SIEVEKING PLASTIC SURGERY

AGELESS SOLUTIONS

BUILDING MUSCLE AFTER THE AGE OF 55

Your Weekly Newsletter
by Dr. Nick Sieveking
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Why 55? Why not 40 or 50?
Because I am 58, and after a lifelong pursuit of trying to get that “jacked” physique and bench press 300 pounds, I’ve given up. It’s never gonna happen for me….not with my genetics.

So around age 55, I shifted my focus toward safer, more age-appropriate fitness training that was more functional in nature—training designed to help me reduce daily aches and pains while promoting longevity, mobility, and overall well-being.

Over the years, I’ve undergone 11 sports injury-related surgeries, and like many soon-to-be sexagenarians (and no, that’s not transgender vocabulary), I deal with a noticeable amount of musculoskeletal discomfort every single day.

My Functional Medicine journey, which began more than 15 years ago, has taught me that lean muscle mass, flexibility, supportive posture, balance, and fluid movement patterns are the true keys to maintaining health and independence as we age.
And science absolutely supports this.

THE TRUTH

Most aging adults do not suffer from too little moderate cardiovascular exercise. However, a majority of aging adults, at some stage, suffer from a progressive loss of lean muscle mass.

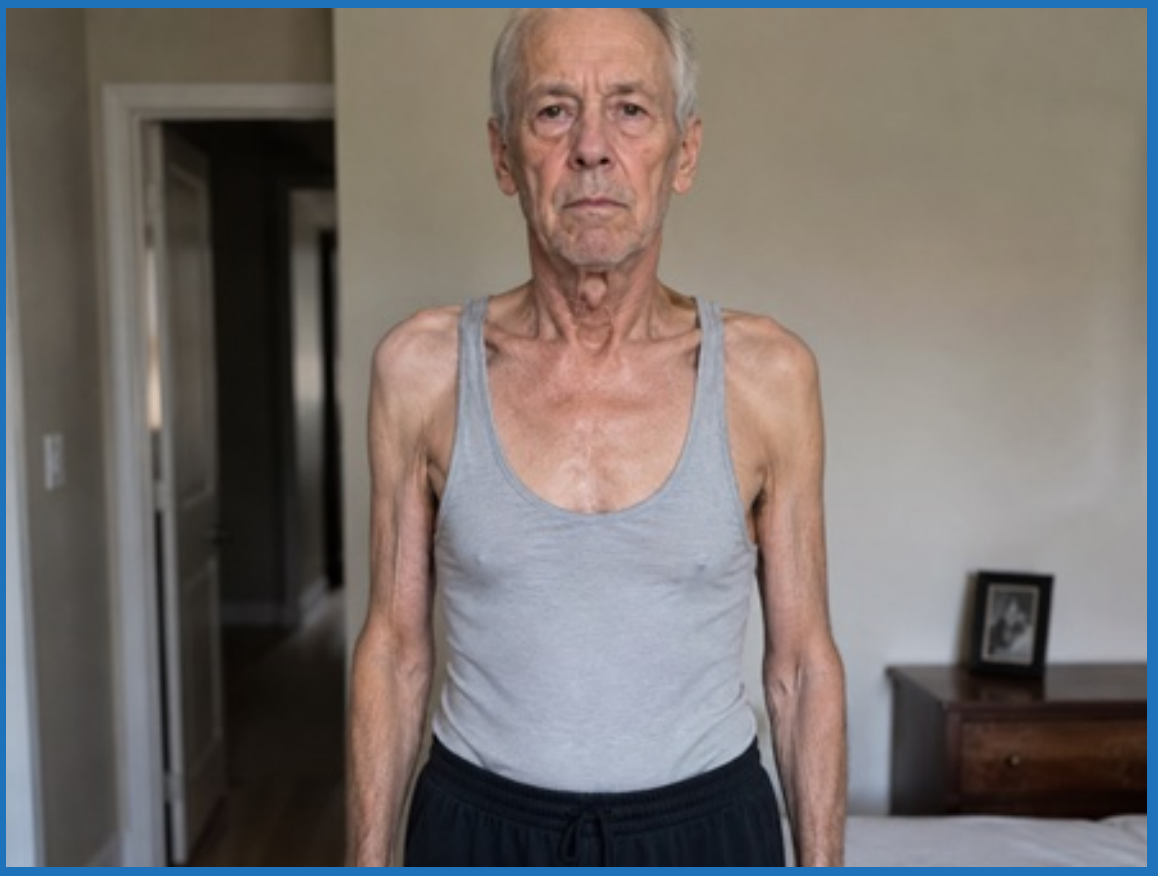
In fact, excessive cardiovascular exercise without adequate resistance training can actually accelerate muscle loss over time. While cardio can certainly help decrease body fat and promote weight loss, studies show that up to 30% of the

lost weight may come from the loss of lean muscle tissue if cardiovascular exercises are “unbalanced“. That matters…..

Because age-related muscle loss—known as Sarcopenia—is one of the major drivers of frailty, falls, metabolic decline, loss of independence, and poor aging outcomes.

WHAT IS SARCOPENIA?

Sarcopenia = Age-related muscle wasting and weakness



The Natural Progression of Sarcopenia

- Loss of strength and stamina
- Difficulty walking or climbing stairs
- Poor balance and increased falls
- Higher fracture and hospitalization risk
- Loss of independence
- Difficulty getting out of chairs or bed
- Slower recovery after illness or surgery
- Increased frailty
- Reduced metabolic rate
- Increased insulin resistance and diabetes risk
- Increased obesity risk despite weight loss
- Chronic fatigue and low energy
- Reduced immune resilience
- Increased likelihood of nursing home placement
- Higher overall mortality risk
- Reduced mobility and quality of life

Maintaining lean muscle mass provides enormous benefits for healthy aging:

- Improved strength and mobility
- Better balance and fewer falls
- Increased metabolic rate
- Improved insulin sensitivity and blood sugar control
- Reduced risk of frailty and sarcopenia
- Better bone density and lower fracture risk
- Improved posture and joint support
- Greater endurance and energy levels
- Enhanced recovery after illness or surgery
- Better cardiovascular and metabolic health
- Improved hormone regulation
- Reduced chronic inflammation
- Better cognitive function and brain health
- Increased independence and quality of life
- Delayed or avoided long-term care placement
- Lower overall mortality risk
- Improved longevity and healthy aging

All these benefits ultimately translate into:

- Fewer falls
- More mobility
- Fewer doctor visits and hospitalizations
- Fewer medications
- More pain-free days
- More adventures and travel
- Better quality time with children and grandchildren

That's the real goal.

THE BIOLOGY OF MUSCLE AGING & RENEWAL

Muscle tissue is constantly renewing itself.
Muscle fibers turn completely over approximately every 60–90 days, meaning your muscles are continually rebuilding and adapting.

Your biceps will be "brand new" in 2 to 3 months.

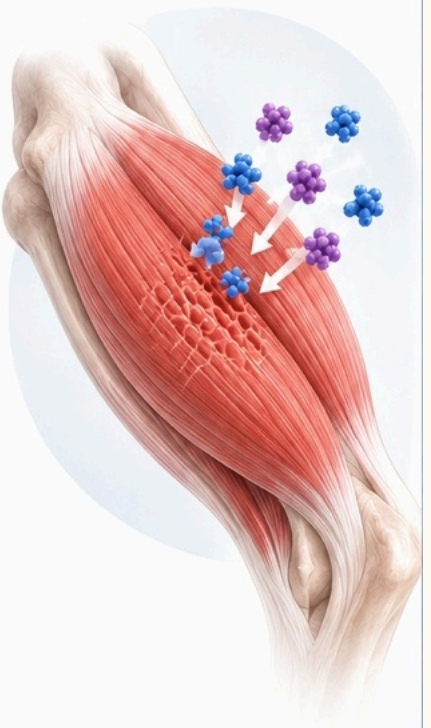
However, aging changes this process.

IN YOUNGER ADULTS:

- Muscle turnover is efficient and balanced

IN ADULTS OVER 55:

- Muscle turnover slows
- "Anabolic resistance" develops => barriers to Muscle-Protein synthesis develop.
- Muscle protein synthesis becomes less responsive
- Inflammatory signaling increases
- Sarcopenia gradually develops if resistance training and protein intake are inadequate



THE GOOD NEWS?

Resistance training powerfully stimulates muscle renewal at any age.

AFTER A SESSION OF RESISTANCE TRAINING:

- Muscle-Protein synthesis rises within hours
- Peaks around 24–48 hours (optimal)
- Can remain elevated up to 72 hours in older adults => due to unaddressed aging factors that slow recovery

AND THERE'S ANOTHER MAJOR BENEFIT:

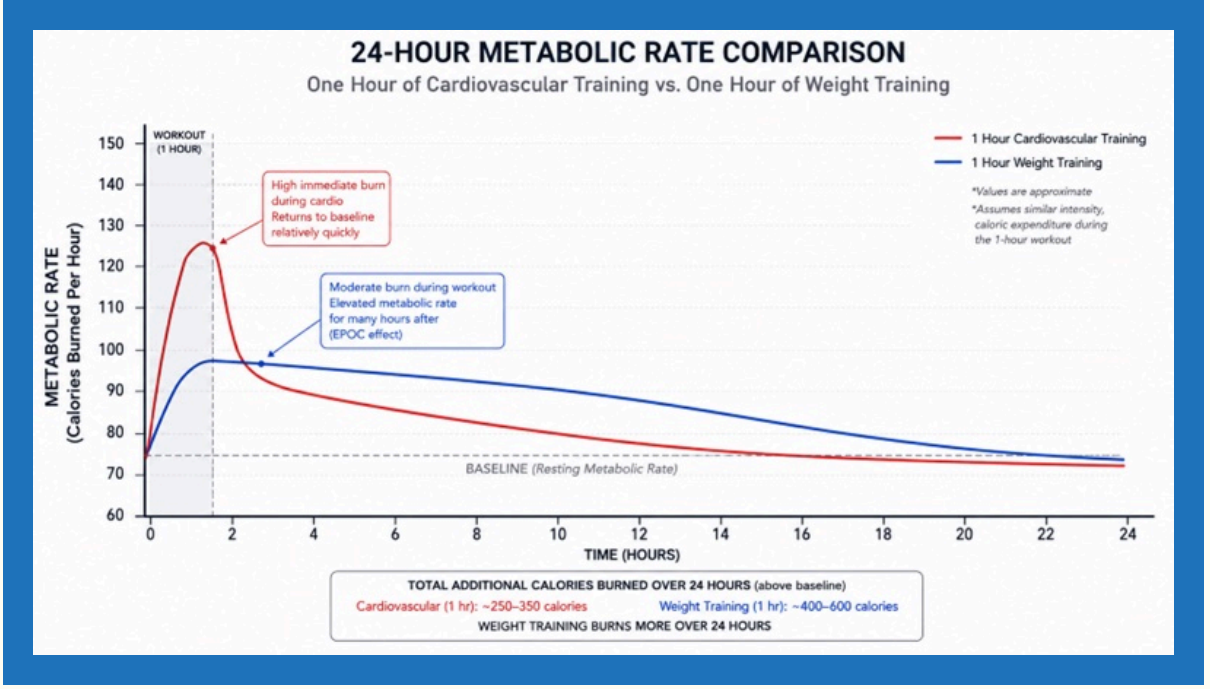
A 45-minute resistance training session raises your average metabolic rate throughout the day far more effectively than 45 minutes of moderate treadmill cardio.

THAT MEANS:

- More calories burned throughout the day
- Greater fat loss
- Better preservation of lean muscle mass

BUILD. RENEW. THRIVE. AT ANY AGE.

Strength training doesn't just build muscle—it powers your body's ability to renew, adapt, and stay strong for life.



And let's be honest—walking around the gym lifting weights at different stations is usually a lot more enjoyable than running in place on a treadmill for 45 minutes.

Don't be the person who spends more time talking than training. Keep your heart rate elevated. Push your muscle groups to true fatigue and make every minute in the gym count.

THE ANSWER TO THE POP QUIZ

The best answer is:

B.) 30 minutes of resistance training with interval heart rates reaching 140–150 beats per minute every five minutes.

That does NOT mean **cardiovascular training** is unimportant. It absolutely matters:

- Improves heart strength and efficiency
- Lowers blood pressure
- Improves VO_2 max and endurance
- Lowers resting heart rate
- Burns more calories during exercise
- Improves circulation and blood flow
- Enhances lung capacity and oxygen delivery
- Reduces risk of heart attack and stroke
- Improves cholesterol and triglycerides
- Helps reduce visceral fat
- Improves stamina and daily energy
- Enhances brain blood flow and cognition
- Improves stress resilience and mood
- Helps improve sleep quality
- Supports longevity and cardiovascular health

*****These benefits of Cardiovascular training closely overlap with intense resistance training**

However, **resistance training** benefits are more pronounced in these areas:

- Builds and preserves lean muscle mass
- Increases strength and functional independence
- Improves bone density and reduces osteoporosis risk
- Helps prevent sarcopenia with aging
- Raises resting metabolic rate long term
- Improves insulin sensitivity and glucose disposal
- Enhances joint stability and musculoskeletal durability
- Reduces fall and fracture risk in older adults
- Improves posture and core stability
- Increases testosterone and growth hormone response
- Improves body composition and muscle tone
- Supports long-term weight maintenance
- Improves balance, coordination, and mobility
- Strengthens tendons and connective tissue
- Better for maintaining physical performance with aging
- Can improve chronic pain related to weakness/deconditioning
- Greater “afterburn” metabolic effect (EPOC) after exercise
- Helps maintain independence and quality of life later in life
- Longevity

For many adults over 55 we strongly recommend maintaining a training ratio weighted more heavily toward resistance exercise than cardio—approximately 3:1.

WHY RESISTANCE TRAINING WINS FOR LONGEVITY

- Preserves lean muscle mass
- Prevents sarcopenia
- Maintains bone density
- Improves insulin sensitivity
- Supports mitochondrial function
- Reduces frailty and fall risk
- Preserves functional independence
- Increases resting metabolic rate
- Improves glucose disposal more effectively than many moderate cardio programs

Protein Targets by Body Weight

Daily grams of protein (rounded to nearest ~5 g)

Body weight	1.2 g/kg (baseline aging target)	1.5 g/kg (solid goal)	1.6 g/kg (training)	2.0 g/kg (hard training)
120 lb	65 g	80 g	85 g	110 g
140 lb	75 g	95 g	100 g	125 g
150 lb	80 g	100 g	110 g	135 g
160 lb	85 g	110 g	115 g	145 g
180 lb	100 g	120 g	130 g	165 g
200 lb	110 g	135 g	145 g	180 g
220 lb	120 g	150 g	160 g	200 g

Quick guidance: Most adults aging well land in the 1.2-1.5 g/kg columns. Consistent lifters often do best around 1.6 g/kg. The 2.0 g/kg column is typically for heavier training loads or very lean/active individuals.

LET'S BUILD YOUR MUSCLE-BUILDING LONGEVITY PLAN

1. Check Your Biomarkers — Get Labs

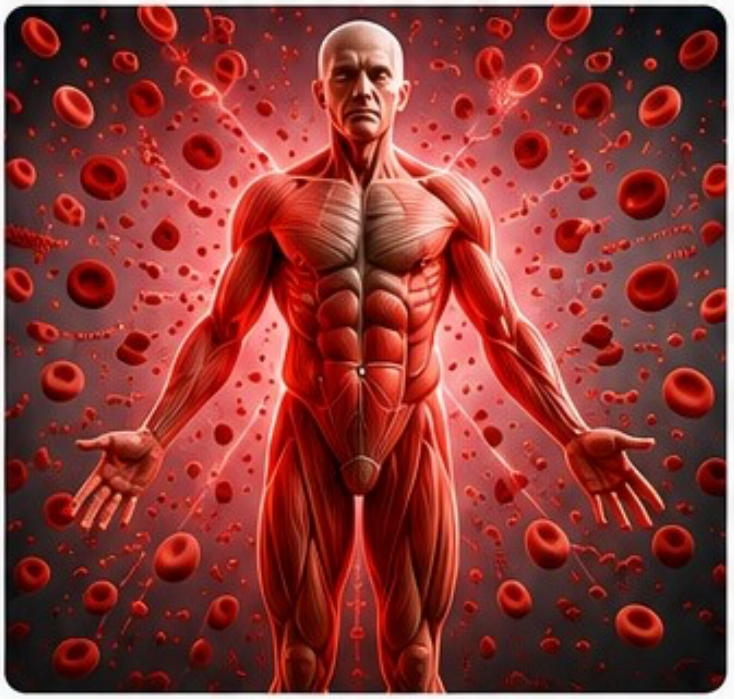
Important Hormones & Biomarkers:

- Testosterone
- Estrogen
- Progesterone
- Growth hormone
- Thyroid hormones
- Cortisol

Action plan: BALANCE YOUR HORMONES!!

Don't fear bioidentical hormone replacement therapy (BHRT). The question is NOT: "is hormone replacement safe?". The real question is: "Is it safe NOT to replace your deficient hormones."

Inflammatory Markers:



- hs-CRP
- ESR
- Homocysteine
- Ferritin
- Oxidized LDL

Action plan:

Check these biomarkers for the presence of inflammation. While we search for the cause of your systemic inflammation, use lifestyle modifications and supplements to reduce the negative "downstream" effects of your inflammatory condition.

Micronutrient Deficiencies:

- Vitamin D
- Magnesium
- Zinc
- Iron
- Vitamin B12

Action plan:

Check for micronutrient deficiencies and plan for correction. Even with good workouts and high protein intake, deficiencies in nutrients like magnesium, vitamin D, zinc, iron, and B vitamins can impair muscle recovery, strength, endurance, and muscle protein synthesis. In older adults especially, correcting deficiencies is critical to maintaining lean muscle mass and preventing sarcopenia.

Don't begin your fitness journey with a gas tank that is already empty. Fill it up and get cruising!

Work with our Functional Medicine specialists at one of our *Ageless Solutions* clinics to optimize your internal health and create the metabolic environment necessary for success.

2. Script Your Diet

Prioritize Protein

Provided kidney function is adequate, aim for:

- 1.2–1.5 grams of protein per kilogram of body weight daily
- Even higher intake may be required with intense training

That means the average 70 kg (154 lb.) adult should consume well over 100 grams of protein daily.

Focus on Anti-Inflammatory Nutrition

Avoid highly inflammatory foods such as:

- Ultra-processed sugars
- Seed oils
- Gluten
- Soy
- Corn

Stabilize Blood Sugar

Blood sugar spikes and insulin resistance accelerate inflammation and muscle loss.

Action Plan:
Shop smart.
Avoid ultra-processed foods and products containing industrial seed oils such as sunflower oil.

Food sensitivity testing through **Ageless Solutions** can help identify which foods support your health—and which foods may be contributing to chronic inflammation.

SPOTLIGHT

BLOOD FLOW RESTRICTION (BFR) TRAINING

Blood Flow Restriction training is one of the most exciting developments in age-appropriate strength training.

How It Works:

- Constriction bands are placed on the upper arms or upper thighs
- Bands are tightened to approximately 50 to 75% of arterial occlusion pressure
- Arterial inflow is partially restricted
- Venous outflow is almost completely restricted

During Exercise with BFR Bands Inflated:
• Oxygen delivery decreases
• Lactic acid rapidly accumulates
• Anaerobic metabolism increases
• Mitochondrial recruitment increases
• The pituitary gland responds by increasing growth hormone release
• Muscle-building cytokines and growth factors are activated
• Muscle protein synthesis increases

Major Benefit:
Muscles can hypertrophy using significantly lighter weights—typically only 30–50% of normal training loads.

This dramatically reduces joint stress while still promoting muscle growth.

Clinical studies demonstrate a 30% increase in muscle volume with less tendon and joint stream when BFR is employed (vs. non-BFR weight training)

For aging adults with arthritis, prior injuries, or chronic pain, BFR training can be a tremendous tool to more safely add muscle mass.

(Suggested BFR provider: **https://saga.fitness**)

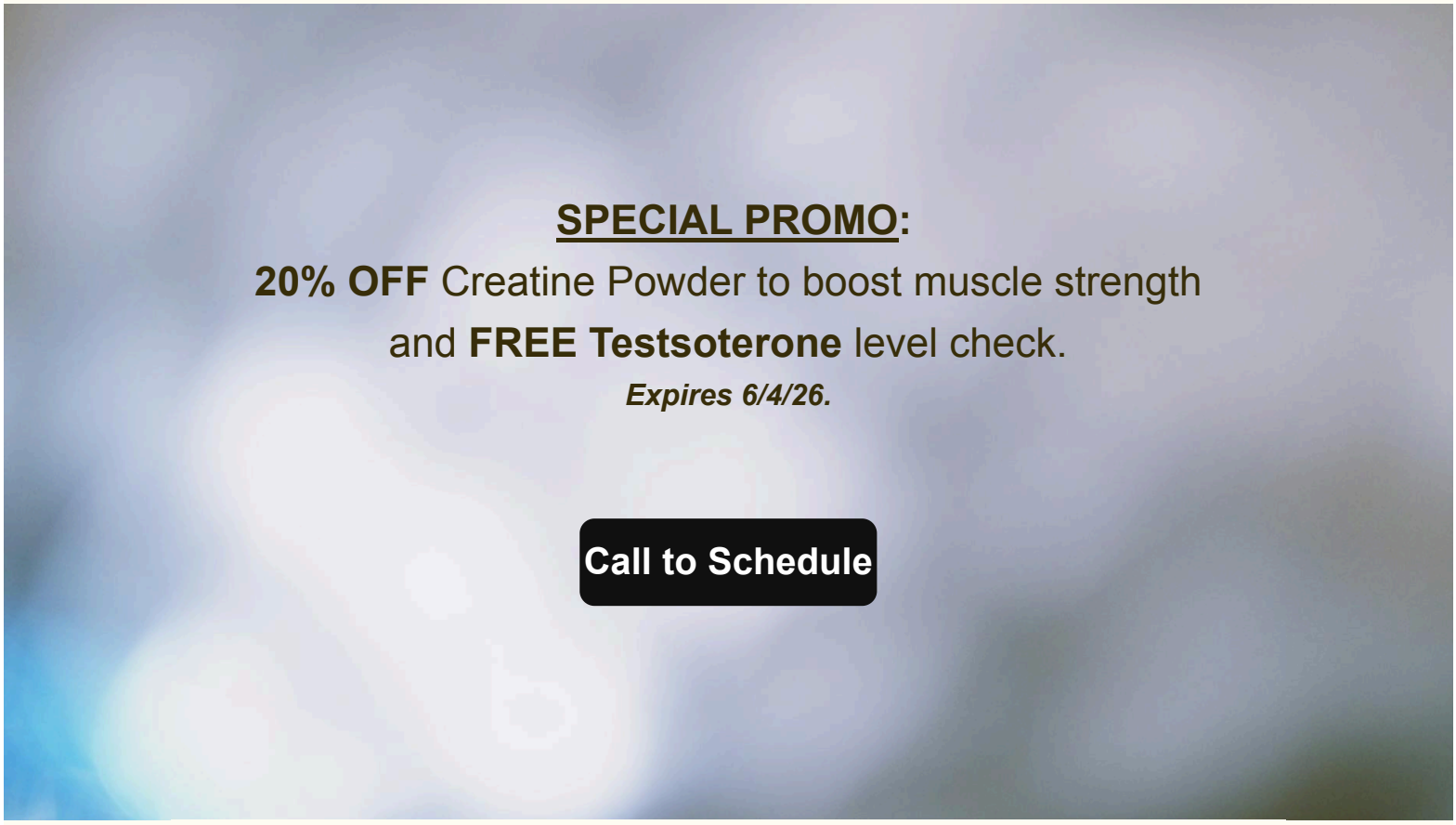
FINAL THOUGHTS
It is never too late to start building muscle.

I have a patient who recently turned 90 years old. Last year, I started him on oral testosterone, growth hormone support, and daily protein supplementation.

Today, he's always "on the go"—outside every day doing heavy labor and maintaining his large estate and offshore fishing every week

The body wants to heal.
The body wants to adapt.
The body wants to survive.

You simply have to give it the proper tools.



STAY TUNED!

Be on the lookout for next week's newsletter, *"Training Smarter, Not Heavier: The Science of Blood Flow Restriction."*

Newsletter Archives

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