FINDING HOPE WITH OMS
Webinar series

Movement and Breathing Better whilst Living Well with MS
Tuesday, September 28th at 8pm BST

Hosted by

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Welcome
Overview

Breathing
- Why & how we should breathe
- How MS affects breathing
- How to breathe better

Movement
- Why is movement & activity important
- How our body responds to activity
- Types of activity to explore
Why & how we should breathe

- Oxygen intake
- Carbon dioxide dispersal

- Diaphragm contracts
- Air moves in
- Intercostals assist rib movement
- Gas exchange occurs
- Diaphragm / intercostals relax
- Air moves out
How does MS affect breathing?

- Reduced muscle strength (primary & secondary)
  - Diaphragm
  - Intercostals
  - Abdominals
  - Facial muscles
  - Neck muscles
- Respiratory centre may be affected
- Consider medications

Causes of Breathing Problems in MS

- Muscle weakness
- Aspiration pneumonia
- Medications

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Signs of ineffective breathing

- Increased fatigue
- Increased neck muscle activity
- Need to take more breaths while talking
- Reduced volume of voice
- Reduced cough strength
- Pursed lip breathing
- Tingling of extremities

- Frequent sighing, sniffing, yawning
- Chest infections
- Dental problems
- Memory problems
- Headaches
- Dry mouth
- Night time urination
How do YOU breathe?

• Notice your breath
  • Deep / shallow?
  • Fast / slow?
• Chest movement / belly movement?
• Open / closed mouth
• Posture?
Test yourself

• Body Oxygen Level Test (BOLT) score
  • Take a normal breath through your nose
  • Allow a normal breath out through your nose
  • Hold your nose closed with your fingers
  • Count how many secs until you feel the distinct desire to breathe in

• NOT a test of how long you can hold your breath!

• HOW MANY SECONDS?
How to Breathe Better

Posture
• Supported sitting, check shoulders & chin

Close
• Close your mouth, breathe through your nose

Practise
• Light
• Slow
• Deep breathing

Try
• Try holding your breath IN and OUT
## How to Breathe Better

<table>
<thead>
<tr>
<th>Exhale</th>
<th>Try</th>
<th>Try</th>
<th>Consider</th>
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<tbody>
<tr>
<td>• Breathe out fully, pulling in your belly</td>
<td>• Tape your mouth</td>
<td>• Respiratory training devices</td>
<td>• Wim Hof method</td>
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Importance of Movement / Activity

• Joint movement
• Muscle length
• Muscle strength
• Circulation
• Bladder / bowel function
• Pain management
• Fatigue management
• Stress management

• Weight management
• Improved sleep
• Social benefits
• Achievement
• Mental well being
• Bone health
• Improved memory / cognition
• Better breathing
Physiological Effects of Activity

• Immediate effects
  • Increased heart rate
  • Increased breathing rate
  • Sweat production
  • Increased mitochondrial activity

• Mid term effects
  • Serotonin / Noradrenaline release
  • Endorphine release
  • Activates your immune system

• Longer term effects
  • Increased stamina, fitness & strength
  • Increases size of muscle fibres
  • Strengthens your heart
  • Boosts HDL, lowers LDL
  • Reduces health risk of other conditions
  • Creates new neural pathways
  • Increase mitochondrial numbers
Types of Activity

- Anaerobic
  - Short, sharp, high intensity increases in heart rate for <2mins
- Aerobic
  - Increasing heart rate moderately for >2mins
Types of Activity: Raising your heart rate
Types of Activity

- Resistance
  - Gravity, body weight, weights, resistance bands
- Stretching
  - Active, passive, assisted
- Balance
  - Tai chi, graded exercises, vestibular retraining

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Types of Activity

• Core strength
  • Pilates, yoga, gymball
• Aqua-therapy
  • Combination
• Vibration plate
• Anti Gravity treadmill
• Visualisation / Virtual Reality
Using Breathing & Moving Together

<table>
<thead>
<tr>
<th>Practise</th>
<th>• Practise your breathing techniques separately</th>
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<tbody>
<tr>
<td>Integrate</td>
<td>• Integrate progressively with exercise &amp; activities</td>
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<tr>
<td>Notice</td>
<td>• Notice your breathing responses during activity</td>
</tr>
<tr>
<td>Challenge</td>
<td>• Gently challenge your boundaries</td>
</tr>
<tr>
<td>Monitor</td>
<td>• Monitor your progress Retest your BOLT score</td>
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Thanks for listening!

Any questions?