Neurological Complications of Diabetes
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Diabetes Wellness Day
The Nervous System
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How the Nerves Work

- Definition
  Junction between terminal branch of nerve fiber and muscle fiber

[Diagram showing the nervous system structure]
How the Nerves Work

**Definition**
Junction between terminal branch of nerve fiber and muscle fiber
The Map of the Brain
Diabetes

- Sugars are an important energy source for the body and the brain
- The sugar levels in your body have to be in very good control
  - High sugar levels are bad
  - Low sugar levels are bad
- Poorly controlled blood sugar levels damage the parts of the body including the brain, spinal cord and the nerves
- The damage starts with the smallest nerves (nerves in your feet)
- This is called Neuropathy (nerve damage)
Diabetic Neuropathy

• Diabetes is the number 1 cause neuropathy in the US
• 10-100% of Diabetics will have neuropathy
• PCP and Diabetes doctors monitor your blood sugars closely
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Hgba1c
Types of Diabetic Neuropathies

• Cranial neuropathies (CN III, CN IV, CN V, CN VI, CN VII)
• Entrapment Neuropathies (Carpal Tunnel Syndrome)
• Peripheral Neuropathies
• Autonomic Neuropathies
• Polyradiculopathies (Thoracic and lumbar)
• Diabetic Amyotrophy
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All of these can be prevented by regular exercising, diet control and weight loss and good glycemic control.
Diabetes and Stroke

• Stroke is a common cause of death and disability
• Stroke damages the brain irreversibly
• Our aim is to prevent strokes
• The following are known causes of stroke
  – Age above 60
  – Hypertension
  – Cholesterol
  – Diabetes
  – Men
Arteries of the Brain
Strokes can damage the brain
Treatment

• Prevention
• Prevention
• Prevention
• Bringing blood sugars under control
• Goal is to bring hgba1c below 7 and ideally below 6.5
Thank you! Questions?