Authored by Mike Seese
412-722-7233

Training With Age

No one wants to admit that the body changes with age; however, it certainly changes quite a bit, and earlier than most realize. Statistically, for example, most males' Testosterone levels decrease starting at age 30. This is just one example of a change which has significant impacts on the body. While still possible to train aggressively and maintain extremely high levels of fitness, it becomes more important to train intelligently, with awareness and deliberate planning. This article includes training strategies to maintain high levels of fitness as well as some key considerations to incorporate:

- Moderating impact activities (run, ruck, box jumps, etc.)
- Eliminating one rep maximum (1RM), or personal record type events
    - Rest Pause, Drop Sets
- Pre-Exhausts
- Nutritional changes, to include supplementation
- Deliberate heart rate tracking
- Regular and comprehensive mobility / stretching

#1. Moderate Amounts of Impact Activities

Problem: Excessive impact deteriorates bone density and joint strength. Especially with previous "wear and tear", lower body joints and bones are at higher risk for significant injury

Solution: Monitor and restrict levels of impact. You should have no more than 2-3 days of impact activities per week, with at least a full day with no impact in-between. You still need to execute anaerobic (HIIT) and aerobic (endurance) training, but can do so with substitutes:

- Bike
- Stationary Bike
- Rower
- Assault Bike
- Swim
- Elliptical or other non-impact machines

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#2. Eliminate 1RM or PR Type Events

Problem: Lifting in repetition ranges less than 3-5 reps per set is inherently risky, especially with age. Bones, joints, and tissue must work extremely hard and extremely quickly to move a heavy load, especially below the 3RM range. However, we can only train Type II (fast twitch) muscle, with sets of lower repetitions and heavier weight.

Solution: Athletes in their 40s and older should consider lifting only in the 3-5 rep range or higher. Athletes in their 50s or older should consider lifting only in the 6-8 rep range or higher. Athletes older than 60 should lift with reps of 10 or higher. So, how can we aggressively train muscular strength and development with these restrictions? These are four great techniques to stay at appropriate rep ranges and still accomplish strength improvement (targeting Type II muscle):

- **Rest Pause Training:** In a "Rest-Pause" set, you will execute a normal set of a given number of reps, stop the exercise and rest no more than about 30 seconds, and then do as many more repetitions as possible maintaining control and form (use a spotter). You can apply this to all sets in an exercise or simply the last 1-2 sets.
    - Ex: Bench Press 5 x 5
        - Set 1: 5 reps
        - Set 2: 5 reps
        - Set 3: 5 reps
        - Set 4: 5 reps. Rack the bar, wait 30 seconds. Repeat another set of as many reps as possible.
        - Set 4: 5 reps. Rack the bar, wait 30 seconds. Repeat another set of as many reps as possible.
- **Time under Tension Training:** Increase the number of seconds you spend on the positive (concentric), negative (eccentric), or the middle of the two motions. Bench Press becomes infinitely harder when you deliberately time a 3-second positive, 3-second hold, and 3- second negative

    - Ex: Squat 3 x 6-8
        - Set 1: 6 reps, 3-second positive, negative, and hold
        - Set 2: 6 reps, 3-second positive, negative, and hold
        - Set 3: 6 reps, 3-second positive, negative, and hold
- **Drop Sets:** A drop set is a set in which you perform a set, and then immediate drop resistance by about 1/3 (typically 25% – 33%) and then immediately perform the same number of reps as the previous set. Drop sets are typically applied to the last set of any exercise.
    - Ex: Dumbbell Row 3 x 6-8
        - Set 1: 3 x 6 at 90 lbs
        - Set 2: 3 x 6 at 90 lbs
        - Set 3: 3 x 6 at 90 lbs, followed by 3 x 6 at 60 lbs
- **Max + 2 or 3:** The "Max Plus" designation simply means that you execute a given number of reps to reach maximum effort, and then a spotter assists you with another given number of reps (typically +2 or +3). You can add these to each set in an exercise or just the last.
    - Ex: Dumbbell Bench 3 x 5, Max + 2
        - Set 1: 5 reps, then 2 assisted reps
        - Set 2: 5 reps, then 2 assisted reps
        - Set 3: 5 reps, then 2 assisted reps

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#3. Pre-Exhausts

Problem: Related to #2 above, we must find ways to properly tax the muscle to achieve growth, without unnecessary risk or physical trauma. Muscles need to face progression and overload to grow. While #2 highlights fast twitch / Type II muscle, this fix will help you target slow twitch / Type I muscle.

Solution: Pre-Exhausting a muscle or muscles before an exercise can help you to achieve muscle exhaustion with less weight. You must be very careful to keep proper form throughout both exercises when using a pre-exhaust. There are various ways to pre-exhaust but I generally group them into:

- **Isometric (Static):** A very old-school technique is simply to flex and hold the muscle you are training, before a related exercise.
  - Chest Squeeze for 30 seconds, then Bench Press
    - Place outstretched hands, folded or clasped, parallel with your chest. Squeeze
  - Wall sit for 30 seconds, then execute reps of Leg Extension
- **Kinetic:** Execute a bodyweight or resistance exercise, before executing a second exercise
  - Leg Curl Machine before Deadlift
    - Be very careful to keep strict form
  - Push-Ups or Dumbbell Flye before Bench Press

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#4. Supplements and Nutritional Changes

Problem: The body operates differently with increasing age. Decreasing bone density, testosterone levels (Males), and joint fluids are some of the primary, negative aspects of aging.

Solution: Luckily, most of the body's changes can be remedied with supplementation. Calcium with D, Testosterone boosters, and Fish Oils are some of the best remedies for the problems noted above.

- **Calcium with Vitamin D:** Fairly inexpensive, but Calcium with D fortifies bone density amongst other benefits. Vitamin D helps the body to absorb calcium, so look for a supplement with both.
- **Testosterone Boosters and Therapy:** Many great sports nutrition Testosterone boosters exist, which you can get over the counter. However, make sure you're asking your Doctor about available prescriptions and treatment through your medical clinic (military) or health insurance.
    - Female and Male bodies both change with age; you should ask a Doctor if some sort of supplementation or therapy is right for you, especially based on blood test results
- **Fish Oils:** While touted for numerous health benefits, fish oils are excellent for joint health. There are various other joint supplements, but fish oils are especially helpful for athletes as they age due to the many health benefits (brain and heart function especially).

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#5. Deliberate Heart Rate Tracking

Problem: Maximum cardiac output decreases with age. It's important to track heart rate and follow guidelines for maximum and working heart rates, to lessen the risk of heart complications.

Solution: Use a heart rate monitor with app, or simply take your heart rate manually. Follow the guidelines below:

- **Maximum Heart Rate:** Generally speaking, seek a maximum heart rate of 220 – Age for a gauge of 100% effort. Example: a 50 year old should seek a max heart rate of no more than (220-50 = 170 Beats per Minute)
- **Target Heart Rate:** Your target heart rate should vary between 50% - 75% of your maximum, depending on your activity and desired outcomes. **The table below is a sample for a 50 year old**:

50%	60%	75%	Max
.5 x 170 = 85BPM	.6 x 170 = 102BPM	.75 x 170 = 130BPM	220-50 = 170BPM

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#6. Flexibility

Problem: Tissue and joints stiffen with age, increasing risk of slips, trips, and falls during a workout or even in daily life.

Solution: Stretch regularly and comprehensively. Yoga positions are some of the most effective stretching methods. You should stretch every time you exercise! It's also good to have an "active recovery day" about once every week, in which you perform very easy exercise for 20-30 minutes, followed by a long stretch session. Try to focus on these common, problem areas:

- Lower Back, Hips, Hamstrings
  - Child's Pose
  - Standing or Crossed Leg Hamstring Stretch
  - Pigeon Sequence Variations
- Shoulders
  - Thread the needle
  - "I / Y / T" Extend and Hold
  - Walk Up the Wall

Conclusion

These are all guidelines to consider. Most importantly, "Listen" to your body and follow your Doctor's recommendations when pursuing physical fitness objectives and training. Of course, you may be capable of doing more or less than what is written here but it is important first and foremost to treat your situation specifically based on your past medical history, current standing, individual nature of work requirements, etc.