Toronto Myositis Centre

MYOSITIS CARE, EXPLAINED

PATIENT NUTRITION GUIDE

Nutrition for myositis

Eating well with inflammatory muscle disease

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PATIENT NUTRITION GUIDE

5 Complete Meals for Inflammatory Muscle Disease

Muscle-Supportive, Anti-Inflammatory Recipes

For Patients with Myositis (Dermatomyositis, Polymyositis, Immune-Mediated Necrotising Myopathy)

by Dr. O. Vinik and A. Papachristos — Myositis Clinic

Inflammatory myopathy places unique nutritional demands on the body. Ongoing muscle fibre damage and regeneration dramatically increases protein requirements, while immunosuppressive medications such as corticosteroids and methotrexate create additional nutritional challenges including bone density loss, folate depletion, and metabolic disturbance. These five recipes are specifically designed to address the nutritional priorities of myositis patients: high-quality protein for muscle repair, anti-inflammatory nutrients to reduce disease activity, and practical preparation methods adapted for patients living with proximal muscle weakness and fatigue.

Each recipe addresses the specific challenges of myositis: high protein content with leucine-rich sources to support mTOR-mediated muscle protein synthesis, soft textures adaptable for dysphagia, preparation methods requiring minimal hand strength and standing time, and nutrients that counteract the side effects of common myositis medications.

Why Nutrition Matters in Myositis

Inflammatory muscle disease creates a unique metabolic state in which skeletal muscle is simultaneously being damaged by immune-mediated inflammation and attempting to regenerate through satellite cell activation. This dual process dramatically increases the body's demand for high-quality protein, specific amino acids (particularly leucine, which activates the mTOR pathway central to muscle protein synthesis), anti-inflammatory nutrients, and energy substrates. At the same time, the medications used to treat myositis introduce their own nutritional complications.

Nutritional Priority	Why It Matters in Myositis	Addressed in These Recipes
High Protein (1.2–1.5 g/kg/day)	Muscle is actively being destroyed and regenerated; protein demand is significantly elevated above the general population recommendation	All 5 meals provide 18–42 g protein per serving, using leucine-rich sources (salmon, eggs, chicken, sardines)
Leucine & BCAAs	Leucine activates the mTOR signalling pathway that drives muscle protein synthesis — the same pathway disrupted by myositis-related muscle damage	Salmon, eggs, chicken thighs, and dairy all provide high leucine content per serving
Anti-Inflammatory Omega-3s	EPA and DHA directly inhibit TNF-α and IL-1β, reducing the inflammatory infiltrate in muscle tissue	Salmon (Meal 1), sardines (Meal 5), and flaxseed provide combined omega-3s across the week
Folate	Methotrexate depletes folate stores; deficiency causes fatigue, mouth ulcers, and cytopaenias	Lentils (Meal 3) and spinach (Meals 1, 3, 4) are among the richest dietary folate sources
Calcium & Vitamin D	Long-term corticosteroids increase osteoporosis risk; vitamin D deficiency correlates with myositis disease activity	Sardine bones (Meal 5), eggs (Meal 4), salmon (Meal 1), and feta (Meal 4) provide both nutrients
Soft Texture / Dysphagia Safety	Oropharyngeal and oesophageal dysphagia occurs in some myositis subtypes, increasing aspiration risk	All recipes include modifications for softer textures; Meals 2, 3, and 5 are inherently soft

MEAL 1

High-Protein Salmon & Quinoa Power Bowl with Avocado-Tahini Dressing

25 minutes | 2 servings | Easy | ~560 kcal per serving

This protein-dense power bowl is designed to support muscle repair and recovery in myositis. Skeletal muscle is in a constant state of damage and attempted regeneration in inflammatory muscle disease, which dramatically increases protein requirements. Salmon provides the highest-quality complete protein alongside omega-3 fatty acids that directly address the inflammatory pathways driving muscle fibre destruction. Quinoa is one of the few plant foods that provides all nine essential amino acids, and the avocado-tahini dressing delivers healthy fats that reduce the corticosteroid-associated metabolic burden many myositis patients carry.

MYOSITIS-SPECIFIC MECHANISM

Myositis involves T-cell and macrophage infiltration of muscle tissue, with upregulation of MHC class I on muscle fibres and production of TNF-α, IL-1β, and IFN-γ. Salmon's EPA and DHA directly inhibit TNF-α and IL-1β at the transcriptional level, reducing the inflammatory milieu around regenerating myofibres. The leucine content of salmon (a key branched-chain amino acid) activates the mTOR signalling pathway, which is critical for muscle protein synthesis — the same pathway that myositis-related muscle damage disrupts. Avocado provides glutathione, supporting antioxidant defences against the oxidative stress that accompanies chronic muscle inflammation. Quinoa's complete amino acid profile ensures substrate availability for myofibre repair without the metabolic acid load of large portions of red meat.

Ingredients

- 2 salmon fillets (approx. 170 g each)
- 1 cup quinoa, rinsed
- 2 cups water or vegetable broth
- 2 cups baby spinach
- 1 cup edamame (shelled, frozen)
- ½ cup red cabbage, thinly sliced
- 1 medium carrot, grated
- Sesame seeds for garnish

For the avocado-tahini dressing:

- 1 ripe avocado
- 2 tbsp tahini
- Juice of 1 lemon
- 1 small clove garlic
- 3 tbsp water
- Pinch of salt

Step-by-Step Instructions

1. Cook the quinoa: bring 2 cups of water or broth to a boil in a saucepan, add the rinsed quinoa, reduce heat, cover, and simmer for 15 minutes until the liquid is absorbed and the quinoa is fluffy. Remove from heat and let stand covered for 5 minutes.

2. While the quinoa cooks, season the salmon with salt and pepper. Heat a non-stick pan over medium-high heat with a drizzle of olive oil. Cook the salmon skin-side down for 4 minutes, then flip and cook for 3–4 minutes more until just cooked through.

3. Add the frozen edamame to the quinoa pot during the last 3 minutes of standing time — the residual heat will warm them through.

4. Prepare the dressing: blend or mash together the avocado, tahini, lemon juice, garlic, water, and salt until smooth. Adjust consistency with additional water if needed.

5. Assemble the bowls: divide the quinoa and edamame between two bowls. Add baby spinach, red cabbage, and grated carrot alongside. Place the salmon fillet on top.

6. Drizzle generously with avocado-tahini dressing and garnish with sesame seeds. Serve immediately.

> **Tip:** If dysphagia (swallowing difficulty) is present — as occurs in some myositis subtypes — flake the salmon into small pieces and mix it through the quinoa with extra dressing to create a softer, more uniform texture. The dressing can be thinned further with water to make it easier to swallow.

Nutritional Highlights: Protein: 42 g | Omega-3 (EPA+DHA): 2.3 g | Leucine: 3.4 g | Fibre: 11 g | Vitamin D: 13 µg | Calcium: 180 mg

MEAL 2

Slow-Cooker Bone Broth Chicken & Vegetable Stew

15 min prep + 4 hours slow cook (or 30 min stovetop) | 4 servings | Very Easy — Minimal Hands-On | ~420 kcal per serving

This stew is specifically designed for myositis patients experiencing severe fatigue or significant proximal weakness that makes prolonged cooking difficult. The preparation requires only 15 minutes of hands-on time before the slow cooker does the rest. Bone broth provides collagen-derived amino acids (glycine, proline, hydroxyproline) that support connective tissue repair around damaged muscles, while the chicken thighs deliver high biological-value protein with a favourable leucine content for muscle protein synthesis.

MYOSITIS-SPECIFIC MECHANISM

Bone broth contains glycine, an amino acid with direct anti-inflammatory properties that inhibits macrophage activation through glycine-gated chloride channels — relevant because macrophages are key effector cells in myositis-associated muscle damage. Chicken thighs provide 26 g of protein per serving with high leucine content, directly supporting the mTOR-mediated muscle protein synthesis that is impaired in inflamed muscle tissue. Sweet potatoes deliver beta-carotene (converted to vitamin A, essential for T-cell regulation and muscle satellite cell differentiation) and complex carbohydrates that prevent the glycogen depletion common in myositis patients with impaired muscle metabolism. Turmeric and ginger synergistically inhibit NF-κB and COX-2 pathways. The one-pot cooking method preserves water-soluble B vitamins that are critical for energy metabolism in compromised muscle tissue.

Ingredients

- 500 g bone-in, skinless chicken thighs
- 4 cups bone broth (or high-quality stock)
- 2 medium sweet potatoes, peeled and cut into 2 cm cubes
- 2 large carrots, sliced into rounds
- 2 stalks celery, sliced
- 1 medium onion, diced
- 3 cloves garlic, minced
- 1 tbsp fresh ginger, grated
- 1 tsp ground turmeric
- ½ tsp black pepper
- 1 tsp dried thyme
- 2 large handfuls kale, stems removed, roughly torn
- Juice of ½ lemon
- Salt to taste

Step-by-Step Instructions

1. Place the chicken thighs in the bottom of a slow cooker (or a large pot if cooking on the stovetop).
2. Add all the vegetables except the kale: sweet potatoes, carrots, celery, onion, and garlic. There is no need to sauté anything first.
3. Add the grated ginger, turmeric, black pepper, and dried thyme. Pour the bone broth over everything.

4. Cover and cook on LOW for 4 hours (slow cooker) or bring to a gentle boil and simmer covered for 25–30 minutes (stovetop) until the chicken is falling off the bone and the sweet potatoes are tender.

5. Remove the chicken thighs. Using two forks, shred the meat off the bones. Discard the bones and return the shredded chicken to the pot.

6. Add the torn kale and stir. Cover and cook for a further 5 minutes until the kale is wilted. Stir in lemon juice, season with salt, and serve in deep bowls.

Tip: This is the ideal batch-cooking recipe for myositis patients. Make the full 4 servings on a day when energy levels are manageable, then refrigerate or freeze individual portions. The stew thickens as it cools and reheats well in the microwave. If hand weakness makes peeling and cutting difficult, use pre-cut frozen vegetable mixes and pre-made bone broth from the grocery store.

Nutritional Highlights: Protein: 34 g | Glycine: 2.8 g | Collagen peptides: from bone broth | Fibre: 7 g | Vitamin A: 12,000 µg RE | Iron: 3.5 mg

MEAL 3

Creamy Lentil & Spinach Dal with Turmeric-Ginger Rice

30 minutes | 4 servings | Easy — One Pot + Rice Cooker | ~440 kcal per serving

This protein-rich vegetarian dal is an excellent option for myositis patients who find meat difficult to chew or swallow, or who prefer plant-based meals. The naturally soft, smooth texture of cooked red lentils makes this one of the most dysphagia-friendly high-protein meals available. Lentils provide 18 g of protein per serving alongside folate — a nutrient that is critically important for myositis patients on methotrexate, as this medication depletes folate stores. The coconut milk base provides medium-chain triglycerides (MCTs) that serve as an alternative energy substrate for compromised muscle tissue.

> **MYOSITIS-SPECIFIC MECHANISM**
> Red lentils are one of the richest plant sources of folate (essential for DNA repair in rapidly dividing immune cells and for countering methotrexate-induced folate depletion). Spinach adds additional folate along with magnesium, which supports muscle relaxation and reduces the cramping that some myositis patients experience. Coconut milk provides lauric acid, which has immunomodulatory properties, and MCTs that can be oxidised for energy without the carnitine shuttle — relevant because carnitine deficiency has been reported in some myositis patients. The turmeric-ginger combination in the rice provides a continuous low-level anti-inflammatory effect through dual NF-κB and COX-2 inhibition.

Ingredients

- 1½ cups dried red lentils, rinsed
- 1 can (400 ml) light coconut milk
- 2 cups vegetable broth
- 1 medium onion, diced
- 3 cloves garlic, minced
- 1 tbsp fresh ginger, grated
- 1½ tsp ground turmeric
- 1 tsp ground cumin
- 1 tsp ground coriander
- ½ tsp black pepper
- 1 tbsp extra-virgin olive oil
- 4 large handfuls baby spinach
- Juice of 1 lemon
- Fresh coriander (cilantro) for garnish

For the turmeric-ginger rice:

- 1½ cups basmati or jasmine rice
- ½ tsp ground turmeric
- ½ tsp grated ginger
- 1 tbsp coconut oil or butter

Step-by-Step Instructions

1. Prepare the rice first: rinse the rice and cook it in a rice cooker or saucepan with the turmeric, ginger, and coconut oil according to package directions. The turmeric will colour the rice golden.

2. Heat the olive oil in a large pot over medium heat. Add the diced onion and cook for 3–4 minutes until softened.

3. Add the garlic, ginger, turmeric, cumin, coriander, and black pepper. Stir for 1 minute until fragrant.

4. Add the rinsed lentils, coconut milk, and vegetable broth. Stir well. Bring to a gentle boil, then reduce heat, cover, and simmer for 18–20 minutes, stirring occasionally, until the lentils are completely broken down into a creamy consistency.

5. Add the baby spinach and stir for 2–3 minutes until fully wilted. Stir in the lemon juice and season with salt.

6. Serve the dal over the turmeric-ginger rice. Garnish with fresh coriander. For patients with dysphagia, blend the dal briefly with an immersion blender for an even smoother texture.

Tip: The naturally soft, creamy texture of this dal makes it one of the safest high-protein meals for myositis patients with oropharyngeal dysphagia. If swallowing is a concern, purée the dal to a completely smooth consistency and cook the rice slightly softer than usual. This dish stores exceptionally well — prepare the full 4 servings and freeze in individual portions.

Nutritional Highlights: Protein: 18 g | Folate: 280 µg (70% DV) | Magnesium: 85 mg | Iron: 5.5 mg | Fibre: 12 g | MCTs: from coconut milk

MEAL 4

Greek Egg & Vegetable Frittata with Feta and Fresh Herbs

25 minutes | 4 servings | Easy — One Pan | ~380 kcal per serving

Eggs are one of the most bioavailable protein sources and contain the full spectrum of essential amino acids needed for muscle repair. This frittata provides 28 g of protein per serving from eggs and feta cheese, packaged in a soft texture that requires minimal chewing. For myositis patients, eggs have additional significance: they are one of the few dietary sources of both vitamin D and choline. Vitamin D deficiency is prevalent in myositis and correlates with disease activity, while choline supports the phosphatidylcholine in muscle cell membranes that is damaged during inflammatory myofibre destruction.

MYOSITIS-SPECIFIC MECHANISM

Egg yolks provide vitamin D3 (cholecalciferol), the same form produced by the skin, which regulates T-cell differentiation and reduces the Th1/Th17 immune polarisation observed in myositis. Choline from egg yolks is required for acetylcholine synthesis (the neuromuscular junction transmitter) and for repair of muscle cell membranes damaged by complement-mediated attack in dermatomyositis. The lutein and zeaxanthin in egg yolks are carotenoid antioxidants that reduce oxidative stress in muscle tissue. Bell peppers provide vitamin C, which supports collagen cross-linking in the extracellular matrix surrounding regenerating muscle fibres. Olive oil provides oleocanthal with its dual COX-1/COX-2 inhibitory activity. The Mediterranean herbs (oregano, thyme) contain rosmarinic acid and carvacrol, both NF-κB inhibitors.

Ingredients

- 8 large eggs
- 80 g feta cheese, crumbled
- 1 medium courgette (zucchini), diced
- 1 red bell pepper, diced
- ½ cup cherry tomatoes, halved
- 1 small red onion, finely diced
- 2 cloves garlic, minced
- 2 large handfuls baby spinach
- 2 tbsp extra-virgin olive oil
- 1 tsp dried oregano
- ½ tsp dried thyme
- Salt and black pepper
- Fresh basil or parsley for garnish
- Wholegrain toast for serving (optional)

Step-by-Step Instructions

1. Preheat the oven grill (broiler) to medium-high. Heat the olive oil in a large oven-safe skillet (approx. 25 cm) over medium heat.

2. Add the red onion, courgette, and bell pepper. Cook for 4–5 minutes until the vegetables are softened but still have some colour.

3. Add the garlic, cherry tomatoes, and baby spinach. Stir for 1–2 minutes until the spinach is wilted and the garlic is fragrant.

4. While the vegetables cook, crack the eggs into a bowl and whisk with the oregano, thyme, salt, pepper, and half of the crumbled feta.

5. Pour the egg mixture evenly over the vegetables in the skillet. Scatter the remaining feta on top. Cook undisturbed on the stovetop for 4–5 minutes until the edges are set but the centre is still slightly liquid.

6. Transfer the skillet under the grill (broiler) for 3–4 minutes until the top is golden and puffed, and the centre is fully set. Let cool for 2 minutes, then slice into wedges. Garnish with fresh herbs.

Tip: A frittata is ideal for myositis patients because it can be eaten at any temperature — warm from the oven, at room temperature, or cold from the refrigerator — eliminating the need to reheat on low-energy days. It stores in the refrigerator for 3 days. For patients with dysphagia, cut into small pieces and serve with extra olive oil or yoghurt to moisten the texture. Use a silicone handle cover on the skillet if grip strength is limited.

Nutritional Highlights: Protein: 28 g | Vitamin D: 4.4 µg (29% DV) | Choline: 380 mg (69% DV) | Vitamin C: 95 mg | Calcium: 250 mg | Selenium: 32 µg

MEAL 5

Omega-3 Sardine & White Bean Smash on Sourdough with Herb Salad

10 minutes | 2 servings | Very Easy — No Cooking | ~460 kcal per serving

This is the fastest complete meal in this collection, designed for days when myositis symptoms make any extended cooking impossible. Canned sardines are nutritional powerhouses — they provide omega-3 fatty acids, vitamin D, calcium (from the edible bones), and complete protein in a format that requires nothing more than opening a can. Mashed with white beans, lemon, and olive oil, the resulting spread has a soft, easily chewable texture suitable for patients with oropharyngeal involvement. This meal can be prepared entirely seated at a table, with no stovetop use required.

MYOSITIS-SPECIFIC MECHANISM

Sardines provide among the highest concentrations of EPA and DHA of any commonly available food, along with vitamin D — the combination addresses both the inflammatory cytokine milieu (TNF-α, IL-1β) and the immune dysregulation (T-cell polarisation) that characterise myositis. The calcium from sardine bones is particularly relevant for myositis patients on long-term corticosteroids, who are at increased risk of osteoporosis. White beans provide resistant starch and prebiotic fibre that support gut microbial diversity — emerging research suggests that gut dysbiosis contributes to systemic autoimmune inflammation in myositis. Sourdough bread is fermented, providing organic acids that improve mineral absorption and may support gut health. The parsley in the herb salad provides apigenin (COX-2 inhibitor) and vitamin K (bone protection during corticosteroid therapy).

Ingredients

- 2 cans (approx. 120 g each) sardines in olive oil, drained
- 1 can (400 g) cannellini or butter beans, drained and rinsed
- Juice of 1 lemon
- 2 tbsp extra-virgin olive oil
- 1 small clove garlic, finely grated
- Salt and black pepper
- 4 slices sourdough bread

For the herb salad:

- 1 cup flat-leaf parsley leaves
- 1 cup rocket (arugula)
- ¼ cup thinly sliced red onion
- 1 tbsp extra-virgin olive oil
- 1 tsp lemon juice
- Pinch of salt

Step-by-Step Instructions

1. In a medium bowl, combine the drained beans and sardines. Using a fork, mash roughly together — aim for a chunky spread, not a smooth paste (unless a smoother texture is needed for swallowing).
2. Add the lemon juice, olive oil, grated garlic, salt, and pepper. Stir to combine. Taste and adjust seasoning.

3. Toast the sourdough bread slices. If grip strength is limited, use a toaster rather than a grill to avoid handling hot pans.
4. Prepare the herb salad: toss the parsley, rocket, and red onion with olive oil, lemon juice, and a pinch of salt.
5. Spread the sardine-bean mixture generously onto the toasted sourdough.
6. Top each toast with a handful of the herb salad. Serve immediately with lemon wedges.

> **Tip:** This entire meal can be prepared while seated, using only a fork, a bowl, and a can opener. For patients with severe hand weakness, electric can openers and jar openers are invaluable kitchen adaptations. The sardine-bean mixture stores well in the refrigerator for 2 days, allowing you to prepare it once and assemble fresh toast as needed. If swallowing is a concern, mash the mixture to a smoother consistency and serve on very soft bread or crackers moistened with extra olive oil.

Nutritional Highlights: Protein: 35 g | Omega-3 (EPA+DHA): 2.0 g | Calcium: 420 mg (35% DV) | Vitamin D: 5.2 µg | Vitamin K: 220 µg | Fibre: 9 g

Kitchen Adaptations for Myositis Patients

Proximal muscle weakness affects the ability to stand for prolonged periods, lift heavy pots, and perform fine motor tasks like chopping and stirring. The following adaptations can make cooking safer and more manageable during periods of active disease.

Challenge	Practical Solution
Prolonged standing	Sit on a high stool at the kitchen counter. Prepare ingredients in stages throughout the day rather than all at once. Choose recipes with minimal hands-on time (Meals 2 and 5 in this guide).
Lifting heavy pots	Use lightweight pans. Fill pots with a jug at the stovetop rather than carrying them full from the sink. Consider a slow cooker placed on the counter at a comfortable height.
Grip weakness	Use electric can openers, jar openers, and lightweight utensils with built-up handles. Non-slip mats under cutting boards prevent sliding. Silicone oven mitts provide better grip than cloth.
Chopping and cutting	Purchase pre-cut vegetables, pre-washed salad greens, and pre-portioned proteins. Use kitchen scissors instead of knives where possible. A food processor reduces manual cutting.
Fatigue and energy management	Batch cook on good days and freeze in individual portions. Keep canned sardines, pre-cooked rice, and canned beans in the pantry as zero-preparation protein sources. Meal 5 requires no cooking at all.
Dysphagia	Modify textures: purée soups and stews, flake fish into smaller pieces, moisten dry foods with dressings or sauces. Avoid hard, dry, or crumbly foods. Always eat upright and take small bites.

Important Note

These recipes are intended to complement, not replace, your prescribed medical treatment for inflammatory myopathy. Nutritional strategies can support muscle recovery and reduce systemic inflammation, but they should be discussed with your rheumatologist, neurologist, or dietitian. This is particularly important if you are on corticosteroids (monitor calcium, vitamin D, and blood glucose), methotrexate (ensure adequate folate intake and discuss supplementation), or if you have dysphagia (a formal swallowing assessment by a speech-language pathologist is recommended before modifying your diet independently). If you experience worsening swallowing difficulty, nasal regurgitation, or choking, contact your medical team immediately.

Developed as a patient education resource for rheumatology and neuromuscular practice by Dr. O. Vinik and A. Papachristos — Myositis Clinic.