

Webinar Series



Exercise & Physical Activity

April 9, 2019

Presented by:



Celgene | Genentech | Mallinckrodt Pharmaceuticals



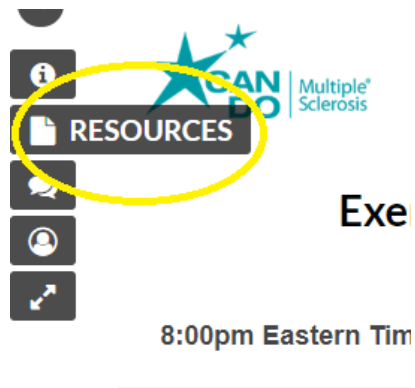
How to Ask Questions During the Webinar:

- Type in your question in the “Ask A Question” Box
- Expand the “Ask a Question” box in your control panel on the left side of your screen

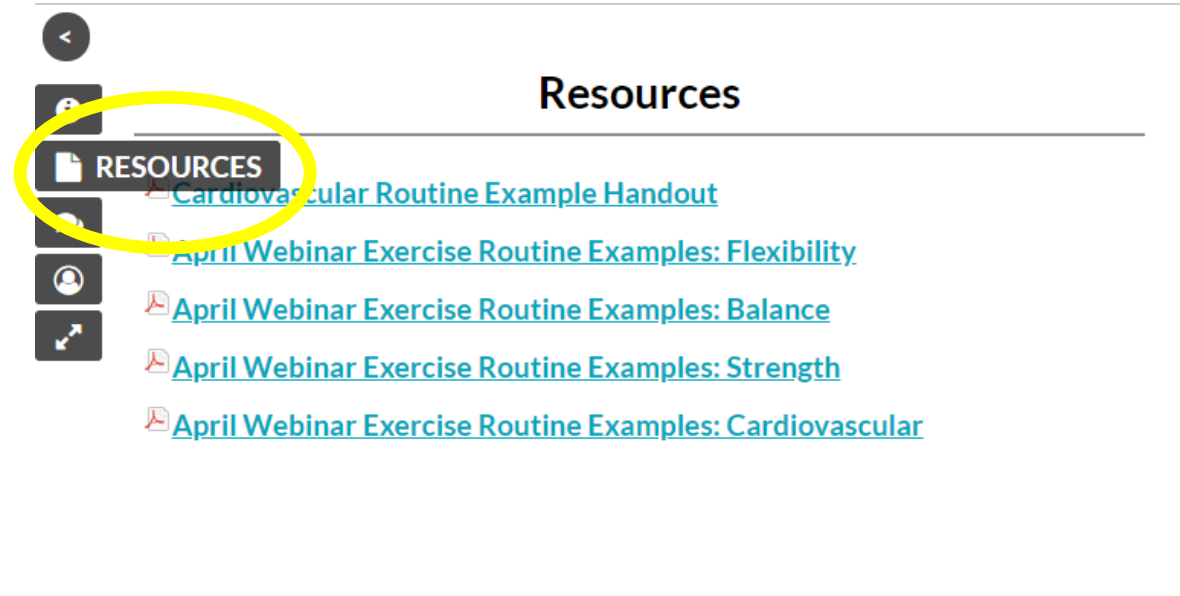
A screenshot of the "Ask A Question" interface. At the top, there is a header "Ask A Question" and a back arrow icon. Below the header, there is a vertical stack of icons. The icon for asking a question is highlighted with a yellow oval. Below this icon, there is a large text input field. Below the input field, there is a "SUBMIT" button. At the bottom of the interface, there is a circular refresh icon.

How to Access Resources During the Webinar:

- Click the “Resources” Icon on the left.



- Then click on any of the resources you’re interested in downloading.



Anna Cotton



Occupational Therapist
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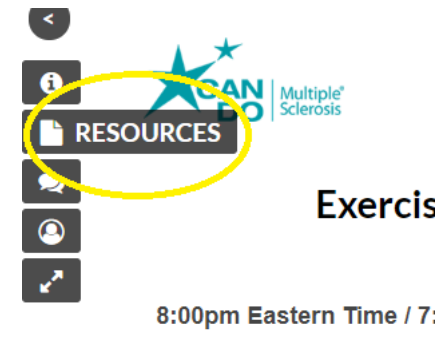
Learning Objectives

- Determine the benefits of exercise & physical activity
- Learn how MS symptoms can be managed through exercise
- Learn how to manage your barriers to exercise
- Understand how to create a well-balanced exercise program
- Learn to incorporate exercise into your daily life
- Develop a personalized strategy for incorporating exercise & physical activity into your daily life

Develop a Personalized Strategy

- “Exercise & Physical Activity” Webinar Handout – attached as a resource for tonight’s webinar

- Please click on the Resources Icon on the left of your screen to access the handout
- The handout will also be sent in the webinar follow up email about 24 hours after the live webinar broadcast



- We hope that you print out this handout, fill it out, and reflect on how you can incorporate exercise into your life

Exercise and Physical Activity

- Important part of a healthy, well balanced lifestyle
 - Physical Benefits
 - Benefits to Mood
 - Brain Health Benefits
- Benefits well studied in general population
- People with MS enjoy the same benefits



Exercise – It Really Is The Best Medicine!

- Improves strength
- Improves posture
- Lessens fatigue
- Improves cardiovascular health
- Improves mood, self-confidence and overall wellness
- Improves sleep and appetite
- Improves fitness levels
- Improves cognitive functioning
- Improves 'Quality of Life'
- Prevents over-use injuries
- Creates opportunities for new social outlets
- Decreases chances of secondary illness
- Effective in weight loss/weight maintenance

... The List Goes On!!

Exercise and MS

- Safe and effective for people with MS (PwMS)
- Benefits of exercises for PwMS are well studied
- Resources available
 - Healthcare Team
 - National MS Society
 - Can Do MS
 - Local YMCA/Community Centers



Why Exercise?

Exercise has been proven to benefit all of the following in PwMS:

- Muscular Strength
- Aerobic Capacity
- Walking Performance
- Fatigue
- Depression
- Quality of Life
- Brain Health



Muscular Strength

**Improved Muscle Force Production

Additional Benefits include:

- Improved walking speed and endurance
- Improved independence
- Improved gait pattern
- Improved immune system function
- Improved breathing
- Reduced fatigue
- Decreased disability



Aerobic Capacity

- Low to moderate intensity cardiovascular exercise is well tolerated
- Positive effects on both physiology and psychology
 - Mood stability
 - Antidepressant effects
 - Anti-fatigue effects
 - Improved capacity of cardiovascular system



Walking Performance

- Walking requires:
 - Lower extremity strength
 - Cardiovascular health
 - Balance
 - Coordination
- Improved fitness level and strength improve:
 - Normalization of gait pattern
 - Improved gait efficiency



Fatigue

- Keeping fit and improving strength can:
 - Reduce the severity of fatigue
 - Improve general sense of wellness



Depression

- In the general population, studies have shown that those who exercise regularly benefit in the following ways:
 - **Improved mood, self-esteem, sleep**
 - **Reduced rates of depression and stress**
- Current research suggests:
 - **Exercise (aerobic and maybe resistive) may decrease depressive symptoms**
 - **Regular physical activity may help people feel less depressed over time**

Quality of Life

- Quality of life is improved with regular exercise
 - Improved mood
 - Improved physical function
 - Improved independence
 - Decreased falls



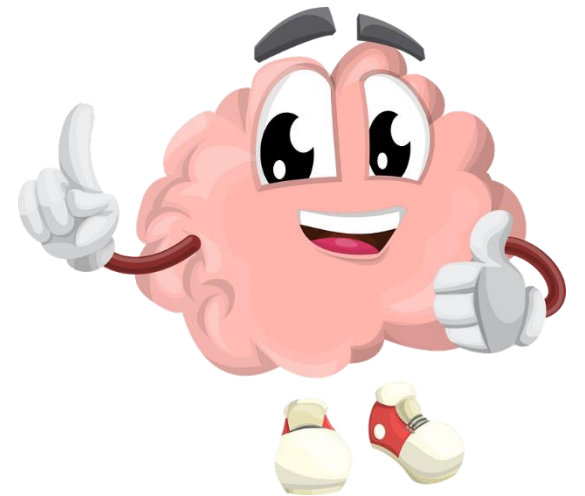
A Body in Motion...

- A well designed exercise program can
 - Optimize potential of muscle, bone and respiration
 - Minimize secondary complications
 - Promote independence
 - Attenuate disability
- Exciting research suggests that exercise may improve brain health in multiple ways!!



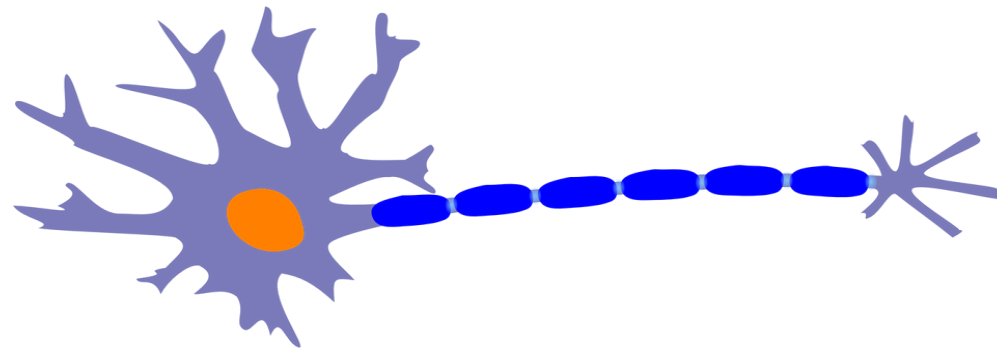
Tends to Stay in Motion

- More fit MS patients have:
 - Less damage and deterioration in the brain as a result of MS
 - Greater volume of vital gray matter
- Individuals who exercise regularly:
 - Generally have better foundation for recovery from an MS attack/exacerbation
- Exercise may help to:
 - Preserve neuronal integrity
 - Reduce long-term disability



Neuroplasticity

- Neuroplasticity is the ability of the neurons to change their function, chemical profile or structure
- The brain and nerve connections within the brain are constantly changing



Exercise may facilitate these processes, encouraging positive changes in the nervous system

Neuroplasticity

- Brain is NOT fixed but rather flexible and adaptable
- Areas of representation can become larger or smaller
- Re-organization is based on learning, experience, memory, disuse, damage from disease, and practice
- Re-organization is influenced by what we DO and what we DON'T DO

Exercise and YOU!

- Exercise programs must be appropriate to ability level of the individual
- Exercise routines should be adjusted as needed
- A physical therapist experienced with the unique and varied symptoms of MS can be helpful in designing, supervising and revising a well-balanced exercise program.
- Any person who is initiating a new exercise program should consult with their physician for clearance.

Barrier to Exercise:

MOTIVATION

- Realistic expectations
- Goal Setting
 - Setting big goals -> outlining small steps to achieve big goals
- Identifying barriers and creating solutions

Polling Question

What is your main motivating reason to exercise?

- A) General Fitness**
- B) Weight Maintenance**
- C) Social Reasons**
- D) Stress Relief**

Barriers to Exercise: MS Symptoms

- Fatigue
- Heat sensitivity
- Decreased mobility, balance & coordination, sensation
- Impaired vision
- Bladder and Bowel issues



Polling Question

What MS symptom most limits your ability to exercise?

A) Fatigue

B) Heat/Cold Sensitivity

C) Mobility Restrictions

D) Impaired Vision

E) Bladder and Bowel Issues

Barriers to Exercise:

Wait, there's more?... than just MS

- Financial constraints
- Time constraints
- Limited space
- Appropriate opportunities
- Equipment
- Finding something that you enjoy



Barrier Breakers: Fatigue

- Identifying the best time of day
- “Just the right amount”
- Breaking up daily exercise into smaller sessions
- 10 minute rule



Barrier Breakers: Heat Sensitivity

- Pre-cooling
- Cooling Devices
- Determining the right environment
- Ice water
- Fans
- Post-cooling



Barrier Breakers: Decreased Mobility, Balance & Coordination, Sensation

- Safety first
- Identifying the right activity based on limitations
- Identifying the right supports and adaptive equipment to use to make the activity safe and doable
- Use mobility devices
- Think outside of the box



Barrier Breakers: Vision Impairment

- Safety first
- Choosing a location to exercise that has good lighting, contrast, and limited visual stimulus
- Avoid busy and/or risky environments
- If exercising outdoors, do so in full daylight
- Wear glasses or contacts



Barrier Breakers: Bladder & Bowel Issues

- Evaluate your needs and identify your pattern
 - Know your body/timing
- Do you need to exercise close to a restroom?
- Avoid bladder irritants prior to exercise
- Avoid activities that cause incontinence
- Replenish fluids after exercising and plan accordingly
- Speak with your healthcare team

Barrier Breakers: Financial Constraints

- Exercise does not have to be expensive
- Start simple: walking, light “weights”, use things you already have
- NMSS
- YMCA



Barrier Breakers: Time Constraints

- You can make time for things you prioritize in your life
- Mentally or literally keep a time journal of your day and find 10-30 min slots to fit in exercise
- Plan for the unexpected
- Stick to your plan
- Communicate with your family, friends, coworkers—asking for help and accountability



Barrier Breakers: Limited Space

- Create dual purpose places for exercise in your home or work
- Get creative



Barrier Breakers: Appropriate Opportunities

- NMSS
- Senior centers
- Community centers
- What groups are you already a part of that you could incorporate exercise into?



Barrier Breakers: Equipment

- Start a program first, once established then invest in equipment
- Use items in your house
- Rent from the library
- Try free trials



Barrier Breakers:

Finding Something That You Enjoy

- It's really hard to make a habit doing something you hate
- Reward yourself



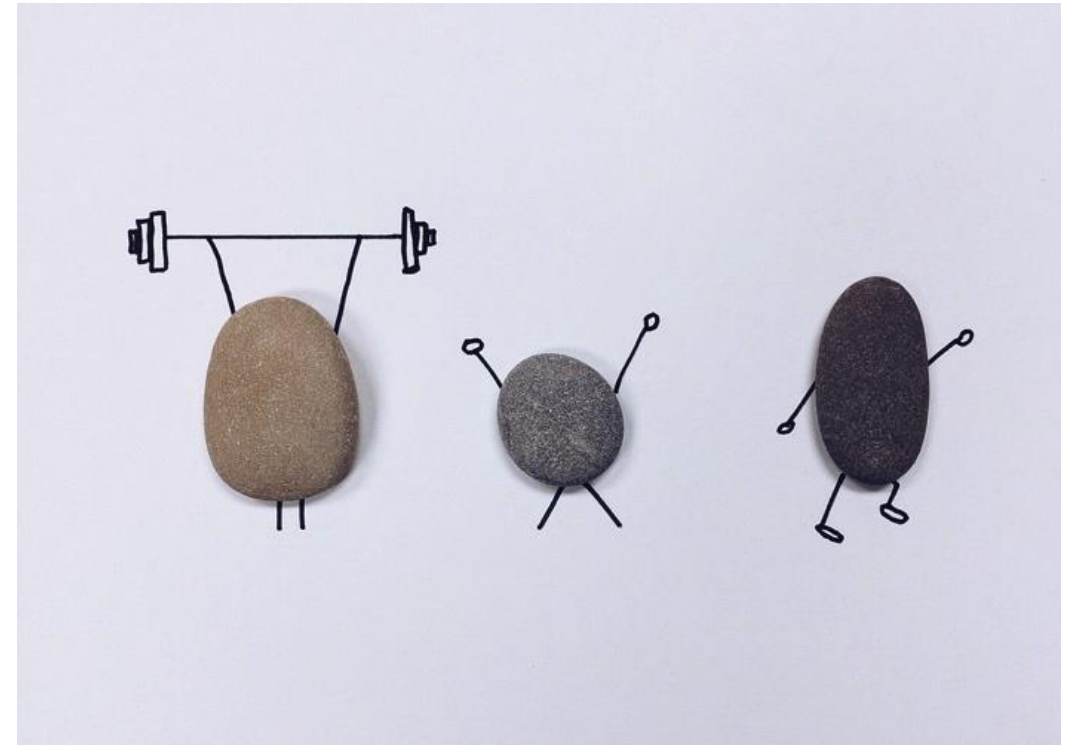
Designing a Well Balanced Exercise Program

Flexibility

Balance

Strength

Cardiovascular Activity



FITT Principal

Frequency

- How often should you exercise?

Intensity

- How hard should you exercise?

Time/Duration

- How long should you exercise?

Type/Specificity

- What type of exercise is most appropriate?

Flexibility

- Elongating muscles
- Component of spasticity management
- **Frequency**: Daily
- **Intensity**: 2-3 repetitions
- **Time/Duration**: Hold 30-60 seconds
- **Type/Mode**
 - Individually, with partner, or with equipment
 - Example: Yoga



Flexibility: Learn Your Options



Balance

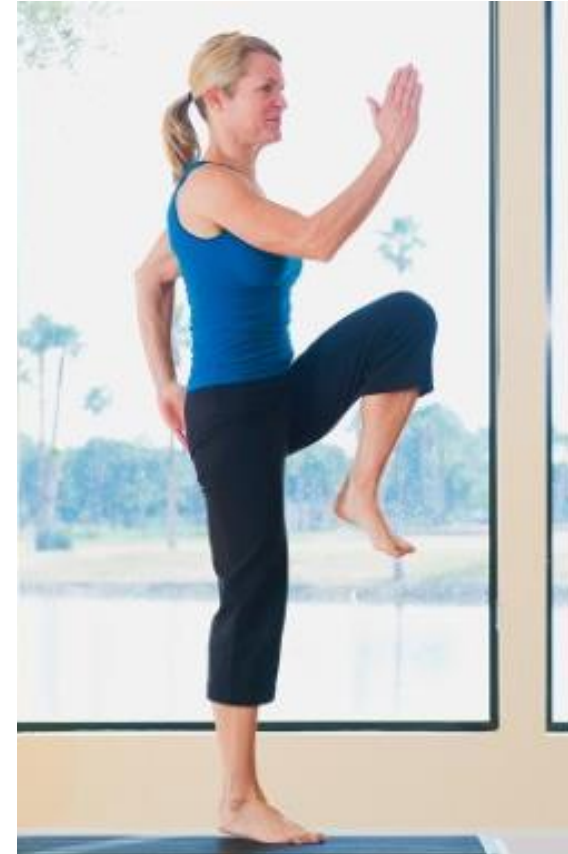
- Balance = Integration of motor and sensory systems
- Motor Systems:
 - Musculoskeletal (strength, flexibility)
 - Neuromuscular (coordination, timing)
- Sensory Systems:
 - Eyes
 - Inner Ear (vestibular organs)
 - Touch/pressure sensation from feet and joints (Somatosensation)

Balance

- Frequency, Intensity, Duration, and Type of exercise are highly individualized
- Safety during performance
- Challenge components of motor and sensory systems
- Examples of challenge:
 - varied arm motions
 - head turns
 - eyes closed
 - unsupportive surface



Balance: Learn Your Options



Cardiovascular Activity

- **Frequency:** 3-4 sessions/week (minimum)
- **Intensity:** Rating of Perceived Exertion Scale- score 3-5
- **Duration:** 20-30 minutes/session OR 2, 10-15 minute sessions
- **Type/Mode:** Walking, Biking, Arm Bike, Boxing, Dancing, Aquatherapy, Aerobics Class



Rating of Perceived Exertion

0	— Nothing
1	— Very, Very Light
2	— Light
3	— Moderate
4	— Somewhat Hard
5	— Hard
6	
7	— Very Hard
8	
9	— Very, Very Hard
10	— Maximal

Cardiovascular Activity: Learn Your Options



Strength

- **Frequency:** 2-3 Sessions/Week
- **Intensity:** 1-3 sets, 8-15 repetitions
 - *Progress repetitions, then weight
- **Duration:** 20-30 min session or multiple smaller sessions
- **Type/Mode:**
 - Emphasis on larger muscles and functional movements
 - Free weights, resistance bands, body resistance, resistance machines

Strength: Learn Your Options



Polling Question

What is the biggest challenge you face that prevents you from being able to exercise regularly?

- A) Time management**
- B) Finances**
- C) Motivation**
- D) MS Symptoms**
- E) Lack of opportunity**

Using the 5 P's to Incorporate Exercise Into Your Daily Life

5 P's:

- Plan
- Prioritize
- Prepare
- Pace
- Position



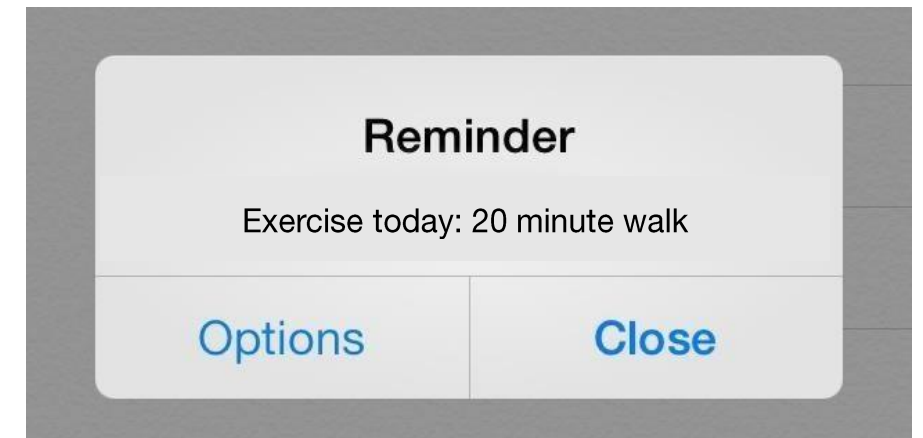
Plan

- Determine the where, when, and how
- Account for good days and bad days and have a plan
- Create accountability
 - Track it
 - From others



Prioritize

- Create and protect the space in your life to exercise
- Put it on your calendar
- Set alarms
- Communicate with those around you: spouse, children, friends, coworkers
- Realize you may have to make adjustments other places in your life to account for the time, energy, and financial expenditures



Prepare

- Set out or pack clothes in advance
- Prep environment
- Plan for the unexpected and adapt
- Mentally prepare by reminding yourself of your big goal



Pace

- Every day might be different
- Use subjective measures rather than objective
- Use the “Rate of Perceived Exertion”
- Be flexible

RATING OF PERCEIVED EXERTION

0	— Nothing
1	— Very, Very Light
2	— Light
3	— Moderate
4	— Somewhat Hard
5	— Hard
6	
7	— Very Hard
8	
9	— Very, Very Hard
10	— Maximal

Position

- Can you sit to perform the exercise?
 - Example: weights, arm ergometer, recumbent bike, balance ball
- Can you add movement to a part of your daily routine you normally are sedentary for?
 - Example: squats while brushing your teeth or microwaving lunch, walking meetings at work or phone calls



Key Take-Aways

- You CAN initiate an exercise routine
- Don't feel overwhelmed
 - Small changes can make a BIG impact
 - Start with one achievable goal
 - Every day is a new opportunity
- Identify barriers and make a plan to overcome them
- Be kind to yourself

Q & A



Programs



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Cognitive Challenges

May 14, 2019

Presented by:



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