

# Diabetes and Beyond?

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## Plan for the afternoon

- MODY – what is it and why do we care
- Quick review of different forms of diabetes mellitus
- How important is pharmacologic choices
- Long term goals

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## Maturity-Onset Diabetes of the Young (MODY)

- Rare form of Diabetes
- Accounts for around 5 % of all U.S DM
- A monogenetic form of diabetes (Autosomal Dominant)
- If a parent has the gene mutation, child has 50% chance of inheritance
- Typically develops MODY before age of 25 (regardless of lifestyle)

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**MODY Symptoms ? Or Symptoms of DM?**

- Polyuria
- Polydipsia
- Dehydration
- Blurry vision
- Recurrent yeast infection
- Recurrent skin infection

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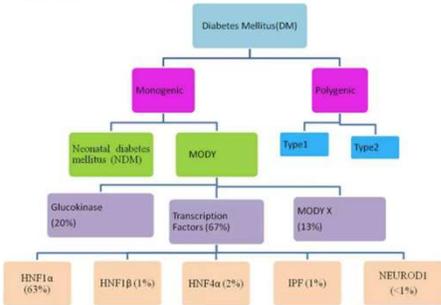
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**MODY - TYPE**




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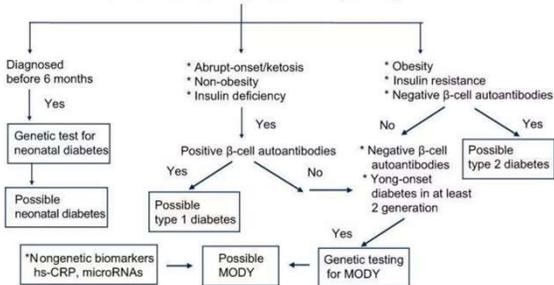
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**Patients with diabetes diagnosed before 25 years of age**




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### Neonatal Diabetes

- Diagnosed before the age of 6 months
- Due to insufficient insulin production
- Transient or permanent
- Monogenic with over 20 mutations identified

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### Treatment of MODY

- Depends of form:
  - Does it cause Insulin resistance? Defect in Insulin secretion?
- MODY 1 and 3 – Sulfonylurea works well
- GCK – MODY – no therapy is typically needed
- Other Types: insulin therapy may be needed

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### Why should we care? It's rare!

- Will treating MODY like Type 2 lead to improper treatment?

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### How to manage MODY long term

- Evaluate family members (autosomal dominant)

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### Lets take a look back

- How many forms of diabetes did you think there were and how many do you now know of?
- Are there more forms of diabetes that are emerging?

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### Lets review the forms of DM

- Monogenic forms of Diabetes
  - Neonatal Diabetes
  - MODY
- Polygenic forms
  - Type 1 DM
  - LADA
  - Type 2 DM
  - Type 3 DM : Cerebral Insulin resistance leading to Alzheimer disease
  - Type 4 DM : Age related insulin resistance (not necessarily obese)
  - Type 5 DM : Malnutrition-related Diabetes

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### Is that it?

- Oh yea:
- Type3c (pancreatogenic diabetes)
  - Loss of beta cells from:
    - Destruction (pancreatitis/cystic fibrosis)
    - Removal (surgery)

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### Drug Induced

- Corticosteroids
  - Prednisone
- Antipsychotics
  - Olanzapine
  - Clozapine
- Antibiotics
  - Fluroquinolones (cipro, levo)
- Statins (typically higher doses)
- Antirejection (tacrolimus)

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### How does pathophysiology effect treatment?

- Understanding physiology helps direct treatment and avoid mistreatment

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### What are the treatments?

- Monogenic forms of Diabetes
  - Neonatal diabetes?
  - MODY?

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### Autoimmune Diabetes Mellitus

- Type 1 DM
- Latent Autoimmune Diabetes in Adults (LADA)

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### Polygenic forms of Diabetes Mellitus

- Type 2 DM
  - You know this one
- Type 3 DM
  - Cerebral Insulin resistance leading to Alzheimer disease
- Type 4 DM
  - Age related insulin resistance (not necessarily obese)
- Type 5 DM
  - Malnutrition-related Diabetes

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### Beta Cell Loss

- Type 3c – pancreatogenic

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### Who should evaluate and treat DM?

- Depends on comfort level and desire

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Questions?

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