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Colorado Parkinson Foundation: Colorado Springs Support Group

Motivation, Learning Tasks, and Behavior Change

Agenda

Apathy

Motor Learning and Learning Tasks

Behavior Change

Apathy

Lack of motivation, diminished initiative, flattened emotional expression

Less driven to start activities

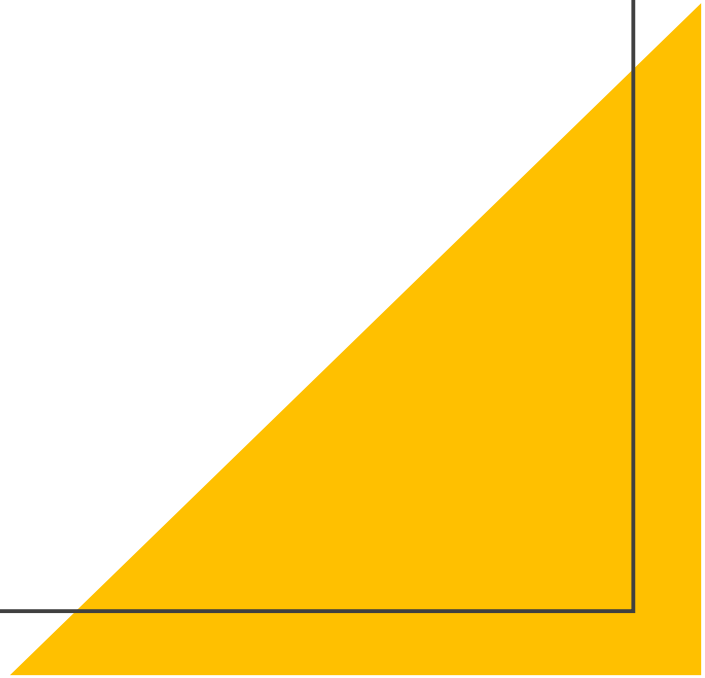
Emotionally “flat”

Indifferent even toward things they previously enjoyed

Not depression

Dopamine loss in SN:

- Motivation
- Anticipation of reward
- Initiating actions
- Emotional engagement

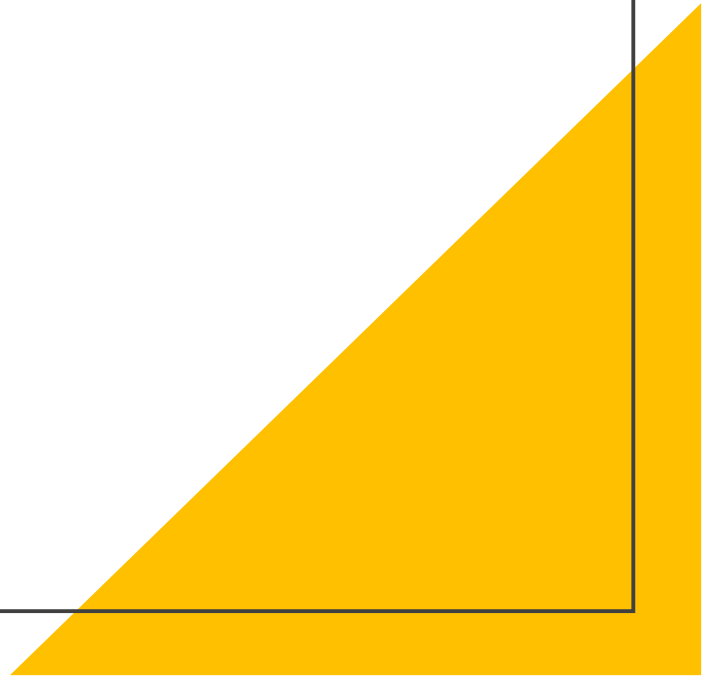


Apathy

Connection between frontal lobe and basal ganglia

Changes:

- Harder to initiate behavior
- Difficulty sustaining effort
- Reduced motivation



Motor Learning

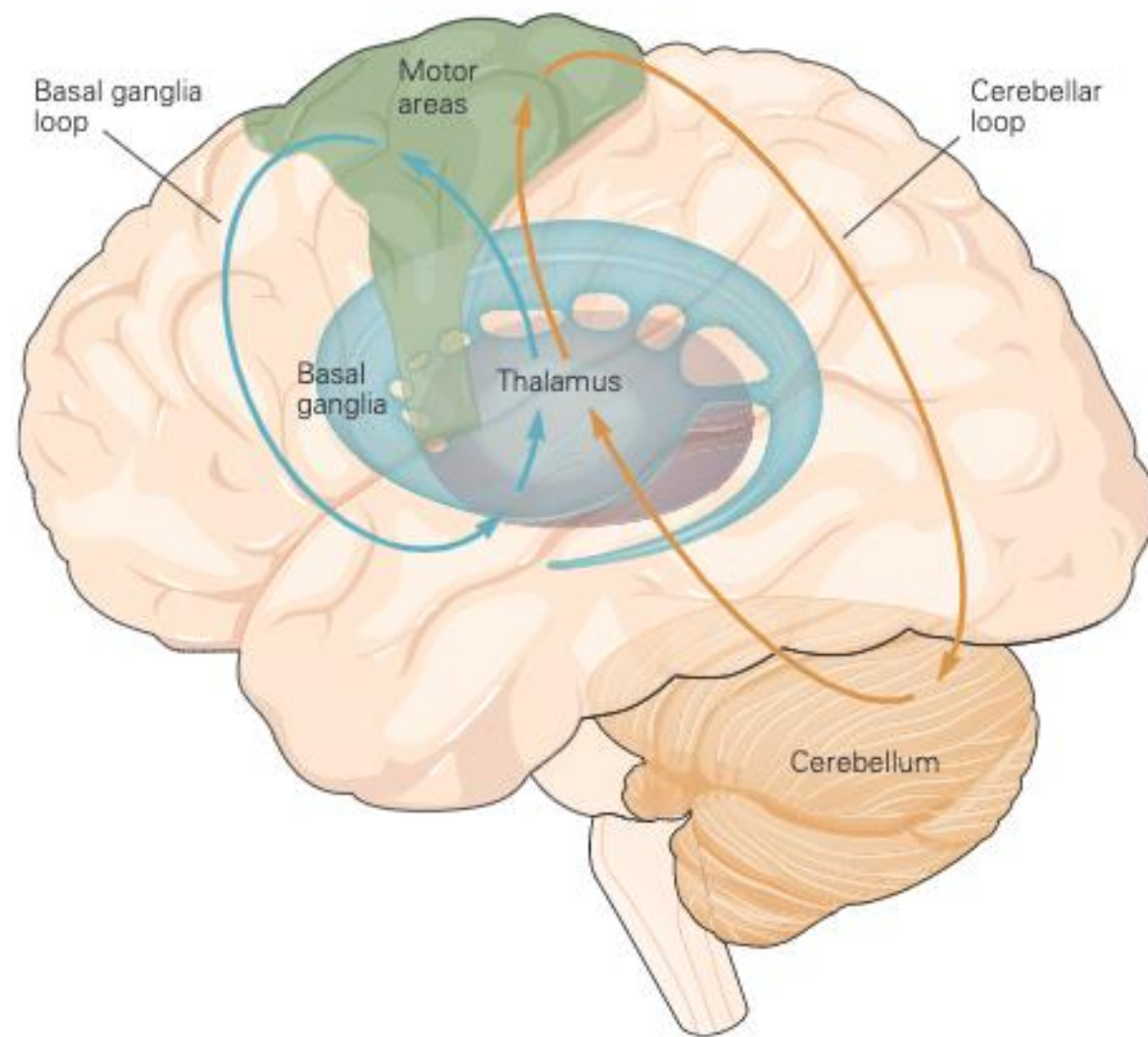
Process where practice changes movement performance over time

- acquiring a new movement
- improving speed and accuracy
- forming habits/automatic skills
- adapting movements based on errors

Basal ganglia → habit learning, automaticity, reinforcement

Cerebellum → error correction and adaptation

Motor cortex → skill consolidation and execution

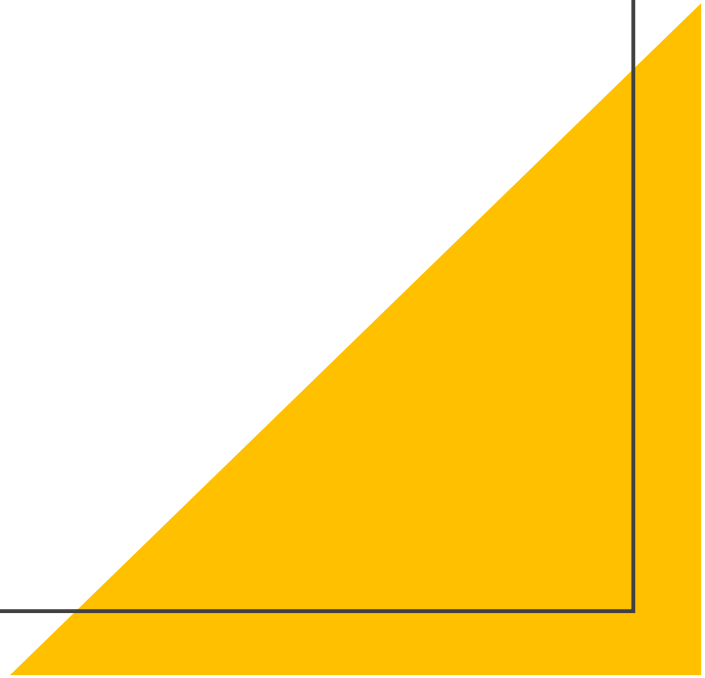


Motor Learning

Impaired implicit/automatic learning

Disruption of:

- Movement patterns
- Chunk actions into habits
- Reduce cognitive effort during skilled movement



Motor Learning

Greater reliance on attention

Requires:

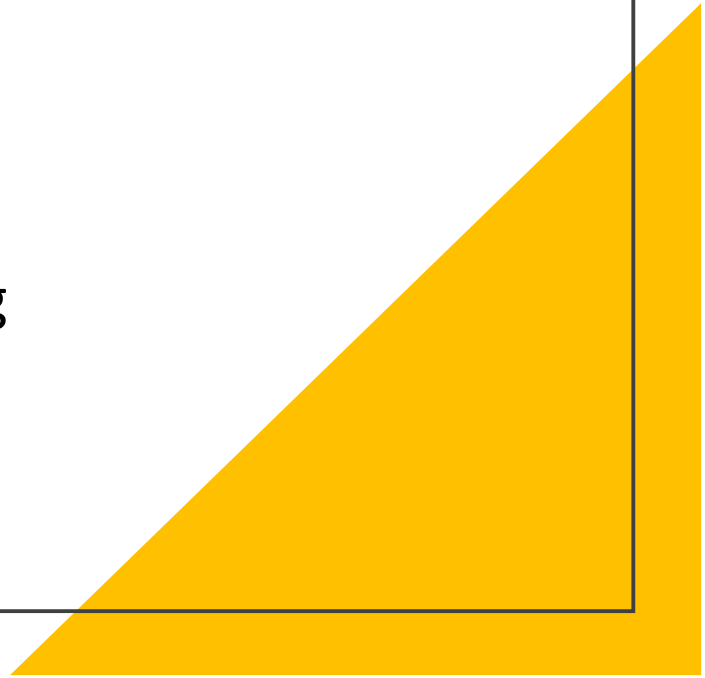
- Attention
- Increased planning
- External cues

Ex: Think “big” steps or band on walker

Motor Learning

Slower acquisition of new skills

- Learning can be slower
- More repetition may be required
- Retention may be variable
- Complex or multistep tasks may be more challenging



Motor Learning

Impaired habits or “movement chunks”

Typically clump into motor groups

In PD:

- movements remain fragmented
- transitions between actions are slower
- initiation between steps may fail

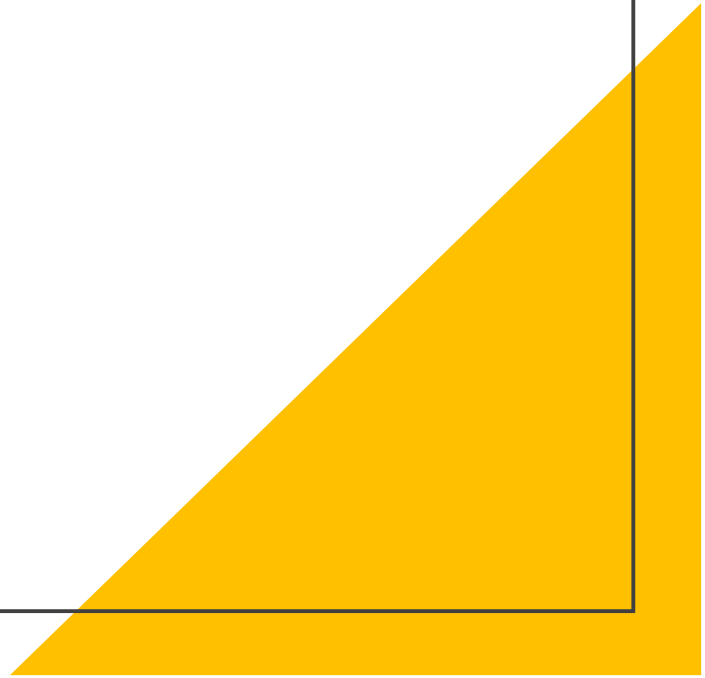
Motor Learning

Reward based learning impaired

- Reinforcement of successful actions uses dopamine

In PD:

- reward feedback is processed abnormally
- trial-and-error learning is less efficient
- selecting strategies becomes harder



How do we develop new habits or behaviors?

Identify
obtainable goals
or ideas

Identify
motivation

Use previous
learned
pathways

Activities with
loved ones or
family or friends

Positive
reinforcement

Use of
reminders

Set up for
success



Physical Activity and Physical Therapy

- Use of targets
 - High repetition
 - To dual task or not?
 - Auditory cues
 - Task Specific
 - Start with aerobic warm up
 - Positive reinforcement
 - Adherence to HEP (home exercise program)
-

Neuro Logic Rehabilitation and Wellness

- ✓ Outpatient mobile physical therapy - We come to you!
- ✓ Hybrid model of insurance covered and optional non covered services to increase access to therapy and services
- ✓ Board Certified Clinical Specialist in Neurologic Physical Therapy
- ✓ LSVT BIG® and/or PWR! (Parkinson's Wellness Recovery) Moves®
- ✓ Individualized services and plan
- ✓ Adaptive Exercise
- ✓ Dry Needling

Thank You

Questions?
Comments?
Curiosities?

