



**MAHIDOL
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Maintaining Respiratory Function in Children with Neuromuscular Diseases

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Neuromuscular diseases

1. Muscles

- Duchene muscular dystrophy

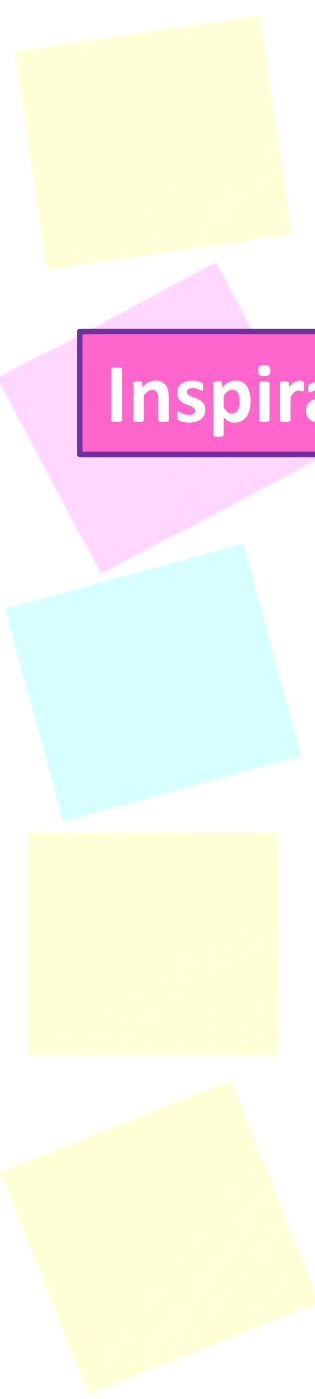
2. Neuromuscular junction

- Myasthenia gravis

3. Peripheral nerves eg Guillain-Barre

4. Spinal cord

- Spinal muscular atrophy (SMA)
- Amyotrophic lateral sclerosis (ALS)
- Traumatic injury



Muscles of respiration

Inspiration

Expiration

Neuromuscular weakness

- Obstructive sleep apnea
- Scoliosis
- Restrictive lungs
- Diminished cough
- Increased risk of aspiration / reflux
- Atelectasis → pneumonia
→ VQ mismatch
- Progressive hypoventilation
→ CO₂ retention + hypoxia
→ respiratory failure

