

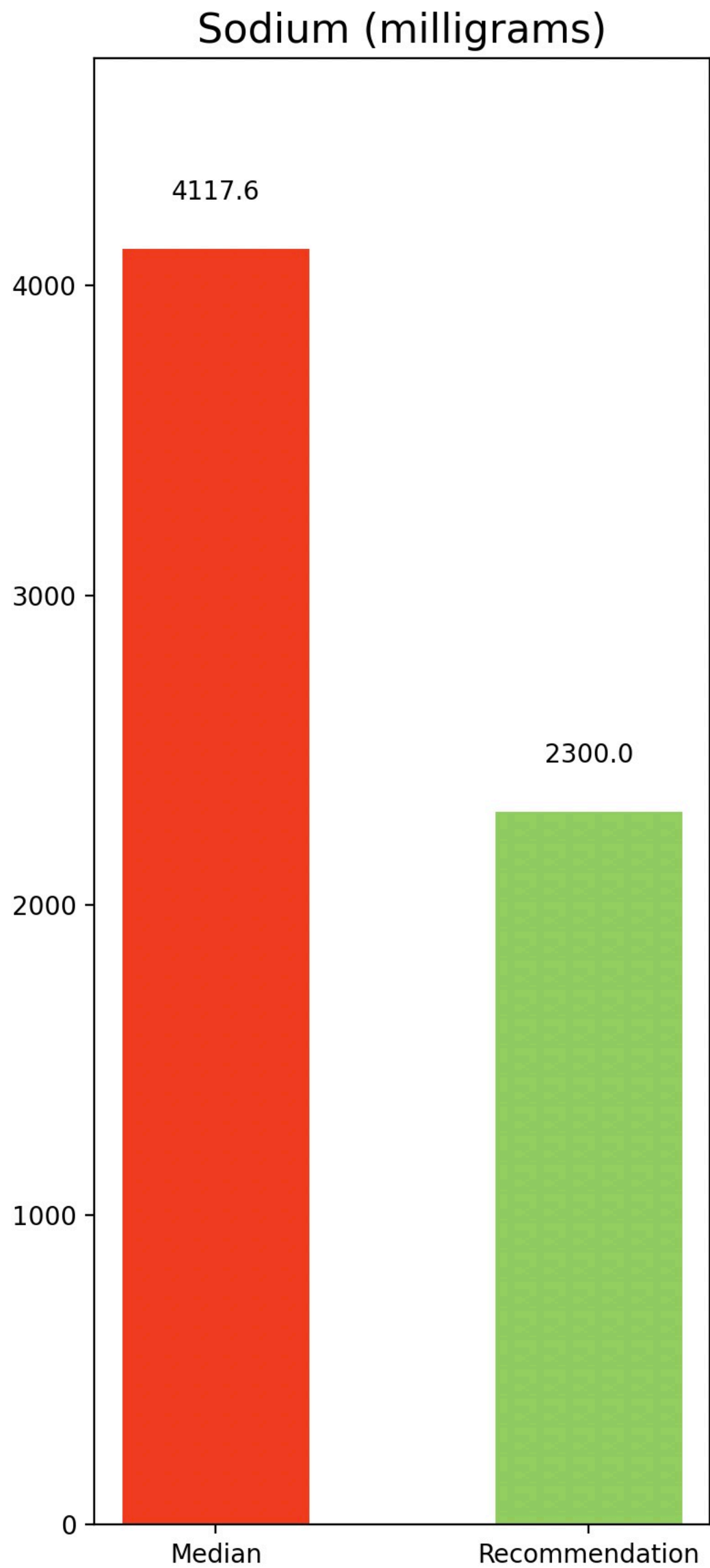
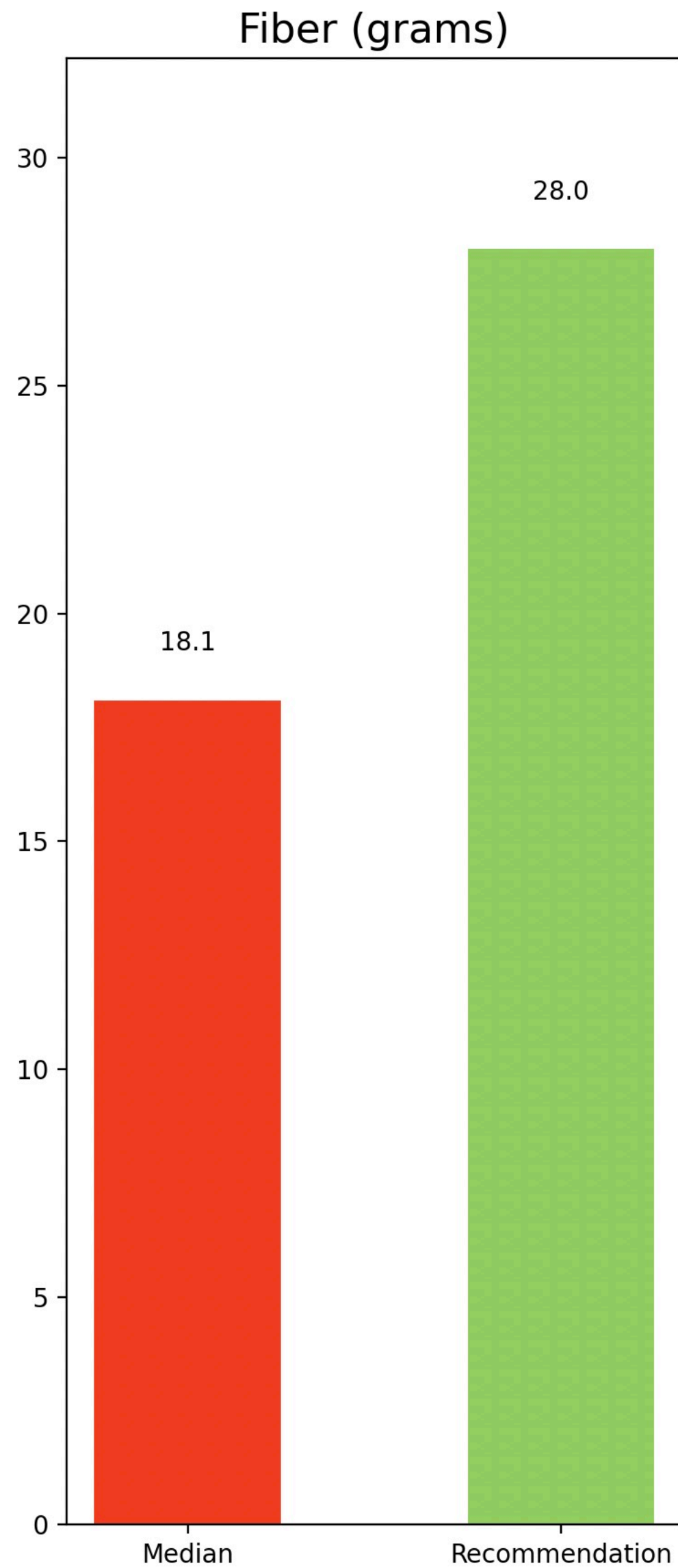
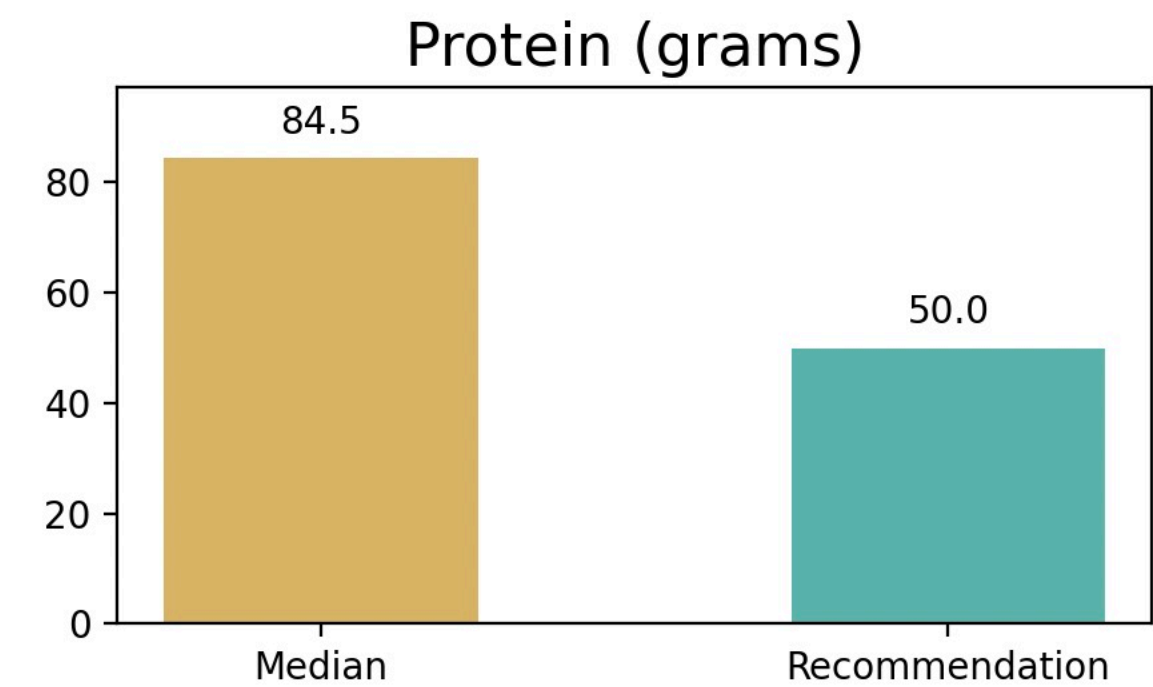
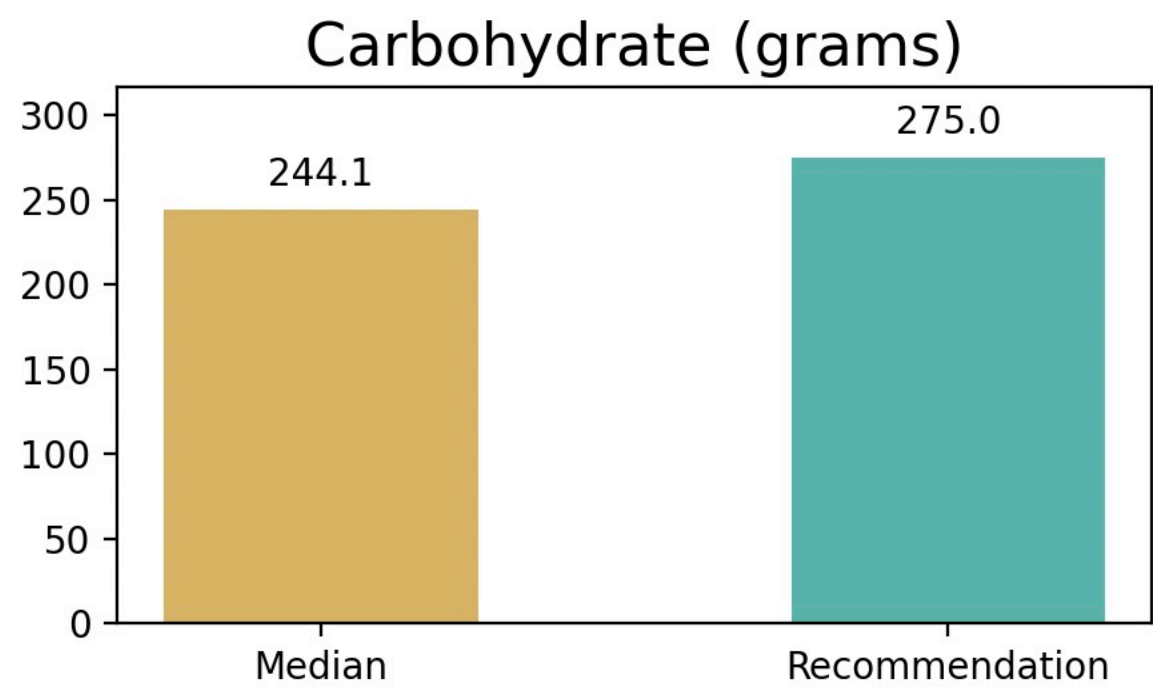
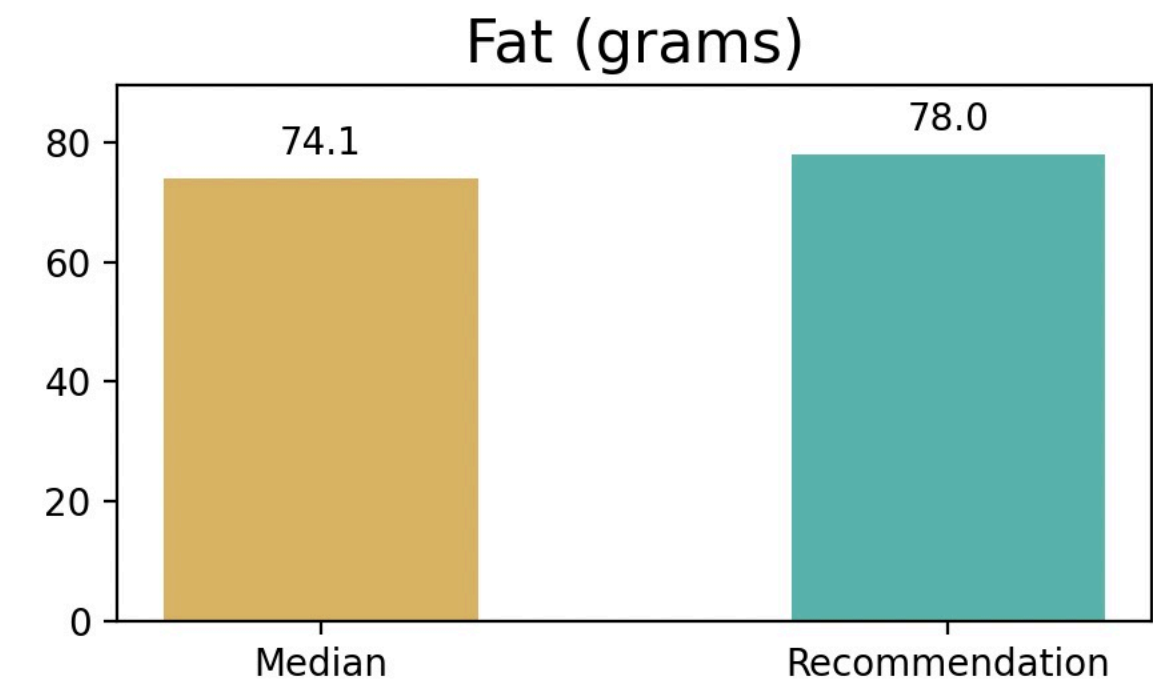
This visualization provides a comprehensive breakdown of nutrients in prepared meals and dishes commonly available at grocery stores such as Walmart, Target, and Wholefoods. Although these meals may initially appear as convenient and healthful alternatives to a balanced diet, a closer look—particularly at often overlooked metrics like fiber and sodium—reveals that their nutrient profiles can actually contribute to health issues.

The data cleaning process presented several challenges. I began by identifying the most frequent product categories across various grocery chains and found that “prepared-meals-dishes” consistently topped the list. However, further inspection revealed that the dataset was messy with numerous outliers and misclassified items (for instance, pastas often appeared in the prepared meals category rather than in a dedicated pasta-noodles grouping). To standardize the data for a fair comparison with National Institutes of Health (NIH) recommendations, I calculated the total calories for each product using the conversion factors (Protein: 4 Cal, Carbohydrate: 4 Cal, Fat: 9 Cal) and applied an interquartile range (IQR) method to remove extreme outliers across all macronutrients. Lastly, the data was scaled up to 2000 Cal in order to match the counterparts.

Two major design decisions shaped the final visualization: spatial layout and color encoding. The layout allocates the macronutrients to a vertical column on the left using smaller subplots, while the right side features larger subplots arranged horizontally for fiber and sodium. This design choice directs greater attention to fiber and sodium, emphasizing their critical yet often neglected role in diet. Complementing the layout, I used a diverging color scheme: muted “standard” colors for the familiar macronutrients and more vivid tones for fiber and sodium to accentuate their differences in comparison to the recommended daily intakes. Instead of a conventional bar chart, the side-by-side comparison format facilitates an intuitive reading of how these nutrients stack up against NIH recommendations.

# Balanced Meal... NOT

Comparison of prepared meals nutrients vs. NIH recommendations of daily intakes



All metrics are scaled to 2000 Cal