

A simple analysis of the cereal dataset for G

Carl Schwarz

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1 Introduction

What is the relationship between the calories in a serving of breakfast cereal and the grams of fat.

2 Material and Methods

A sample of 22 cereals were sampled from a local grocery store from this manufacturer and the nutritional information (e.g. number of grams of fat, protein, carbohydrates, etc.) and the number of calories per serving was extracted. The display shelf on which the cereal was stored was also recorded.

A simple linear regression was used to estimate the relationship between calories and fat.

All computations were performed using R version 3.6.0 (2019-04-26).

3 Results

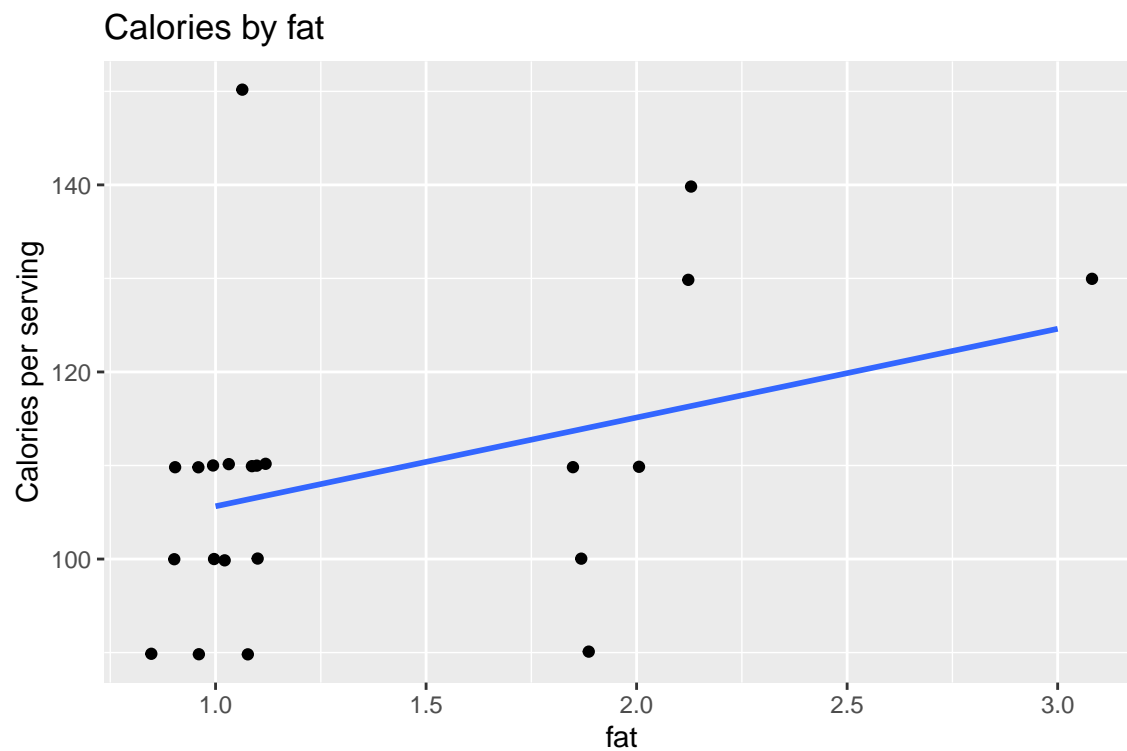
The data was screened for outliers and no unusual points were located.

This table summarizes the calories per serving by shelf number. shelf shelfc 1 2 3 High 0 0 9 Low 6 0 0 Middle 0 7 0

Table 1: Summary statistics on calories per serving

Shelf	n	Mean calories per serving	Min calories per serving	Max calories per serving	SD calories per serving
Low	6	103.3	90	110	10.3
Middle	7	110	100	130	10
High	9	112.2	90	150	22.2

This figure shows a graphical display of the calories per serving vs. the amount of fat in a serving.



There was no evidence of a relationship between the calories per serving and the amount of fat ($p=0.11656$). The estimated slope was 9.49 (SE 5.78).

4 Summary

We found no evidence that the mean number of calories varied with the amount of fat in a serving of cereal.