

Diet Compositions and Obesity

Ken Ye

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Introduction

A staggering number of 37.3% of the US population is obese,

The USDA Center for Nutrition Policy and Promotion recommends a very simple daily diet intake guideline: 30% grains, 40% vegetables, 10% fruits, and 20% protein. [1] [2]

Data

Categories	Items
Alcoholic Beverages	Alcohol, Non-Food; Beer; Beverages, Alcoholic; Beverages, Fermented; Wine
Animal fats	Butter, Ghee; Cream; Fats, Animals, Raw; Fish, Body Oil; Fish, Liver Oil
Animal Products	Aquatic Animals, Others; Aquatic Plants; Bovine Meat; Butter, Ghee; Cephalopods; Cream; Crustaceans; Demersal Fish; Eggs; Fats, Animals, Raw; Fish, Body Oil; Fish, Liver Oil; Freshwater Fish; Marine Fish, Other; Meat, Aquatic Mammals; Meat, Other; Milk - Excluding Butter; Molluscs, Other; Mutton & Goat Meat; Offals, Edible; Pelagic Fish; Pigmeat; Poultry Meat
Aquatic Products, Other	Aquatic Animals, Others; Aquatic Plants; Meat, Aquatic Mammals
Cereals - Excluding Beer	Barley and products; Cereals, Other; Maize and products; Millet and products; Oats; Rice (Milled Equivalent); Rye and products; Sorghum and products; Wheat and products
Eggs	Eggs
Fish, Seafood	Cephalopods; Crustaceans; Demersal Fish; Freshwater Fish; Marine Fish, Other; Molluscs, Other; Pelagic Fish
Fruits - Excluding Wine	Apples and products; Bananas; Citrus, Other; Dates; Fruits, Other; Grapefruit and products; Grapes and products (excl wine); Lemons, Limes and products; Oranges, Mandarinines; Pineapples and products; Plantains
Meat	Bovine Meat; Meat, Other; Mutton & Goat Meat; Pigmeat; Poultry Meat
Milk - Excluding Butter	Milk - Excluding Butter
Miscellaneous	Infant food; Miscellaneous
Offals	Offals, Edible
Oilcrops	Coconuts - Incl Copra; Cottonseed; Groundnuts (Shelled Eq); Oilcrops, Other; Olives (including preserved); Palm kernels; Rape and Mustardseed; Sesame seed; Soyabeans; Sunflower seed
Pulses	Beans; Peas; Pulses, Other and products
Spices	Cloves; Pepper; Pimento; Spices, Other
Starchy Roots	Cassava and products; Potatoes and products; Roots, Other; Sweet potatoes; Yams
Stimulants	Cocoa Beans and products; Coffee and products; Tea (including mate)
Sugar & Sweeteners	Honey; Sugar (Raw Equivalent); Sugar non-centrifugal; Sweeteners, Other
Sugar Crops	Sugar beet; Sugar cane
Treenuts	Nuts and products
Vegetable Oils	Coconut Oil; Cottonseed Oil; Groundnut Oil; Maize Germ Oil; Oilcrops Oil, Other; Olive Oil; Palm Oil; Palmkernel Oil; Rape and Mustard Oil; Ricebran Oil; Sesameseed Oil; Soyabean Oil; Sunflowerseed Oil
Vegetables	Onions; Tomatoes and products; Vegetables, Other
Vegetal Products	Alcohol, Non-Food; Apples and products; Bananas; Barley and products; Beans; Beer; Beverages, Alcoholic; Beverages, Fermented; Cassava and products; Cereals, Other; Citrus, Other; Cloves; Cocoa Beans and products; Coconut Oil; Coconuts - Incl Copra; Coffee and products; Cottonseed; Cottonseed Oil; Dates; Fruits, Other; Grapefruit and products; Grapes and products (excl wine); Groundnut Oil; Groundnuts (Shelled Eq); Honey; Infant food; Lemons, Limes and products; Maize and products; Maize Germ Oil; Millet and products; Miscellaneous; Nuts and products; Oats; Oilcrops Oil, Other; Oilcrops, Other; Olive Oil; Olives (including preserved); Onions; Oranges, Mandarinines; Palm kernels; Palm Oil; Palmkernel Oil; Peas; Pepper; Pimento; Pineapples and products; Plantains; Potatoes and products; Pulses, Other and products; Rape and Mustard Oil; Rape and Mustardseed; Rice (Milled Equivalent); Ricebran Oil; Roots, Other; Rye and products; Sesame seed; Sesameseed Oil; Sorghum and products; Soyabean Oil; Soyabeans; Spices, Other; Sugar (Raw Equivalent); Sugar beet; Sugar cane; Sugar non-centrifugal; Sunflower seed; Sunflowerseed Oil; Sweet potatoes; Sweeteners, Other; Tea (including mate); Tomatoes and products; Vegetables, Other; Wheat and products; Wine; Yams

Categories	Items
Grains	Cereals - Excluding Beer
Vegetables	Spices
	Starchy Roots
	Vegetables
	Vegetal Products
Fruits	Fruits - Excluding Wine
Protein	Aquatic Products, Other
	Eggs
	Fish, Seafood
	Meat
	Offals
	Pulses
Dairy	Milk - Excluding Butter
Sugar	Sugar & Sweeteners
Alcohol	Alcoholic Beverages
Stimulants	
Fats	Animal fats
	Treenuts
	Vegetable Oils
Others	Animal Products
	Miscellaneous
	Oilcrops
	Sugar Crops

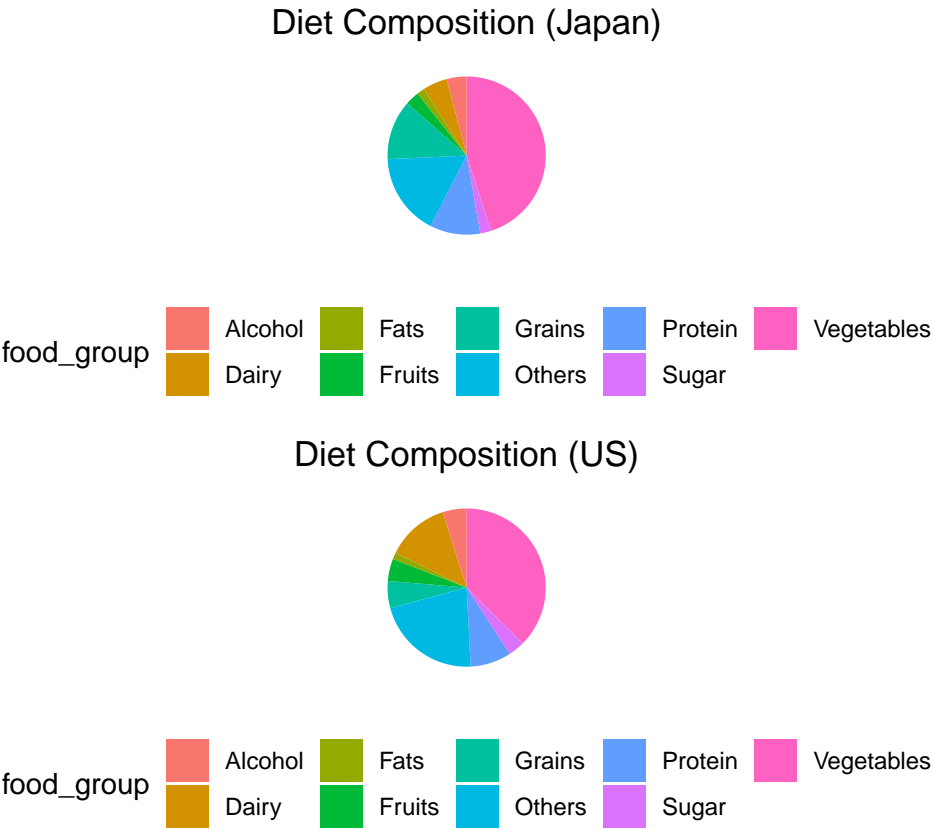
Methodology

```
##
## Call:
## betareg(formula = Obesity ~ Grains + Vegetables + Fruits + Protein +
##       Dairy + Sugar + Alcohol + Stimulants + Fats, data = supply_kg_data)
##
## Standardized weighted residuals 2:
##      Min      1Q  Median      3Q      Max
## -3.3497 -0.5380  0.0241  0.7551  2.3273
##
## Coefficients (mean model with logit link):
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)  2.45713    1.78489   1.377  0.16863
## Grains      -0.08722    0.01810  -4.818 1.45e-06 ***
## Vegetables  -0.04562    0.01845  -2.472  0.01342 *
## Fruits       -0.02167    0.02184  -0.992  0.32109
## Protein      -0.08384    0.04263  -1.967  0.04922 *
## Dairy        -0.05158    0.03582  -1.440  0.14988
## Sugar         0.09115    0.03137   2.906  0.00366 **
## Alcohol      -0.06759    0.02363  -2.861  0.00423 **
## Stimulants   -0.37750    0.21030  -1.795  0.07265 .
## Fats          0.22165    0.07253   3.056  0.00224 **
##
## Phi coefficients (precision model with identity link):
##              Estimate Std. Error z value Pr(>|z|)
## (phi)      30.389      3.312   9.177  <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Type of estimator: ML (maximum likelihood)
## Log-likelihood: 224.9 on 11 Df
## Pseudo R-squared: 0.5913
## Number of iterations: 22 (BFGS) + 2 (Fisher scoring)
```

Country	Grains	Vegetables	Fruits	Protein	Dairy	Sugar	Alcohol	Fats	Others	Stimulants	Obesity
Japan	12.1692	44.8553	2.8618	10.3100	5.0630	2.2055	4.0440	1.5008	16.6173	0.3731	0.044
United States of America	5.5048	37.3716	4.5432	8.3902	12.8657	3.3200	4.8647	1.3342	21.5598	0.2458	0.373

Results

Compare Japan and US Diet Compositions



Conclusion

Citations

[1] <https://www.dietaryguidelines.gov/>

[2] <https://www.myplate.gov/>