Linear regression analysis

```
> linearmod2<-lm(data=test.20, SBPZAGH~temp_DDI[1,])
> summary(linearmod2)

Call:
lm(formula = SBPZAGH ~ temp_DDI[1, ], data = test.20)

Residuals:
    Min      1Q  Median      3Q     Max
-3.9745 -0.7713 -0.1219  0.7329  4.0410

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    0.17103    0.07291   2.346   0.0194 *
temp_DDI[1, ]  0.16800    0.07743   2.170   0.0306 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.18 on 418 degrees of freedom
  (352 observations deleted due to missingness)
Multiple R-squared:  0.01114,   Adjusted R-squared:  0.00877
F-statistic: 4.707 on 1 and 418 DF,  p-value: 0.0306
```

```
> keep<-which(test.20$n_agents>0)
> linearmod2<-lm(data=test.20, SBPZAGH[keep]~temp_DDI[1,keep])
> summary(linearmod2)

Call:
lm(formula = SBPZAGH[keep] ~ temp_DDI[1, keep], data = test.20)

Residuals:
     Min      1Q  Median      3Q     Max
-3.9745 -0.7713 -0.1219  0.7329  4.0410

Coefficients:
                   Estimate Std. Error t value Pr(>|t|)
(Intercept)        0.17103    0.07291   2.346   0.0194 *
temp_DDI[1, keep]  0.16800    0.07743   2.170   0.0306 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.18 on 418 degrees of freedom
  (47 observations deleted due to missingness)
Multiple R-squared:  0.01114,   Adjusted R-squared:  0.00877
F-statistic: 4.707 on 1 and 418 DF,  p-value: 0.0306
```

```
> n0<-which(test.20$n_agents==0)
> summary(test.20$SBPZAGH[n0])
    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
-2.1800 -0.4850  0.3400  0.2712  0.8200  3.9700      42
> summary(test.20$SBPZAGH[n0], na.rm=TRUE)
    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
-2.1800 -0.4850  0.3400  0.2712  0.8200  3.9700      42
> sd(test.20$SBPZAGH[n0])
[1] NA
> sd(test.20$SBPZAGH[n0],na.rm=TRUE)
[1] 1.01236
> mean(test.20$SBPZAGH[n0],na.rm=TRUE)
[1] 0.2711864
```

```
> linearmod2<-lm(data=test.20, SBPZAGH~temp_DDI[2,])
> summary(linearmod2)

Call:
lm(formula = SBPZAGH ~ temp_DDI[2, ], data = test.20)

Residuals:
    Min      1Q  Median      3Q     Max
-3.4603 -0.9884 -0.0795  0.9850  3.6819

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)     0.7410     0.2013   3.680 0.000383 ***
temp_DDI[2, ]  -0.1715     0.3416  -0.502 0.616775
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.378 on 97 degrees of freedom
  (673 observations deleted due to missingness)
Multiple R-squared:  0.002592,  Adjusted R-squared:  -0.007691
F-statistic: 0.252 on 1 and 97 DF,  p-value: 0.6168

> linearmod2<-lm(data=test.20, SBPZAGH~temp_DDI[3,])
> summary(linearmod2)

Call:
lm(formula = SBPZAGH ~ temp_DDI[3, ], data = test.20)

Residuals:
    Min      1Q  Median      3Q     Max
-3.1660 -0.4547 -0.0370  0.6361  2.3257

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)     1.9178     0.3719   5.157  5.6e-05 ***
temp_DDI[3, ]  -0.6522     0.8257  -0.790    0.439
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.35 on 19 degrees of freedom
  (751 observations deleted due to missingness)
Multiple R-squared:  0.0318,    Adjusted R-squared:  -0.01916
F-statistic: 0.624 on 1 and 19 DF,  p-value: 0.4393

Diastolic
> linearmod2<-lm(data=test.20, DBPZAGH~temp_DDI[1,])
> summary(linearmod2)

Call:
lm(formula = DBPZAGH ~ temp_DDI[1, ], data = test.20)

Residuals:
```

```
     Min      1Q  Median      3Q     Max
-2.6531 -0.7226 -0.0866  0.6738  4.8222

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)    0.24697    0.06472   3.816 0.000156 ***
temp_DDI[1, ]  0.09112    0.06874   1.325 0.185742
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.047 on 418 degrees of freedom
  (352 observations deleted due to missingness)
Multiple R-squared:  0.004185,  Adjusted R-squared:  0.001803
F-statistic: 1.757 on 1 and 418 DF,  p-value: 0.1857

> linearmod2<-lm(data=test.20, DBPZAGH~temp_DDI[2,])
> summary(linearmod2)

Call:
lm(formula = DBPZAGH ~ temp_DDI[2, ], data = test.20)

Residuals:
     Min      1Q  Median      3Q     Max
-2.7016 -0.8409 -0.0411  0.7612  4.6994

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)    0.43213    0.18432   2.345   0.0211 *
temp_DDI[2, ]  0.05898    0.31266   0.189   0.8508
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.261 on 97 degrees of freedom
  (673 observations deleted due to missingness)
Multiple R-squared:  0.0003667, Adjusted R-squared:  -0.009939
F-statistic: 0.03559 on 1 and 97 DF,  p-value: 0.8508

> linearmod2<-lm(data=test.20, DBPZAGH~temp_DDI[3,])
> summary(linearmod2)

Call:
lm(formula = DBPZAGH ~ temp_DDI[3, ], data = test.20)

Residuals:
     Min      1Q  Median      3Q     Max
-2.4126 -0.9584 -0.1104  0.8620  3.8420

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)     1.4287     0.4095   3.489  0.00246 **
temp_DDI[3, ]  -1.2171     0.9093  -1.338  0.19654
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.487 on 19 degrees of freedom
  (751 observations deleted due to missingness)
Multiple R-squared:  0.08617,   Adjusted R-squared:  0.03807
F-statistic: 1.792 on 1 and 19 DF,  p-value: 0.1965
```

using DDI 1, and n_agents vs SBP z

```
> linearmod2<-lm(data=test.20, SBPZAGH~temp_DDI[1,]+n_agents)
> summary(linearmod2)

Call:
lm(formula = SBPZAGH ~ temp_DDI[1, ] + n_agents, data = test.20)
```

```
Residuals:
     Min      1Q  Median      3Q     Max
-3.8591 -0.6941 -0.0636  0.6930  3.8335

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)   -0.31712    0.12611  -2.515   0.0123 *
temp_DDI[1, ]  0.06476    0.07870   0.823   0.4111
n_agents       0.39944    0.08520   4.688 3.74e-06 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.151 on 417 degrees of freedom
  (352 observations deleted due to missingness)
Multiple R-squared:  0.06065,   Adjusted R-squared:  0.05614
F-statistic: 13.46 on 2 and 417 DF,  p-value: 2.162e-06
```

```
> linearmod2<-lm(data=test.20,
SBPZAGH~temp_DDI[1,]+n_agents+BMIPCTAG+Upc+CKDONST+male1fe0+GHTOTINC+gfr+mean_compliance)
> summary(linearmod2)

Call:
lm(formula = SBPZAGH ~ temp_DDI[1, ] + n_agents + BMIPCTAG +
     Upc + CKDONST + male1fe0 + GHTOTINC + gfr + mean_compliance,
     data = test.20)

Residuals:
     Min      1Q  Median      3Q     Max
-3.5782 -0.7055 -0.0526  0.6506  3.4666

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
(Intercept)     -0.062840   0.421722  -0.149 0.881621
temp_DDI[1, ]    0.024016   0.076582   0.314 0.753989
n_agents         0.316550   0.083751   3.780 0.000181 ***
BMIPCTAG         0.004903   0.001821   2.692 0.007388 **
Upc              0.122170   0.026688   4.578 6.27e-06 ***
CKDONST          0.017735   0.011644   1.523 0.128521
male1fe0         0.002623   0.111254   0.024 0.981203
GHTOTINC        -0.025886   0.015974  -1.620 0.105907
gfr             -0.003689   0.002496  -1.478 0.140220
mean_compliance -0.085837   0.355204  -0.242 0.809170
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.104 on 403 degrees of freedom
  (359 observations deleted due to missingness)
Multiple R-squared:  0.1475,    Adjusted R-squared:  0.1285
F-statistic: 7.747 on 9 and 403 DF,  p-value: 1.536e-10
```