

Introduction to Ketogenic Diets

A Treatment for Epilepsy

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Types of Ketogenic Diets

- ▶ Classic Ketogenic Diet
- ▶ Modified Atkins Diet
- ▶ MCT Ketogenic Diet
- ▶ Low Glycemic Index Treatment

Ratios

- ▶ The total amount of fat grams in the diet compared to total amount grams of carbohydrates and protein combined.
- ▶ The ratios can range from 5:1, 4:1, 3:1, 2:1, 1:1
- ▶ For example, a 4:1 ratio, the fat is four times as much as the carbohydrates and protein combined.
- ▶ The ratio can be used to fine tune the diet.

Classic Ketogenic Diet (KD)

- ▶ High Fat, low Carbohydrate Diet, adequate Protein
- ▶ Food weighed on Digital Gram Scale
- ▶ Ketodietcalculator or Keto Planner
- ▶ Meals must be eaten in its entirety for the diet to be most effective
- ▶ Ensure that goal fluid needs are met
- ▶ For 1000 calories diet:
 - ▶ 8gm carb on a 4:1
 - ▶ 16gm carb on a 3:1
 - ▶ 30gm carb on a 2:1
 - ▶ 40-60gm carb on a 1:1

Classic KD 4:1 Ratio



Modified Atkins Diet (MAD)

- ▶ MAD can be used as an alternative to the strict Classic KD and as a step-down diet.
- ▶ Food is measured with household measurements compare to digital gram scale
- ▶ More flexibility in menu planning
- ▶ Low carbohydrate foods and meals can also be eaten in restaurants, making the diet more accessible, especially for teens and adults
- ▶ Usually 2:1 or 1:1 ratio (75-80% FAT)
- ▶ 1000 calories day: 15-30 grams CHO per day

Modified Atkins Diet (MAD)



MCT Ketogenic Diet (MCTKD)

- ▶ Provides 30-60 % of calories from MCT oil
- ▶ Estimate protein needs 1.0-1.2 grams PRO/kg BW or RDA for age
- ▶ Provides 5-10% total calories from CHO
- ▶ 75-80% total calories from fat (reminder calories from fat source other than MCT oil)
- ▶ Allows more carbohydrate and protein than the classic ketogenic diet.
- ▶ Food is weighed or use household measurements
- ▶ Usually 1:1 or 2:1 ratio with 40-60 grams of CHO for 1000 calorie diet

MCT Ketogenic Diet (MCTKD)



Low Glycemic Index Treatment (LGIT)

- ▶ LGIT is individualized but less structured diet than the ketogenic diet.
- ▶ Usually 1:1 Ratio with 40-60 grams of CHO/day
- ▶ It uses exchange lists for planning meal and emphasizes complex carbohydrates.
- ▶ The balance of low glycemic carbohydrates in combination with fat result in steady glucose levels.
- ▶ It is **NOT** intended to promote ketosis.

Low Glycemic Index Treatment (LGIT)



Conclusion

- ▶ All types of the KD have the following criteria in common:
 - ▶ High Fat, Low Carbohydrates, Adequate Protein
 - ▶ Medically supervised
 - ▶ Based on a ketogenic ratio
 - ▶ Portion control is necessary
 - ▶ Require Vitamin and mineral supplementation.
 - ▶ Do **NOT** restrict fluids
- ▶ All types of the KD vary in the **Macronutrient** profile.