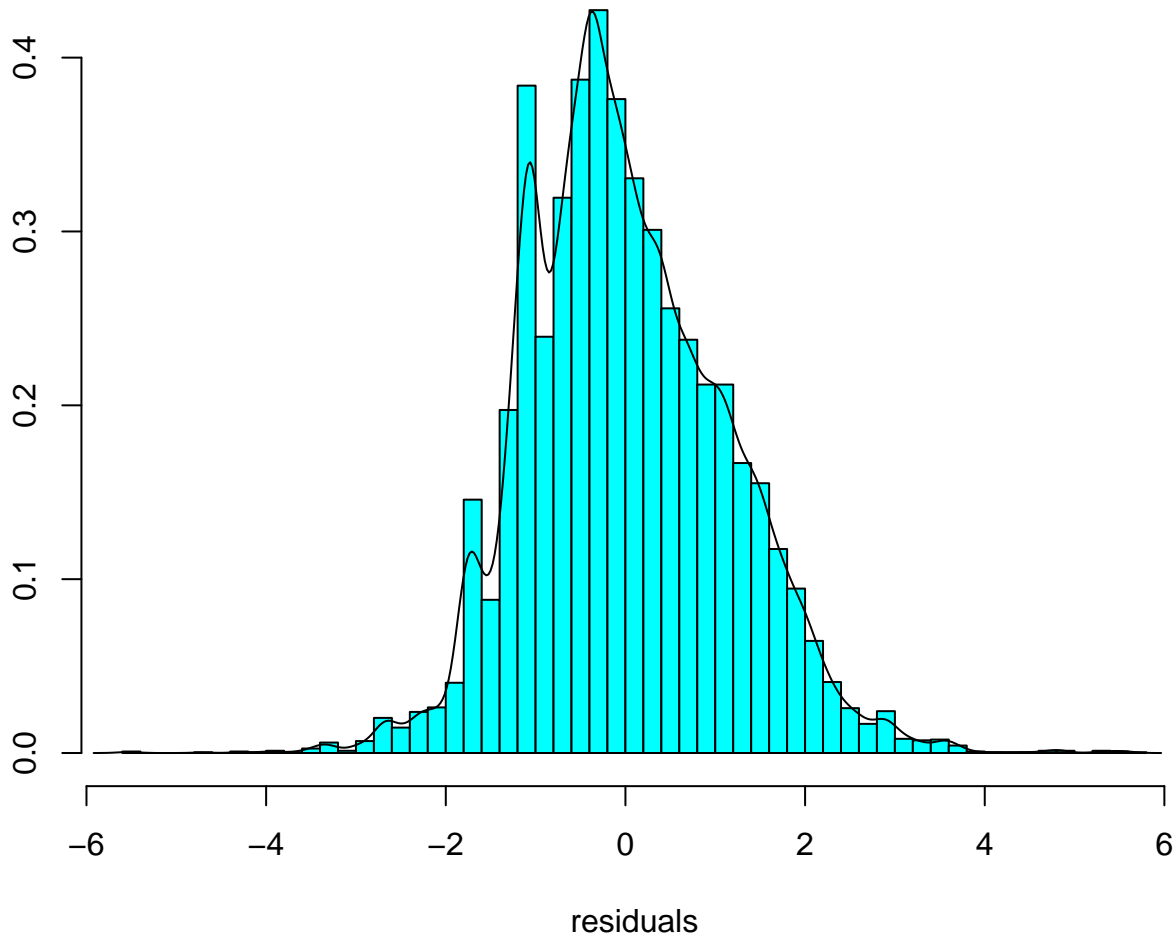
**Transformed data for b12 in china\_men\_b12**  
**men ; age 15-92    lambda = 0**



QQ-normal: residuals of model  
intake.trans ~ fp(age)  
men ; age 15-92 for b12 in china\_men\_b12

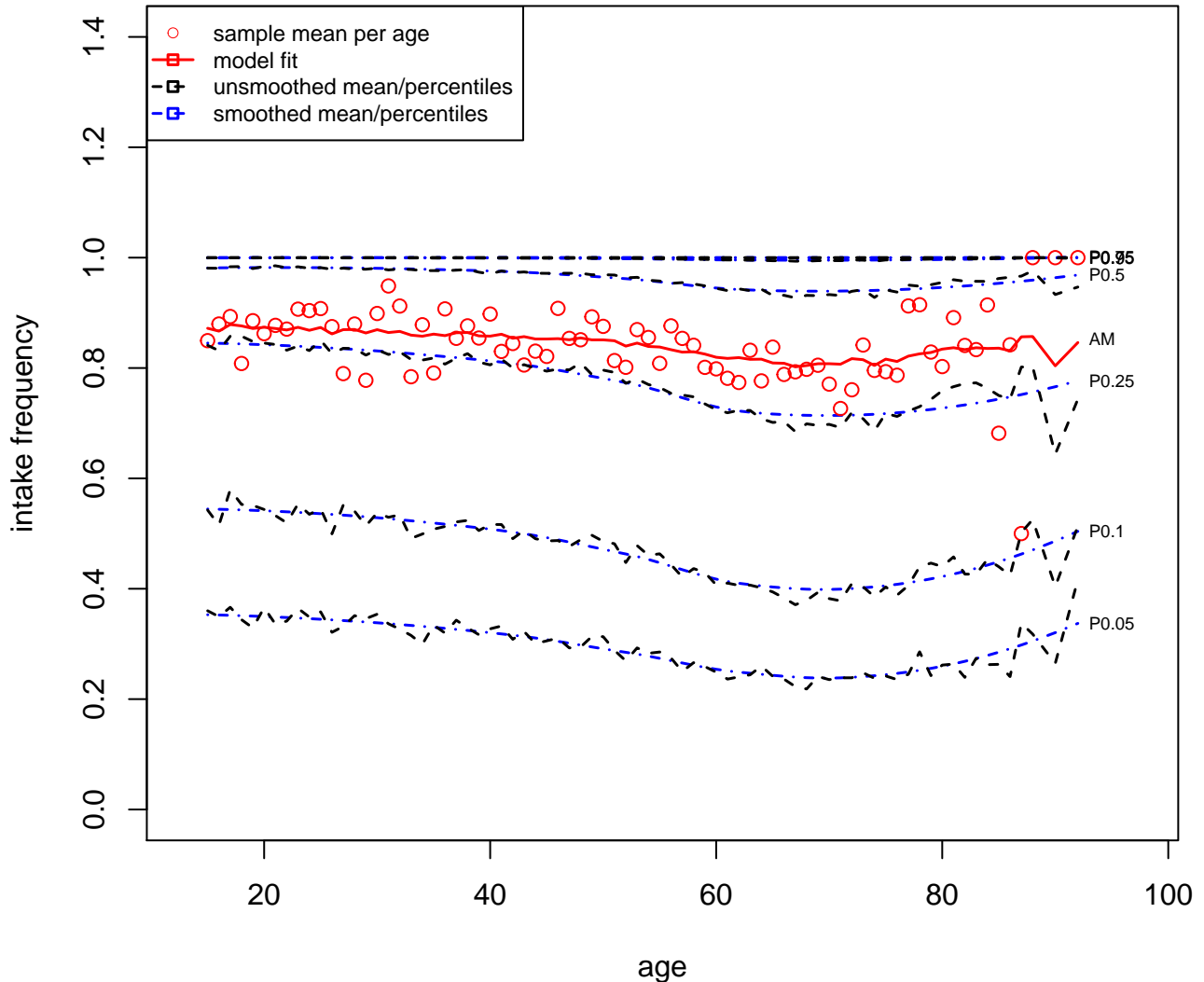


Histogram: residuals of model  
intake.trans ~ fp(age)  
men ; age 15–92 for b12 in china\_men\_b12

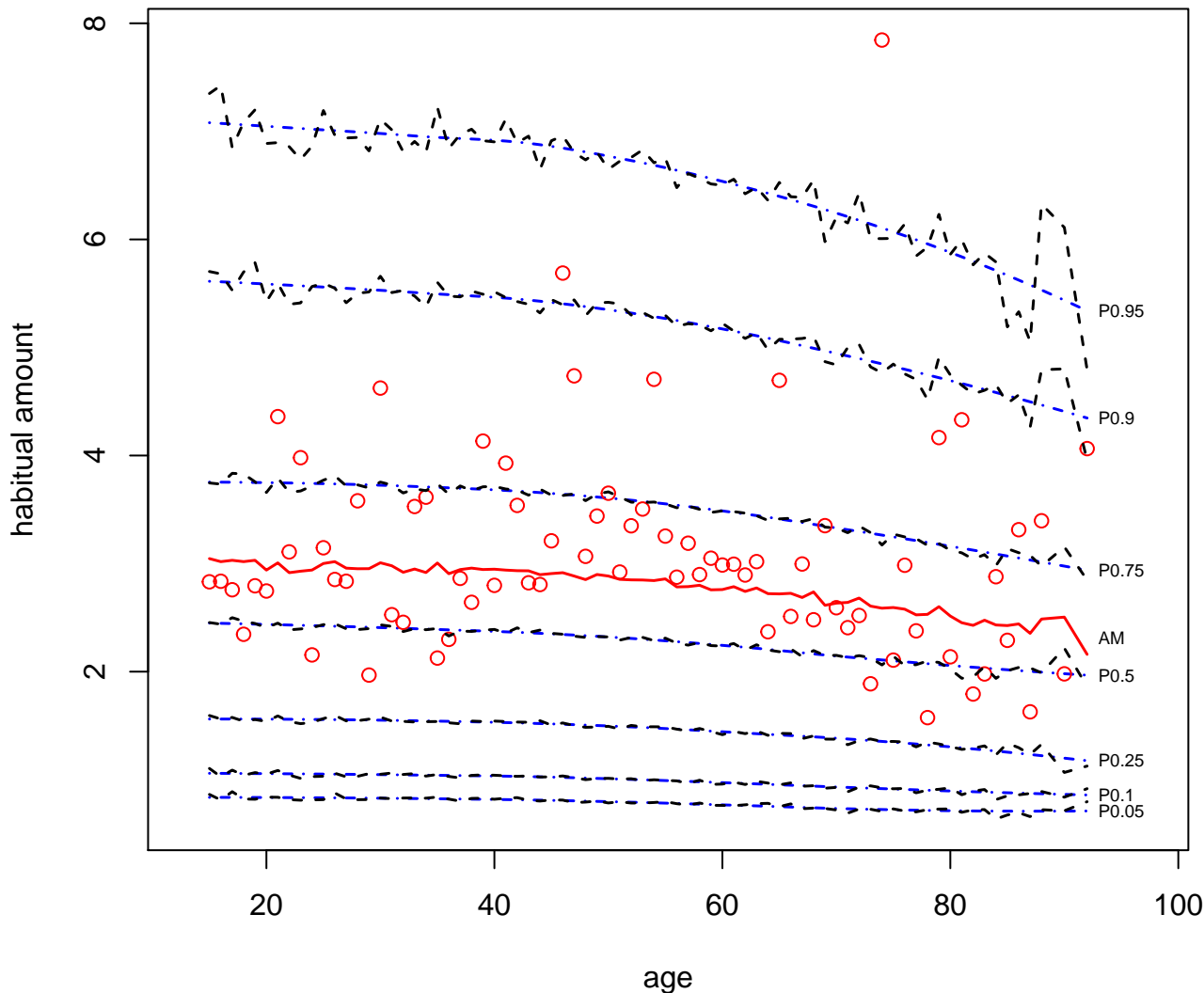




**BB model: intake frequency distribution for b12 in china\_men\_b12**  
**men ; age 15–92**  
**per person 100 simulated pseudo persons**



Habitual amount distribution for b12 in china\_men\_b12  
men ; age 15–92  
per person 100 simulated pseudo persons



Habitual amount distribution for b12 in china\_men\_b12  
men ; age 15-92  
per person 100 simulated pseudo persons

