

# Myasthenia Gravis and Therapies

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# Myasthenia Gravis

- Weakness and rapid fatigue of muscles under your voluntary control.
- Caused by a breakdown in the normal communication between nerves and muscles.
- No cure for MG treatment can help relieve signs and symptoms

# Myasthenia Gravis and Exercise

- Myasthenia Gravis symptoms tend to progress over time, usually reaching their worst within a few years after the onset of the disease.
- Muscle weakness caused by MG worsens as the affected muscles are used repeatedly, therefore symptoms usually improve with rest

# “Snowflake Disease”



# Variance of Symptoms

- There is a lot of variance between patients with MG
- No one exercise program is the same and treatment strategies may even vary

# Factors that can worsen MG symptoms

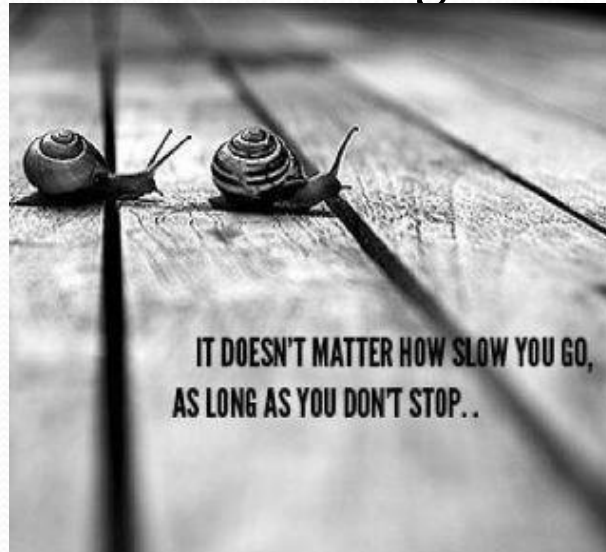
- Fatigue
- Illness
- Stress
- Extreme heat
- Some medications

# Check with your Doctor

- Before starting any exercise program it is important to check with your physician
- This is true with any disease but particularly with MG
- Exercise when MG is not yet stable or if patient is not medically managed can result in worsening of symptoms and increases risk of injury.

# Treatment/Exercises Goals

- During an Exacerbation- Exercise is not appropriate
  - Energy Conservation
  - Safe mobility utilizing assistive devices if necessary
  - Fall Prevention-Home Modification (grab bars, decreasing fall risks-removing throw rugs)





# Safety and Energy Conservation

- Use safety precautions at home.

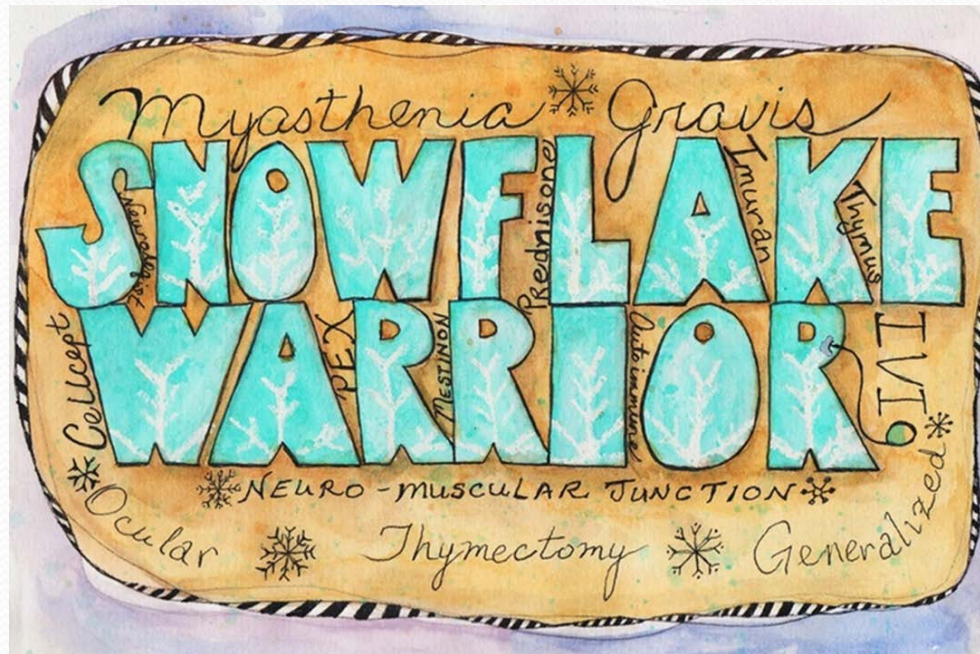


- Use electric appliances and power tools.



# Treatment/Exercises Goals

- Once MG is Stable consistent exercise will elevate your baseline functional capacity which will diminish the effect of MG exacerbation.



# MG Exercise Considerations

All stable MG patients who are exercising should consider 5 items:

- The Dollar Per Day Rule
- Exercise at your best time of day
- Exercise at peak dose pyridostigmine
- Exercise large, proximal muscle groups for short periods of time building up only to moderate intensity only
- Do not exceed Moderate Intensity Exercise Levels, mild to moderate levels of exercise are the best

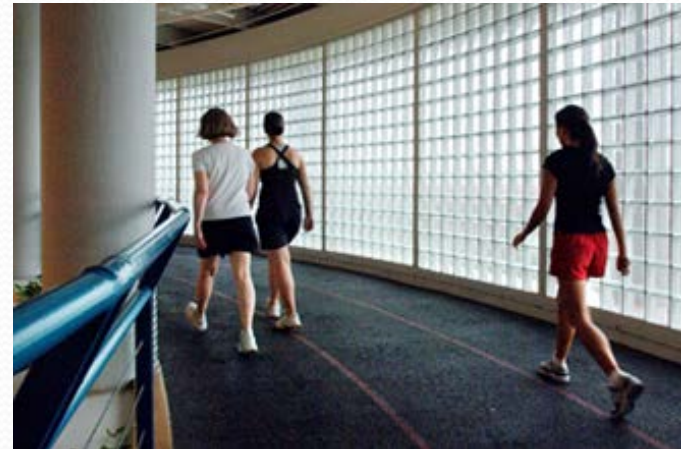
# Moderate Exercise Intensity

- HR should not elevate greater than 30 beats per minute from resting baseline
- Patient should not cause you to become SOB at peak of exercising
- MG symptoms should not become worse during exercise (drooping of eyes)
- Patient should not still be tired 2 hours after exercise
- Patient should not have severe residual muscle soreness day(s) post exercise

# Types of Exercises and Devices Utilized in MG



# Types of Exercises and Devices Utilized in MG



# Types of Exercise and Situations to Avoid



# Cooling of Muscle Groups in MG

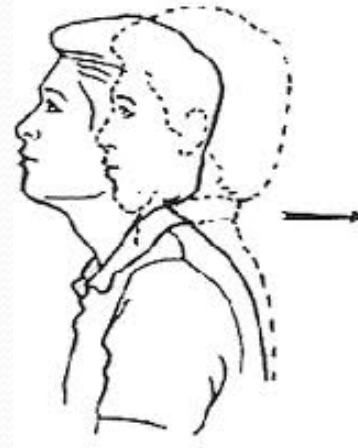
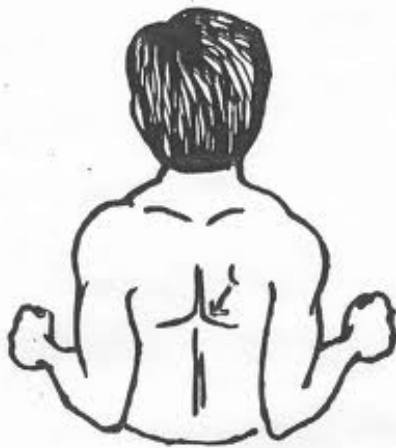
- Some research suggests that utilizing whole body cooling suits, cold packs or cool showers and baths can decrease muscle fatigue in patients with MG





# Postural Exercises

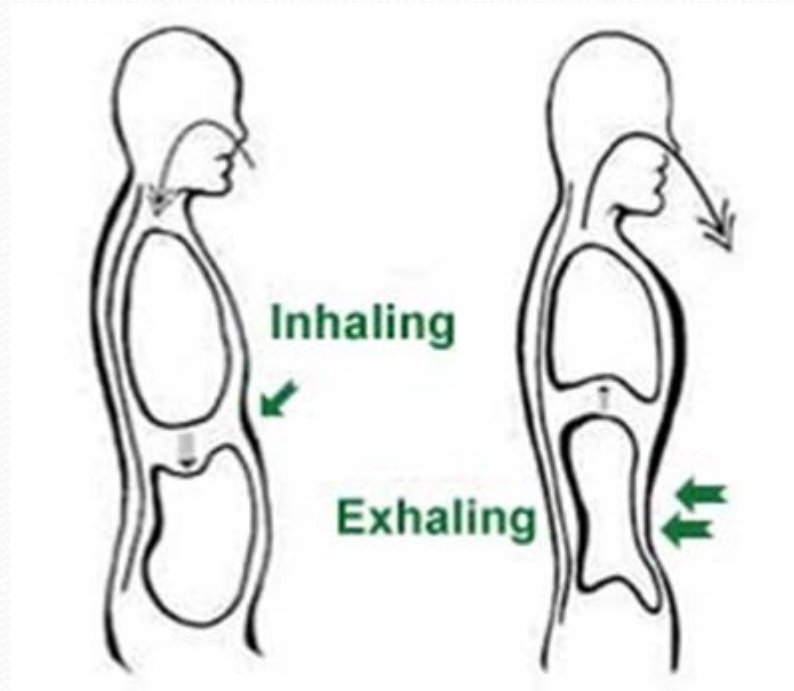
- Important to Assist with Breathing, Speaking and Swallowing
- When our posture is good many other things become “easier”



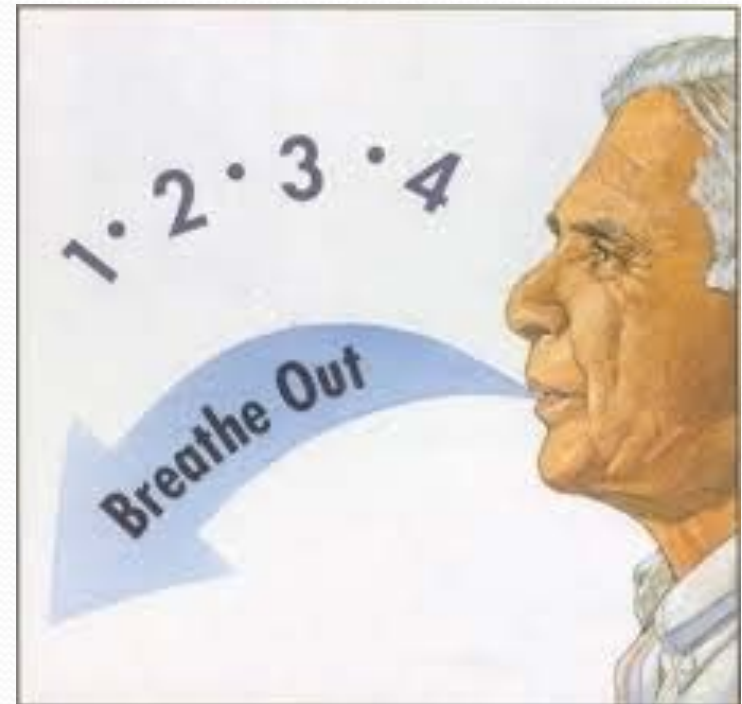
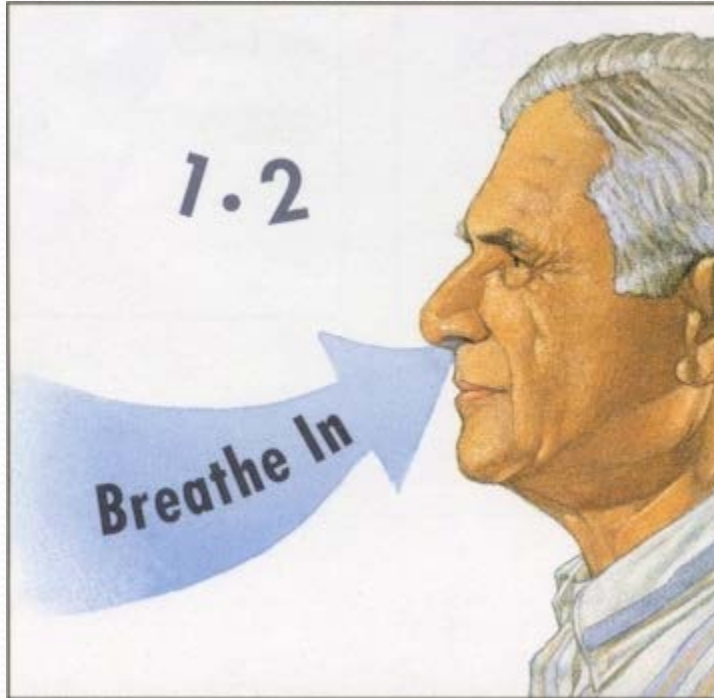
# Breathing Exercises

- Pursed Lip Breathing and And Abdominal Breathing Exercises have been found to be beneficial in MG
- These exercises can improve respiratory endurance as many people with MG have effected respiratory muscles

# Abdominal Breathing



# Pursed Lip Breathing



# Having Trouble and Don't Know Where to Begin?

- Ask your doctor for a prescription for Physical Therapy
- A Physical therapist can get you started on a program you can continue on your own

# Physical Therapy

- EVALUATION AND TREATMENT
- INCLUDES :
  - STRENGTH MEASUREMENTS
  - FLEXIBILITY
  - MOBILITY ASSESSMENT
  - ASSESSMENT FOR ASSISTIVE DEVICE AS NEEDED
  - BALANCE
  - SAFETY/FALL PREVENTION
  - GAIT
  - ENDURANCE/ACTIVITY TOLERANCE
  - TRANSFERS

# PT Treatment

- Exercise prescription and plan of care will be dependent on results of the evaluation
- It can include:
  - Energy Conservation
  - Gait Training with appropriate assistive device
  - Posture and Balance retraining
  - Breathing Exercises
  - Recommendations for safety within the home and community
  - Developing a specific home exercise program you can continue on your own

**“A journey of a thousand miles  
begins with a single step”**

— Confucius



HEALTHY CARROT



# Resources

1. Howard, James F. Jr., MD, ed. "Myasthenia Gravis A Manual for the Health Care Provider." *Myasthenia Gravis Foundation of America* (2008): 74-82. Myasthenia Gravis Foundation of America. Web.
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3. Kittiwatanapaisan W, Gauthier DK, Williams AM, Oh SJ. Fatigue in Myasthenia Gravis Patients. *Journal of Neuroscience Nursing*. 2003; 35.2: 87-106
4. Sheer BV, Valero-Burgos E, et al. Myasthenica Gravis and Endurance Exercise. *Am J Phys Med Rehabilitation*. 2012; 91.8: 725-727
5. Weeks B. Myasthenia Gravis Helping patients have better outcomes. *The Nurse Practitioner*. 2012; 37.9: 31-36
6. Merimier C, Schneider SM, et al. Preliminary Results: Effect of Whole Body Cooling in Patients with Myasthenia Gravis. *Medicine & Science in Sports Medicine*. 2006; 38.1:13-20



# MYASTHENIA GRAVIS AND SPEECH THERAPY

# Communication disorders and Myasthenia Gravis

- Dysphonia
- Dysarthria
- Dysphagia

# DYSPHONIA

- Dysphonia is a term that refers to any change in voice quality. This may be an increase in nasality, or breathiness .
- It may be related to weakness in the soft palate
- Or breathing problems

# Voice/Breathing

- Soft Palate Weakness is sometimes remedied with medication and exercise
- Breathing exercises are essential to improve voice and communication

# DYSARTHRIA

- Dysarthria refers to a decrease in articulatory skills due to muscle weakness
- Speech therapy can assist in muscle strengthening and compensatory strategies to improve articulation

# DYSPHAGIA

- Dysphagia refers to swallowing deficits that can be caused by muscles weakness.
- Can be oral as well as pharyngeal
- May need a diet change in consistency of food to remain well nourished and hydrated

# SPEECH THERAPY

- EVALUATION
  - BREATHING FOR SPEAKING
  - VOICE QUALITY ASSESSMENT
  - EATING/SWALLOWING ASSESSMENT
  - TOLERANCE FOR ACTIVITY



# SPEECH THERAPY TREATMENT

- Breathing for connected speech
  - Exercises to increase breath control
  - Vocal exercises to improve voice quality
  - Swallowing exercises and diet recommendations
  - Breathing for swallowing
  - Articulation exercises

# Speech therapy

- Usually short term
- Check up/follow up

# Thank you

- Thank you for having me. I appreciated being here with you.