DM AND THE CENTRAL NERVOUS SYSTEM

John W. Day, MD, PhD
Understanding DM Effects on Muscle

CTGCTGCTGCTG

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Ranum, et. al., Ann Rev Neurosci, 2006

Taneja, et al., JCB 128:995; 1995

Changes in Proteins, Changes in Function
Helps Explain DM Effects on CNS

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Helps Explain DM Effects on CNS

Changes in Proteins,
Changes in Function

Jiang, et al., 2004
MRI Changes

Kornblum, et al, J. Neurol, 2004
MRI Changes Do Not Predict Microscopic Changes
But Maybe those MRI Changes

Kornblum, et al, J. Neurol, 2004
Underlie Changes in Connectivity?
And Account for Changes in Processing?

- Wechsler Test of Adult Reading
- Executive Function Verbal Fluency
- Conceptual reasoning
- Stroop Color Test
- Trail Tests
- Visual Puzzles
- Purdue Pegboard Test
- Frontal Systems Behavior Scale
- Depression Inventory
Do test changes relate to patient descriptions?

- Brain Fog
- Good Days and Bad Days
- Low Energy
- Fatigue
- Sleepiness
- Inability to focus
- Trouble connecting
But What Accounts for Patient Experience?

Molecular Changes

MRI Changes

Psychology Test Changes

Patient Experience

Plus what effect on brain is caused by DM changes on muscle? Heart? Vision? GI?
Patients and Investigators Need to Work Together to Determine

What symptoms are most important
How do we quantify those symptoms
How do we measure those symptoms
How do we improve those symptoms
What can you do?

- MDF Registry
- Rochester DM Registry
- Participate in Research
- Donate specimens
- Spread the word