https://www.uspharmacist.com/article/inappropriate-use-of-skeletal-muscle-relaxants-in-geriatric-patients

Table 1

Key Differences Between Antispasmodic and Antispastic Agents

Drug Category	Mechanism of Action	Condition Treated	Disease States
Antispasmodics	Block nerves from signaling brain	Spasms secondary to peripheral musculoskeletal conditions	Injury, trauma
Antispastics/ spasmolytics	Block nerve signaling from spinal cord; act directly on skeletal muscle to relax spasm	Spasticity secondary to upper motor neuron lesions	Multiple sclerosis, spinal cord injury, stroke, cerebral palsy, infection

Source: References 8, 9, 12.

Table 2

A Summary of Available Skeletal Muscle Relaxants

Agent	Indications	Usual Oral Adult Dosage	On Beers Criteria List	Considerations in Geriatric Patients	Clinical Pearls	Approved Duration
Antispasmodics						
Carisoprodol	Acute musculoskeletal pain	250 mg-350 mg tid + hs[a]	Yes	Efficacy and safety not established in patients aged >65 y	If used long-term, must taper off owing to risk of withdrawal effect	2-3 wk
Chlorzoxazone	Acute musculoskeletal pain	Initial: 250 mg tid; max: 500 mg qid	Yes	Decrease dose as symptoms improve	Rare but serious hepatotoxicity	No duration given
Cyclobenzaprine (immediate-release)	Muscle spasm	5 mg-10 mg tid	Yes	Extended-release formulation not recommended; consider decreased frequency	Potential for serotonin syndrome; strong anticholinergic properties	2-3 wk
Metaxalone	Acute musculoskeletal pain	800 mg tid or qid[a]	Yes	Caution in patients with hepatic impairment	Potential for serotonin syndrome, strong anti-cholinergic properties	No duration given
Methocarbamol	Acute musculoskeletal pain; tetanus	Initial: 1,500 mg qid for 2-3 days, then decrease dosage to 4 g-4.5 g/day divided into 3-6 doses[a]	Yes	Start at lower dose and titrate to toler-ance in geriatric patients and those with hepatic or renal impairment	Mechanism of action is due to sedative properties; no direct effect on muscles	Chronic use
Orphenadrine	Acute musculoskeletal pain	100 mg bid	Yes	Contraindicated in patients with glaucoma	Strong anticholinergic properties	No duration given
Antispastics						
Baclofen	Spasticity resulting from MS (flexor spasms) or spinal cord injuries and diseases	Initial: 5 mg tid for ≥3 days, then titrate up by 5 mg q3d; max: 80 mg	No	Little/no evidence for use in chronic lower back pain	Potential for large number of CNS and cardiovascular side effects	1-2 mo
Dantrolene	Chronic spasticity	Initial: 25 mg qd for 7 days, then 25 mg tid titrated to effect by increasing dose q7d, not frequency; max: 400 mg (100 mg qid)	No	Drowsiness may persist for 48 h post dose	Black box warning for hepatotoxicity	45 days, if no benefit seen
Antispasmodic and Antispastic With Geriatric Dosage						
Diazepam	Muscle spasm caused by local pathology; spasticity	2 mg-10 mg po tid or qid Geriatric dosage: 2 mg-2.5 mg qd or bid; increase as tolerated	Yes	Increased risk of death with use	Associated with falls and traumatic injuries	No duration given
Tizanidine	Spasticity	2 mg-12 mg qd to tid Geriatric dosage: 2 mg qd to qid; titrate as needed; max: 36 mg	Yes[b]	Calculate creatinine clearance prior to dosing	Reserve treatment for time of day when control of spasticity is most important	No duration given

[a] A dose decrease is recommended in renal impairment.
[b] Tizanidine appears on the Beers Criteria list secondary to its potential to reduce urinary flow in men. There is no listed concern for sedation or potential fall risk.
CNS: central nervous system; max: maximum; MS: multiple sclerosis.
Source: References 3, 8, 9.

Table 3

Alternatives to Skeletal Muscle Relaxants

Indication	Skeletal Muscle Relaxants	Possible Alternatives
Acute low back pain	Short-term cyclobenzaprine, carisoprodol, metaxalone, methocarbamol	Physical therapy, ibuprofen (if no heart failure, hypertension, other considerations)
Chronic low back pain	Should not be used	Physical therapy, NSAIDs, tramadol, opioids[a]
Spasticity	Baclofen, tizanidine, dantrolene scheduled	Physical therapy; baclofen, tizanidine, dantrolene as needed

[a] Although they are recommended by some groups as alternatives, tramadol and opioids should not be used as first-line therapy in geriatric patients owing to the potential for sedation and falls.
NSAID: nonsteroidal anti-inflammatory drug.
Source: References 19, 21.