

stacking with a LVR bag, and/or a cough assist device to clear lower airway secretions. Nebulisers, medication, and suction may be required to treat excess secretions.

Falls and fractures

- Limited mobility can lead to poor bone density. Ensure Vitamin D supplementation and adequate calcium intake.
- Individuals are at higher risk of fractures even after low-impact injuries. Regular monitoring of bone health is expected, planned by specialist neuromuscular clinic.
- If at A&E with a suspected fracture, have a low threshold for X-ray due to poor bone density. It's essential for local team to contact specialist neuromuscular team regarding treatment.

Swallowing and nutrition

- Some individuals experience weakness in chewing and swallowing muscles which increases the risk of weight loss, choking, and aspiration (where food or liquid enters the airway).
- If the individual experiences signs or symptoms of chewing or swallowing difficulties, timely referral to a specialist speech and language therapist and a dietitian is recommended.
- It may be difficult to maintain adequate calorie intake. A dietitian can advise on food fortification, and nutritional supplements.
- Individuals with no feeding difficulties who are less active may be prone to weight gain. A dietitian can advise, and local weight management services might be considered.



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**MUSCULAR
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Alert card

Spinal muscular atrophy type 3

Name Date of birth

NHS/CHI/H&C number

If presenting at A&E, contact the specialist team at:
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as soon as possible on:

For information and support, contact us on our helpline
0800 652 6352 or email info@musculardystrophyuk.org

Spinal muscular atrophy (SMA) type 3

SMA is a progressive genetic condition that causes severe muscle weakness and affects movement.

Symptoms of SMA type 3 usually show after 18 months of age, but this varies and may not be until early adulthood. Individuals can initially stand and walk unaided, although many find walking and getting up from a seated position difficult. Muscle weakness progresses and some lose the ability to walk when they are older.

Pneumococcal and annual flu vaccinations should be kept up to date. COVID-19 vaccination should be given according to national guidelines.

Treatments

- Disease-modifying drugs are available if eligibility criteria are met. Risdiplam (Evrysdi) and Nusinersen (Spinraza) are available for those with SMA types 1, 2, or 3. These drugs are most effective when given before muscle weakness onset. They can stop the progression of muscle weakness and may improve strength and motor function. Ask if the individual has a treatment plan.

Anaesthetic precautions

- There is an increased risk of complications with general anaesthetic in SMA. If elective surgery is required, ensure preoperative assessment and communication between local and specialist respiratory teams. Where possible, surgery should occur in a specialist centre with staff experienced in

managing SMA patients.

- People with SMA can have serious reactions to neuromuscular blocking drugs (muscle relaxants), including suxamethonium, which should be avoided whenever possible.
- After surgery, the individual may require transition from intubation to non-invasive ventilation. If able to breathe by themselves prior to surgery, aim to wean them back to their pre-op baseline.

Respiratory function

- A small number of individuals may have weak respiratory muscles, which can cause nocturnal hypoventilation (shallow breathing at night) later in life. Symptoms include morning headaches, fatigue during the day, and poor concentration. If showing symptoms, periodic monitoring is advised.

- Weak respiratory muscles can make it difficult to cough effectively and any swallowing difficulties may lead to unwanted throat or respiratory secretions.

Respiratory infections

- There is increased risk of pneumonia and respiratory/chest infections. A low threshold for the use of antibiotics is recommended.
- Oxygen therapy is sometimes required during hospitalisation for an infection. If using ventilator support, it should be combined with the ventilator. Oxygen therapy (including high flow oxygen) should only be used on its own with close CO₂ monitoring to avoid the risk of raised CO₂ level.
- Assess secretion management and consider cough augmentation techniques like assisted coughing, breath