

Meat

classic

ketogenic

Fruit

Vegetables

Index

Atkins

Glycemic Low

Modified

Diet Therapy

Fat

MCT

# Fat Chance: The Ketogenic Diet

Helen Lowe MSc, RD  
Maria Zak MN, NP-Paediatrics  
Janice Mulligan MSW, RSW  
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# Agenda

- \* What is the Ketogenic Diet?
- \* Types of Ketogenic Diets
- \* The real deal: what families say

# Diet Therapy – Ketogenic Diet

- \* Medically prescribed high fat, low carbohydrate, adequate protein diet
- \* Used to treat intractable epilepsy at SickKids
- \* Strictly calculated by dietitian and supported by the multi-disciplinary team

# Diet Therapy – Ketogenic Diet

- \* What it does to the body:
  - \* Lowers glucose (sugar) levels in the blood
  - \* Forces the body to burn fat for energy instead of sugar
  - \* Creates ketone bodies in the blood (ketosis)
- \* This results in a reduction in seizures
- \* Efficacy:
  - \* Half patients have 50% reduction, 1/3 had 90% reduction (Henderson, 2006 Meta-analysis)
  - \* more than 1/3 have a 50% reduction in seizures, 7% have a 90% reduction in seizures (Neal, 2008)

# The Benefits

- \* Decreased seizures (some will have no seizures)
- \* Increased alertness, awareness and quality of life
- \* Fewer emergency visits
- \* Potential decrease in seizure medications  
(some may be weaned of all seizure medications)

# The DIETS

- \* Classic
- \* MCT (Medium Chain Triglycerides)
- \* Modified Atkins
- \* Low Glycemic Index

# Classic Keto Food



1200 kcal 2.75:1 ratio

1715 kcal/d 3.75:1 ratio



butter candy



1140 kcal/d 2.75:1 ratio



1443 kcal/d 17% MCT diet



# MCT Keto Food



1443 kcal 20% MCT



1524 kcal 30% MCT



1596 kcal 30%MCT



1596 kcal 30%MCT (2 snacks and lunch)



1686 kcal 30% MCT diet

# Comparing epilepsy diets...

<b>Diet Content</b>	<b>Typical</b>	<b>Classic KD</b>	<b>MCT KD</b>	<b>MAD</b>	<b>Low GI</b>
Carbohydrate	55%	3%	19%	6%	10%
Protein	15%	7%	10%	30%	30%
Fat	30%	90%	71%	64%	60%

**SickKids**

Epilepsy Diet Program

# The real deal

What parents tell us

# Most difficult

Feeling  
overwhelmed in  
the beginning

Adjusting to the  
rigidity of the  
diet

Finding time  
to make the  
meals

Getting my child  
to take the diet

Getting my  
extended family  
to follow the diet

# Most Rewarding

Seeing my child  
more bright and  
aware

Quality of life

Seeing who my  
child really is

Going longer  
stretches  
without seizures

Fewer visits to the  
Emergency  
Department

# Advice from Keto Families

Patience –  
it takes  
time

Be organized  
and prepare in  
advance

Ask questions  
when you're not  
sure

Give yourself time to  
get used to it

Connect with other  
families

# Epilepsy's Big Fat Miracle

- \* There are dozens of antiepileptic drugs on the market, many approved in the last 15 years. The newer ones work with fewer side effects, and that's important. But the percentage of patients who take drugs and still have seizures hasn't changed meaningfully in decades. About a third of the nearly 3 million epileptics in the United States have drug-resistant seizures, and doctors estimate that at least 300,000 of those drug-resistant patients are children. Since keto often works when drugs do not, neurologists finally see a way to fix that problem.”

–Fred Vogelstein, November 17, 2010

*The New York Times Magazine*