

Statistical Inference Project Part 1

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This is an analysis of the ToothGrowth data in the R datasets package. The analysis will provide a basic summary of the data and use confidence intervals and/or hypothesis tests to compare tooth growth by supp and dose. ## Load ToothGrowth data

```
library(datasets)
data(ToothGrowth)
str(ToothGrowth)
```

```
## 'data.frame': 60 obs. of 3 variables:
## $ len : num 4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7 ...
## $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2 ...
## $ dose: num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 ...
```

Summary of ToothGrowth dataset

```
ToothGrowth$dose <- as.factor(ToothGrowth$dose)
summary(ToothGrowth)
```

```
##      len      supp      dose
## Min.   : 4.20   OJ:30   0.5:20
## 1st Qu.:13.07   VC:30    1 :20
## Median :19.25           2 :20
## Mean   :18.81
## 3rd Qu.:25.27
## Max.   :33.90
```

```
table(ToothGrowth$supp, ToothGrowth$dose)
```

```
##
##      0.5  1  2
## OJ  10 10 10
## VC  10 10 10
```

Boxplot of ToothGrowth Dose Summary

