MX4 ACTIVE

MATRIX

SMALL GROUP TRAINING COURSE

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 1 5/22/24 7:32 AM

TABLE OF CONTENTS

INTRODUCTION

What is MX4 Active? 3

How Does MX4 Active Differ from MX4? 3

The Science Behind the Solution 4

OVERVIEW

Program Basics 6

Workout Structure 6

Periodization and Tempo 7

The Exercises 7

Instructor-to-Participant Ratio 8

Defining Success: Instructor Basics 8

PROTOCOLS

Screen and Assessment: Timed Up-and-Go Test 9

Warm-up Protocol 10

Cool-down Protocol 12

Enrichment Add-ons 13

MX4 Active Small Group Assessment 15

MX4 Active Weekly Programs 16

REFERENCES 29

This work is the exclusive copyright property of Johnson Health Tech North America (JHTNA), protected under the laws of the United States of America. No part of this work may be copied, reproduced or distributed other than by written permission of JHTNA. The unauthorized reproduction or distribution of this copyrighted work is illegal. Criminal copyright infringement, including infringement without monetary gain, is investigated by the FBI and is punishable by up to five years in federal prison and a fine of $250,000.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 2 5/22/24 7:32 AM

INTRODUCTION

WHAT IS MX4 ACTIVE?

Delivered via a variety of exclusive Matrix Fitness equipment, MX4 Active is an engaging small group programming solution designed to meet the needs of aging individuals and those with a low baseline of fitness. It blends cardio exercise with functional training to support gradual improvements to fitness and blood vessel function throughout the body. Each session is designed to last 45 minutes, and participants are encouraged to train two to three times per week.

HOW DOES MX4 ACTIVE DIFFER FROM MX4?

Developed from our original MX4 small group training, MX4 Active is the second programming offering in the Matrix functional training portfolio. While both programs use the same Matrix equipment, they are designed for individuals with very different fitness levels. See the table below for an overview of the differences between MX4 and MX4 Active.

Exhibit A: Key Differences in MX4 Programs

	MX4	MX4 ACTIVE
Group Training Overview	Designed for conditioning through a variety of training tools, heart rates, movements and intensities	Designed for those who lack the physical capacity for high-impact exercise
Target Participants	Mid-to-high fitness	Low-to-mid fitness
Program Structure	30 minutes Mid-to-high intensity workouts with options to increase duration and intensity	45 minutes Low-to-mid intensity workouts
Coach : Participant Ratio	Recommended maximum 1:12	Recommended maximum 1:8 (Active Aging) 1:12 (Active Living)
Workouts & Exercises	3 workouts per week (156 workouts per year) 600+ exercises	1 workout per 2-week period (26 workouts per year) 100+ exercises
Pre-Designed Warm-Up / Cool Down	No	Yes
Assessment	Fitness assessment to establish baseline	Physical readiness assessment for 55+
Areas of Focus	Strength, Endurance, Power, Cardio	Balance, Flexibility, Coordination + Strength, Endurance, Power, Cardio

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 3 5/22/24 7:32 AM

THE SCIENCE BEHIND THE SOLUTION

Many individuals recognize the health benefits of regular exercise and seek an approach that will accommodate lower levels of baseline fitness. These participants require exercises with a range of motion that supports functional movements at an appropriate training load. MX4 Active offers an optimal solution because it was designed to counter the loss of muscle mass and bone density that results from sedentary lifestyles.

By increasing fitness and physical activity, MX4 Active addresses the top protective factors against the risk of falling. Each year, more than one in five adults 20 years and older will fall at least once, and fall rates increase exponentially beyond the age of 50.[1] MX4 Active includes weight-bearing exercises to enhance stability and uses tools that support balance recovery responses.

For example, the Connexus Step+ tool is used for dynamic weight shifts and activates muscles to improve hip mobility. Also, the Connexus Step+ has a removable platform with a contoured balance surface that is used for stability training. The S-Drive Performance Trainer is manually powered and designed to correct postural imbalances, featuring a safety belt that centers the user and handrails that span the length of the platform. Tools like the Connexus Step+ and the S-Drive strengthen the hip, a common site of injury due to falling to the side or backward.

Since most falls occur in the forward direction and involve the upper extremity, equipment such as Total Body Cycle is used to target upper body conditioning, strengthening the core and arms using a safe range of motion. Because diverse movements can stem the increased fall risk associated with advancing age,[2] MX4 Active combines a wide array of balance- and stability-promoting exercises.

Meanwhile, session programming addresses the common concerns of participants who are less active:

- Specific movements have been selected that are lower-back friendly
- MX4 Active sessions are lower-impact than a typical group exercise offering
- The programming does not require kneeling positions, minimizing the need to go to the ground

With these considerations, the benefits of fitness and motor coordination can be delivered while maximizing participant comfort.

Those who exercise regularly maintain the skills for independent living as a result of better endurance, strength, balance and flexibility. These four areas are targeted by MX4 Active through multicomponent exercises. Even more importantly, these exercises are completed in a friendly team-like atmosphere, where individuals are encouraged to expand the limits of their physical capabilities. The social support inherent to small group exercise enhances enjoyment and camaraderie, especially when delivered to individuals with similar fitness starting points. Social interactions foster a sense of belonging and encourage high levels of engagement while participants meet exercise goals.

In addition to building a team-like atmosphere, the social component of group training supports healthy brain aging.[3] On average, brain volume begins to decline by the time an individual reaches their mid-40s,[4] but this is not an inevitable process. In fact, the brain is highly sensitive to aerobic fitness, such that regular exercise can halt[5] and even reverse[6] an age-associated loss of brain tissue and function. Based on research in middle-aged and older adults,[7] MX4 Active uses a medium-length duration to maximize exercise-induced benefits to brain function.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 4 5/22/24 7:32 AM

What's more, physical challenges that boost cardiovascular health also improve cerebral blood flow, helping to preserve brain mass. In response to beginning a habit of regular exercise, blood flow is increased to brain regions that serve memory functions,[8] resulting in better performance on memory tasks in older adults.[9] MX4 Active blends cardio-based modalities with functional movement training to support gradual improvements to fitness and blood vessel function throughout the body.

As training adaptations accrue, participants may begin to feel less fatigue throughout the day, countering one of the most common complaints that accompanies inactivity[10] and advancing age.[11] This renewed sense of energy is augmented by exercise-dependent improvements in mitochondrial function within skeletal muscles[12,13] and the brain.[14,15] In addition, regular physical activity reverses age-related losses of specific brain factors[16,17] and neurotransmitters that support improved self-esteem, mood[18,19] and exercise motivation.[20] Taken together, MX4 Active has the essential elements to support health and vitality and can facilitate a successful transition to an active lifestyle.

For classes that are populated with older individuals, three recommendations are provided to optimize effectiveness and safety. With these three modifications, MX4 Active is an age-appropriate solution that reverses the effects of a sedentary lifestyle while leveraging the benefits of a social group environment.

- The Timed-Up-and-Go Test (page 9) is recommended to ensure that participants have the requisite movement capabilities for safe participation.
- An instructor-to-participant ratio of 1:4 or 1:8 is recommended, particularly for new instructors, as an older demographic may require extra guidance.
- Each weekly program can be used for two weeks, with the first week (Establish / Learn It) focusing on form and movement familiarity, and the second week (Elevate / Work It) allowing for higher intensities and shorter transition times (see page 7 for more details).

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 5 5/22/24 7:32 AM

OVERVIEW

PROGRAM BASICS

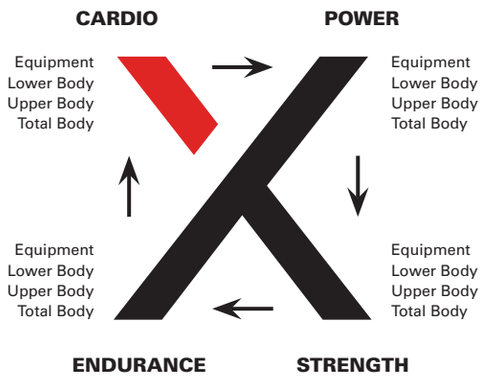
MX4 Active workouts consist of 45-minute sessions of low- to moderate-intensity intervals. Each session is designed to address the common concerns of participants who have been inactive or not following a structured exercise system. Specific movements have been selected that are lower-back friendly, and the entire exercise library is dominated by low-impact options. Furthermore, instructors are trained to encourage participants to use a third point of contact when needed.

IN ADDITION, MX4 ACTIVE FEATURES:

- **A pre-participation assessment** for sessions populated by older participants to determine class readiness
- Pre-choreographed **warm-up** and **cool-down** routines, tailored to meet the unique needs of the target participant
- **Periodization** designed to meet the unique needs of the population. Each of the 26 pre-designed workouts are used for a two week period within a facility
- **Programming** designed around sound scientific principles, without complexity for the sake of variety
- **Gradual activity progression** with achievable short-term goals that promote a confidence-inspiring experience
- **Timed small group assessment trials** in a "as many reps as possible" (AMRAP) format to measure progress (quarterly assessments recommended)
- **Suggested homework** to achieve one health-related activity that week, encouraging participants to start dialogue between themselves relating to their experiences and achievements

WORKOUT STRUCTURE

Each arm of the "X" represents a distinct station that uses one piece of equipment. MX4 Active sessions are comprised of one complete circuit around the X. At each station, three exercises are performed that typically include a lower body, an upper body and a total-body movement.



MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 6 5/22/24 7:32 AM

PERIODIZATION AND TEMPO

MX4 Active is delivered using a modified periodization schedule based on participant characteristics. For classes attended by individuals 55 years of age and older, we recommend using a two-week periodization format to support motor learning. Market testing has revealed that older participants prefer learning motor skills honed by repetition at varying intensities, and subjective reports suggest that movement familiarity is valued over movement diversity. In contrast, younger participants may place greater value on MX4 Active sessions that offer unique workouts each week or each session. To accommodate these differences, we recommend moving through the exercise plans at a pace consistent with participant preferences for novel workout sequences. Older participants may follow the Establish and Elevate approach to give them two weeks to master new movement sequences as described below.

To empower participants and enhance engagement, the programming alternates between **Establish** and **Elevate** weeks, such that each of the 26 programs are used for two consecutive weeks. This ensures that participants have optimal movement patterns established prior to increasing intensity.

ESTABLISH

The first week of a new MX4 Active workout sequence emphasizes motor learning. Establish weeks encourage overall conditioning by focusing on form, proper stabilization and building cardiovascular endurance. Longer transition times between exercises facilitate recovery and help participants orient to new tools. This allows the instructor ample time to direct and guide participants when necessary.

ELEVATE

The second week of the workout sequence features the same exercise sequence as Establish. Elevate features a faster tempo to improve force production and fast-twitch muscle fiber recruitment. The coordination developed in Establish weeks is a requisite foundation that reduces the risk of injury by improving participant comfort and exercise familiarity. Elevate weeks give participants an opportunity to capitalize on established motor sequences with greater confidence. On certain cardiovascular equipment, the speed or reps per minute are week-specific.

WEEK	WORK / REST RATIO (SECONDS)	TRANSITION TIME TO MOVE BETWEEN THE FOUR PILLARS OF THE "X"	EXERCISE TEMPO
ESTABLISH	60 / 30	90 seconds	2- 0- 2
ELEVATE	60 / 30	60 seconds	2- 1- 0

THE EXERCISES

Apart from the Cardio arm of the "X," movements are included in each set of exercises that meet the skill criteria. Given special consideration for MX4 Active participants, emphasis is placed on movements designed to challenge neuromotor systems involved in balance, coordination and skill acquisition. Each lesson plan includes at least one principal skill movement.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 7 5/22/24 7:32 AM

SKILL CRITERIA IS ACHIEVED BY MOVEMENTS THAT INCLUDE ANY OF THE FOLLOWING:

1. Exercise that involves working across the midline of the body
2. Bodyweight transfer onto a single foot
3. Moves that involve more than two phases of movement (e.g., the inclusion of rotation, extension and flexion in a movement pattern)
4. Coordination challenges that are beneficial and helpful for this specific population (e.g., walking backward)

INSTRUCTOR-TO-PARTICIPANT RATIO

The MX4 Active coach should encourage participants to challenge themselves while avoiding overexertion. This is achieved by ensuring the ratio of instructor to participant is no more than 1:8.

DEFINING SUCCESS: INSTRUCTOR BASICS

MX4 Active was developed for participants with a low baseline of fitness, some of whom may be under a doctor's care for minor conditions. We encourage instructors to consider the following:

- Although a primary risk factor for falls is muscle weakness, another issue is that some prescription medications increase the difficulty of balance-promoting exercise. On a daily basis, more than 70% of individuals 55 and older take at least one prescription medication, many of which interfere with balance.[21] Instructors must therefore cultivate a positive and accepting atmosphere that encourages participants to challenge themselves but also honors their diverse capabilities.
- Aging and less active populations have a high percentage of chronic health conditions and may have a history of injury that warrants a careful approach. Instructors should remind participants to avoid movements that provoke pain or discomfort.
- Movements that challenge balance are essential to developing the muscles that promote functional stability. Instructors can reduce concerns about the rigor of these balance challenges by reminding participants that they can adjust the pace and/or add a third point of contact at any time.

DELIVERY STYLE

Delivering clear instructions is crucial in any exercise class, but especially for MX4 Active, as participants tend to be older and age is a significant predictor of hearing loss. For instance, the prevalence of mild-to-moderate hearing loss impacts approximately 7% of those aged 40–49, 13% of those aged 50–59, 26% of those aged 60–69, and half of those aged 70–79 For effective communication, instructors should:

- Provide spoken directions at an appropriate volume while facing participants, ideally with a low level of background noise
- Encourage a manageable pace with a focus on positive words and phrases
- Combine spoken instructions with physical demonstrations, using gestures and body language that affirms the participant's form, pacing or effort
- Project their voice well, but resist the urge to shout at participants

Keep in mind that participants in this class will likely respond to a different coaching style than participants in a HIIT class. The table labeled "Participant Internal Dialog" (following page) illustrates the characteristics and internal dialogs that different participants experience. Keep in mind that many MX4 Active participants fall on the right column of this table and instructor cues should be adjusted accordingly. For substitute language, see the "Appropriate Phrasing" table on the following page.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 8 5/22/24 7:32 AM

Exhibit B:

PARTICIPANT CHARACTERISTICS AND INTERNAL DIALOGUE		
Baseline Fitness	**High** (Typical for MX4)	**Low** (Typical for MX4 Active)
Self-efficacy	**High:** "This will make me stronger."	**Low:** "I'm not sure about this."
Confidence	**High:** "I know I can do this."	**Low:** "I don't think I can do these moves."
Competitiveness	**Motivating:** "I can push myself harder."	**Demotivating:** "Am I the worst one here?"
Fear of Injury	**Low:** "No pain, no gain."	**High:** "This seems dangerous."
Self-consciousness	**Low:** "My form is great."	**High:** "Is everyone looking at me?"

Exhibit C:

APPROPRIATE PHRASING TO TRANSFORM THE EXPERIENCE	
Instead of...	**Say this...**
"Push yourself NOW and recover later!"	"I can see you're really focused. I'm loving the effort you're putting in!"
"Really challenge yourself today and get that heart rate up!"	"Listen to your body. If this feels okay, you are welcome to push yourself a little more."
"Try your hardest so you can get the most out of this workout!"	"Having the courage to try new things makes you a success every time you walk into this room"
"I want each of you to try to be the hardest working person in the room!"	"There's no need to compare yourself to others; focus on what you can do today."
"Faster / harder / more!"	"Everything you accomplish today improves your health, even if it's not the full expression of the movement."

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 9 5/22/24 7:32 AM

PROTOCOLS

SCREENING AND ASSESSMENT: THE TIMED UP-AND-GO (TUG) TEST

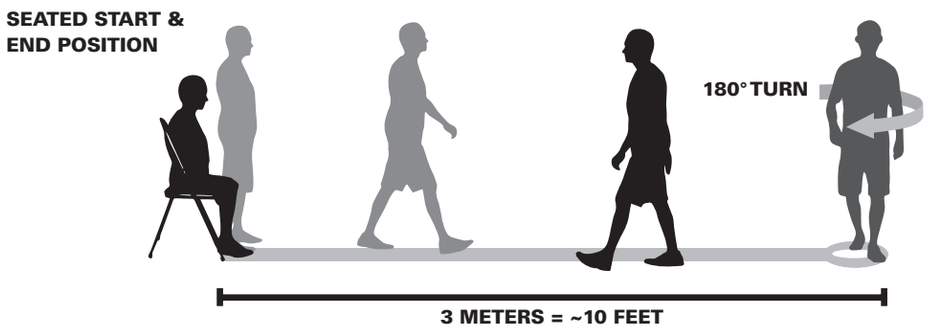
For classes populated by individuals 55 and older, instructors should use the TUG Test as a brief mobility task to identify those whose risk of falls or injury exceed safe limits. Allow approximately five minutes to screen eight participants.

Equipment:

1. Stopwatch
2. Tape measure
3. Plyometric box or chair (seat height: 41-51 cm / 16-20")

Procedure:

1. Place the plyometric box or chair against the slam wall.
2. Place a tape line or cone at three meters (~10 feet) from the base of the box or chair
3. Explain the test, then physically demonstrate it at a controlled pace, repeating the instructions.
4. Instruct participants to stand from the chair, walk to the line (or cone), turn, walk back to the chair, sit down again.
5. When you say "Go," stopwatch timing begins for the participant and stops once they return to a seated position



Interpretation: The TUG test assesses basic mobility using functional maneuvers related to activities of daily living. Anyone who needs ≥12 seconds to complete the TUG has a significantly higher fall risk[28] and does not qualify to participate in MX4 Active. In addition to the TUG time requirement, instructors should watch participants carefully. Observing any of the following risk factors may disqualify the participant if they show difficulty completing the TUG task:

- Difficulty rising from the seat
- Difficulty walking a straight line
- Difficulty turning 180 degrees
- Difficulty re-orienting to the chair
- Little or no arm swing
- A slow, tentative pace
- Very short stride length
- Loss of balance

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 10 5/22/24 7:32 AM

Tug Test Failure: If a participant fails to meet this criterion or demonstrates serious risk factors noted above, ensure that the participant has an action plan. Direct these participants to strength-building activities with less range of motion. This may include a recumbent cycle or selectorized strength equipment that minimizes compound movements. The participant may also be referred to personal training or physical therapy, depending on the severity of the mobility limitations.

Positive phrasing can be used to discuss a participant's next steps: "Based on the TUG Test results, some of the movements in these classes will present a level of challenge that may increase your risk of injury. I can see that you have the courage and drive to work toward physical improvements. For a motivated individual like yourself, other possibilities may better serve your needs. First, I'd like to introduce you to a personal trainer / physical therapist, because individualized exercises result in improved balance and stability more reliably. They can help you target the necessary areas for improvement and can give you personalized support to move toward your fitness goals. Secondly, if you are ready to explore movements that can gradually build strength now, we have a series of machines with a wider safety margin. These machines feature stable surfaces, so you can be in a seated position as you complete strength-building movements."

WARM-UP PROTOCOL

Each week the warm-up is intentionally repetitive and lasts 6–10 minutes, consisting of seven movement preparation positions and seven Dynamic Activity positions that gradually elevate the heart rate and body temperature. The recurrence of familiar sequences shines a spotlight on quality of movement and allows participants to gauge progress over time.

Prior to class, instructors should provide convenient contact points, since the initial movements require a third point of contact. On the Connexus Perimeter, points of contact may include the horizontal bar, the two adjustable training handles on the vertical posts, the frame of the med ball target and the frame of the magnetic chalkboard. The Connexus Compact can accommodate at least three users (adjustable training handles and med ball target frame). The S-Drive handrails accommodate two to four individuals as well.

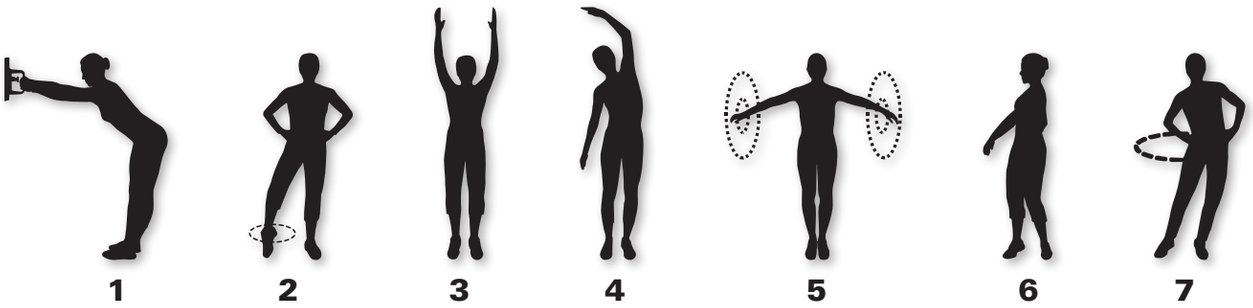
Preparation positions are used to encourage a range of motion that is rarely encountered in most daily activities. These are not intended to increase flexibility during the Movement Preparation phase as members may not be sufficiently warm. Instead, these positions prime subtle balance adaptations as weight on the feet is shifted front to back and side to side.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 11 5/22/24 7:32 AM

MOVEMENT PREPARATION

Complete each 2–4 times and hold for 10–15 seconds.

1. **Anterior/posterior weight transfer and hip hinge** with a stable point of contact and feet shoulder width apart
2. **Ankle rolls** with heel elevated, option to use stable point of contact; shift weight onto opposite foot
3. **Reach arms above head** or forward in front of the body
4. **Side bends,** keeping the chest facing forward and limiting head tilt
5. **Shoulder warm-up using small circular movements**, increasing to larger circular movements
6. **Slow spine rotation** with a brief pause; shift weight to side-to-side and allow foot to pivot on toe
7. **Rotate hips in circles** with hands on hips



MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 12 5/22/24 7:32 AM

DYNAMIC ACTIVITY

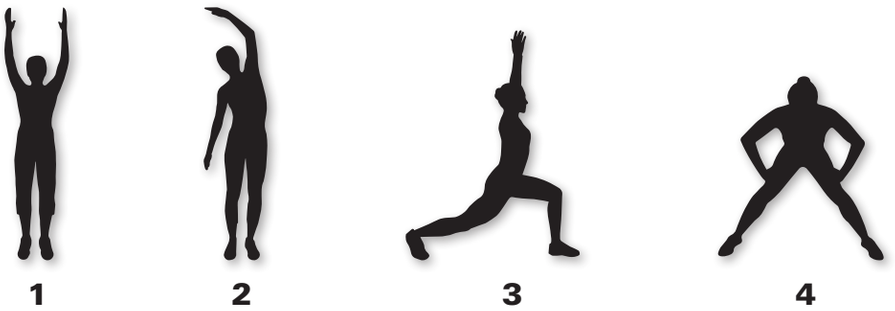
These movements challenge participants to dynamically shift their bodyweight using momentum. To facilitate this process, instructors should demonstrate the sequence using partial ranges of motion first, then show the full expression of the movement as a goal to work toward, not an expectation. Instructors may also emphasize that joints do not need to be fully extended, keeping a slight bend for all movements. Alternate left and right sides, completing the first exercise (marching steps) for at least 30 seconds to elevate the heart rate. Then complete all subsequent movements for 4–8 repetitions per side.

1. **High-knee marching steps:** starting low, alternating arms and legs, coordinating the opposite arm with the movement
2. **Inside taps:** lifting the leg while flexing and abducting the knee, reaching toward the medial side of the foot with the opposing arm
3. **Outside taps:** lifting the leg while flexing the knee and everting the foot, reaching toward the lateral side of the foot with the arm
4. **Torso rotations:** allowing arms to swing with the momentum of a twist, shifting the weight to one side and pivoting the rear foot
5. **Hip hinge hamstring stretch:** with feet staggered, tip the torso forward while shifting the hips backward, and dorsiflex the forward foot briefly
6. **Step out to side lunge:** gradually widening the stance and sinking deeper with each repetition, with weight aligned over the ankle
7. **Rear lunge with arm raise:** maintaining a chest-forward posture, sweeping the arms forward (or upward as shown) while stepping back, sinking into the front leg



COOL-DOWN PROTOCOL

Repeat the movements as shown in the warm-up phase using a slower tempo to target flexibility and mobility. Stretches can be held up to 30 seconds. Encourage participants to take full breaths to enhance relaxation after the session. Positions 1, 2 and 3 will be familiar to participants as they are used in the warm-up, and position 4 is an opportunity to hip hinge and stretch the hamstrings and adductors. As with all MX4 Active movements, suggesting a third point of contact is helpful for those who lack stability. While participants are enjoying the cool-down, instructors may use the optional Enrichment Add-ons to draw attention to the benefits of exercise and suggest movements they may wish to try at home.



MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 13 5/22/24 7:32 AM

ENRICHMENT ADD-ONS

ENRICHMENT ADD-ON 1: PASSING ON EVIDENCE-BASED FINDINGS

For participants who are interested in learning about how exercise supports their goals for improved health, instructors may share summary statements provided below:

- Exercise programs that emphasize leg strength to support balance can reduce fall rates by at least 42%, according to an analysis of 44 clinical trials on more than nine thousand individuals.[23]
- The specific brain region that forms new memories is also the most sensitive to physical activity, and this area of the brain begins to grow after 6–12 weeks of regular exercise, helping you learn and remember. These improvements in size and function persist as long as the regular exercise habit is maintained.[24]
- A study that assessed brain size found that six months of regular exercise was sufficient to increase the total brain size in middle- to older-aged adults. Weight-bearing exercise that elevates your heart rate may be required, because a group that worked on flexibility alone did not experience brain size increases.[25]
- After six months of regular exercise, people improve their performance on tests that assess logical reasoning and the ability to pay attention.[26]
- Just three months of regular exercise significantly improves mood and reduces the symptoms of depression.[27]

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 14 5/22/24 7:32 AM

ENRICHMENT ADD-ON 2: HOMEWORK CHALLENGES

Homework Challenges complement MX4 Active movements and help participants build physical capacity on days they do not complete MX4 Active workouts. Homework Challenges should be selected based on participant capabilities. Instructors can demonstrate the movement at the end of the session, encouraging participants to share their experiences at the following session. These activities provide a common goal that can spur group discussion. Anchoring these behaviors to a daily task, such as before brushing teeth or before lunch, may help participants remember to incorporate these brief activities into their routine.

1. **Wall sit:** Participants should begin with a slight bend in their knees, positioning their back firmly against a wall, and work toward holding the position for 30 seconds. Participants can gradually sink lower, bending their knees up to 90 degrees as they gain strength.
2. **Modified plank:** With their body at a 45-degree angle and hands supporting themselves against a wall or counter-top, participants should maintain a tight core for 30 seconds.
3. **Seated hamstring stretch:** While seated on the ground, extend one foot in front of your body and spend at least 30 seconds taking deep breaths as you feel the stretch in your hamstring.
4. **Chest and shoulder stretch:** Positioning your arm against a wall or doorway, gently rotate away from the arm, holding the position for at least 20 seconds for each arm.
5. **Calf raises:** With a third point of contact, rock your weight to the front of your foot and elevate your heel, repeating the movement 10 times.
6. **Straight-leg hamstring stretch against a wall:** Participants should begin by sitting on the ground within a foot or two of a wall. They should lay down with their back against the ground so that both legs can be extended upward with their heels against the wall. Hold the position for up to one minute. They should work to close the gap between their sitting bones and the wall.
7. **Seated leg extensions:** 20 repetitions for each leg.
8. **Standing hamstring curls:** Using a third point of contact, shift your weight to one foot and pull your heel back toward your rear, completing 10 repetitions for each leg and keeping your knees stable.
9. **Alternating cross-body touches:** Participants should reach across your body to touch your shoulders for 20 repetitions.
10. **Foot strengtheners:** Participants should curl and extend their toes while barefoot, completing 10 repetitions for each foot.
11. **Set a breath challenge:** Participants should perform 10 deep breaths while seated.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 15 5/22/24 7:32 AM

MX4 ACTIVE SMALL GROUP ASSESSMENT

Each assessment is performed for 1 min. and score is recorded.
Rest and transition for 2 min. between assessments.

NAME:

DATE:

CARDIO TEST

MED BALL TOE TAPS
Participants should start with the ball on the ground in front of them. They should alternate legs, touching the top of the Med Ball / Slam Ball with toe taps and counting repetitions.

BALL USED:

 # OF REPS:

POWER TEST

BATTLE ROPE WAVES
Count repetitions by focusing on the path of the right arm during the alternating arm motions. Each movement of the hand from waist to shoulder height counts as one repetition.

HEIGHT OF WAVE USED:

 # OF REPS:

ENDURANCE TEST

BAND ROW
Participants should adjust the training handles between hip and chest height, attach band to vertical handle and hold the band with both hands. They should step backward until their arms are straight in and the band is taut. With a shoulder-width base stance, each repetition is earned by pulling the band toward their chest and their elbows behind them.

BAND USED:

 # OF REPS:

STRENGTH TEST

BODYWEIGHT SQUAT
With feet shoulder-width apart, participants should hold their arms in front or touch an optional third point of contact. Squat depths vary, but the range of motion should remain consistent by using a touch point at squat depth. Toll options include chair, Dynamax ball, horizontal bar or plyo box. Terminate the test if form is not maintained.

AVERAGE DISTANCE TO GROUND:

 # OF REPS:

WHY:

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 16 5/22/24 7:32 AM

MX4 ACTIVE WEEKLY PROGRAMS

Week 1 & 2

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SECONDS
WEEK 2: 60 SECONDS

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

Backward Walk

High Grip Sled Push

POWER - Suspension Straps

Alternating Reverse Lunge

Low Row

Hip Drop (10)



ENDURANCE - Med Ball / Slam Ball

Toe Taps

Rainbow Ground Slams

High Knee March

STRENGTH - Band

Skaters

Band Halos

Squat to Press

Week 3 & 4

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SECONDS
WEEK 2: 60 SECONDS

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26–30 SPM

Underhand Grip,
Light 26–30 SPM

Overhand Grip,
Heavy 22–25 SPM

POWER - Battle Ropes

Snakes with Squat

Waves

Squat to Lateral Raise



ENDURANCE - Connexus Step+

Toe Taps

Straddle Toe Taps

Downhill Single-leg Walk Over,
Long Axis (5)

STRENGTH - Suspension Straps

Assisted Squat to Toes

Chest Press

Alternating Crossing Lunge

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 17 5/22/24 7:32 AM

Week 5 & 6

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride at medium effort

Ride at medium effort

Ride at medium effort

POWER - Plyo Box

Toe Taps

Alternating Seated Overhead Press with Very Light Weight or No Weight

Mountain Climbers



ENDURANCE - Dumbbells

Alternating Goblet Lunge

Split Row (5)

Hang to Shrug with Calf Raise

STRENGTH - Band

Two-step Lateral Step Out or Shuffle (10)

Standing High to Low Chops (5)

Squat to Row

Week 7 & 8

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

Backward Walk

High Grip Sled Push

POWER - Rope

Waves with Alternating Reverse Lunge

Single-arm Snake (10)

Snakes with Squat



ENDURANCE - Connexus Step+

Butt Kicks (5)

Dips or Static Hold

Cross-body Mountain Climbers

STRENGTH - Dumbbells

Alternating Lateral Lunge

Lateral Raises with Very Light (2 or 5-lb) Weights

Goblet Squat

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 18 5/22/24 7:32 AM

Week 9 & 10
W/R: 60:30
TEMPO: WEEK 1: 2-0-2 WEEK 2: 2-1-0
TEACH EXERCISES: 2 MIN.
WARMUP: 6–10 MIN.
TRANSITION: WEEK 1: 90 SEC. WEEK 2: 60 SEC.
WORKOUT: ~20 MIN.
GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26-30 SPM

Underhand Grip,
Heavy 22-25 SPM

Overhand Grip,
Light 26-30 SPM

POWER - Suspension Straps

Alternating Skater Squat

T-ups

Squat to High Row



ENDURANCE - Med Ball / Slam Ball

Lateral Toe Taps

Front Raise

Wood Chops (5)

STRENGTH - Band

Back Pedal

Face Pull

Single-arm Chest Press (10)

Week 11 & 12
W/R: 60:30
TEMPO: WEEK 1: 2-0-2 WEEK 2: 2-1-0
TEACH EXERCISES: 2 MIN.
WARMUP: 6–10 MIN.
TRANSITION: WEEK 1: 90 SEC. WEEK 2: 60 SEC.
WORKOUT: ~20 MIN.
GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

Backward Walk

High Grip Sled Push

POWER - Rope

Isometric Squat Waves

Single-arm Snake (10)

Squat to Lateral Raise



ENDURANCE - Connexus Step+

Back-to-front Foot Rock (5)

Dips or Static Hold

Sit to Stand Straddle Squat

STRENGTH - Suspension Straps

Alternating Reverse Lunge

High Row

Wall Slides

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 19 5/22/24 7:32 AM

Week 13 & 14

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride at medium effort

Ride at medium effort

Ride at medium effort

POWER - Plyo Box

Toe Taps

Alternating Seated Overhead Press with Very Light Weight or No Weight

Mountain Climbers



ENDURANCE - Med Ball / Slam Ball

Squat

Rainbow Ground Slams

High Knee March

STRENGTH - Band

Resisted Alternating Lunge

Hammer Curls

Two-step Lateral Step Out or Shuffle (10)

Week 15 & 16

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

High Grip Sled Push

Backward Walk

POWER - Rope

Waves (Small) with Alternating Reverse Lunge

Waves (Big)

Snake with Squats



ENDURANCE - Connexus Step+

Bodyweight Squat

Rotational Chop with Balance Board (5)

Alternating Step-up

STRENGTH - Dumbbells

Squat to Curl

Split Row (5)

Push Press

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 20 5/22/24 7:32 AM

Week 17 & 18
W/R: 60:30
TEMPO: WEEK 1: 2-0-2 WEEK 2: 2-1-0
TEACH EXERCISES: 2 MIN.
WARMUP: 6–10 MIN.
TRANSITION: WEEK 1: 90 SEC. WEEK 2: 60 SEC.
WORKOUT: ~20 MIN.
GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26-30 SPM

Underhand Grip,
Heavy 22-25 SPM

Overhand Grip,
Light 26-30 SPM

POWER - Suspension Straps

Squat to Low Row

Chest Press

Wall Slides



ENDURANCE - Dumbbells

Alternating Lateral Lunge

Bicep Curl

Chops (5)

STRENGTH - Band

Back Pedal

Lateral Pull Downs

Squat to Press

Week 19 & 20
W/R: 60:30
TEMPO: WEEK 1: 2-0-2 WEEK 2: 2-1-0
TEACH EXERCISES: 2 MIN.
WARMUP: 6–10 MIN.
TRANSITION: WEEK 1: 90 SEC. WEEK 2: 60 SEC.
WORKOUT: ~20 MIN.
GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

Backward Walk

High grip Sled Push

POWER - Rope

Single-arm Snake (10)

Waves

Squat to Lateral Raise



ENDURANCE - Connexus Step+

Alternating Step-up

Standing Chest Press
with Balance Board

Straddle Toe Taps

STRENGTH - Suspension Straps

Alternating Reverse Lunge

Hip Drop (10)

Squat to Row

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 21 5/22/24 7:32 AM

Week 21 & 22

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride at medium effort

Ride at medium effort

Ride at medium effort

POWER - Suspension Straps

Alternating Reverse Lunge

T-ups

Hip Drop (10)



ENDURANCE - Med Ball / Slam Ball

High Knee March

Standing Chest Press

Alternating Lunge with Rotation

STRENGTH - Band

Skaters

Bicep Curl

Squat to Row

Week 23 & 24

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

High Grip Sled Push

Backward Walk

Walk / Jog

POWER - Rope

Snakes with Squat

Waves

Squat to Lateral Raise



ENDURANCE - Connexus Step+

Back-to-front Foot Rock (5)

Bicep Curl with Balance Board

Sit to Stand Straddle Squat

STRENGTH - Suspension Straps

Alternating Reverse Squat

T-ups

Squat to High Row

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 22 5/22/24 7:32 AM

Week 25 & 26

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26-30 SPM

Underhand Grip,
Light 26-30 SPM

Overhand Grip,
Heavy 22-25 SPM

POWER - Suspension Straps

Alternating Reverse Lunge

Low Row

Hip Drop (10)



ENDURANCE - Med Ball / Slam Ball

Lateral Toe Taps

Standing Chest Press

Wood Chops (5)

STRENGTH - Band

Skaters

Band Halos

Squat to Press

Week 27 & 28

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

Backward Walk

High Grip Sled Push

POWER - Rope

Isometric Squat Waves

Single-arm Snake (10)

Waves



ENDURANCE - Connexus Step+

Toe Taps

Dip or Static Hold

Single-leg Walk Over,
Long Axis (5)

STRENGTH - Suspension Straps

Alternating Reverse Lunge

High Rows

Wall Slides

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 23 5/22/24 7:32 AM

Week 29 & 30

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride at medium effort

Ride at medium effort

Ride at medium effort



POWER - Plyo Box

Toe Taps

Elevated Push-up

Bump Squats

ENDURANCE - Dumbbells

Alternating Goblet Lunge

Split Row (5)

Hang to Shrug with Calf Raise

STRENGTH - Band

Two-step Lateral Step Out or Shuffle (10)

Standing High to Low Chops (5)

Squat to Row

Week 31 & 32

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

High Grip Sled Push

Backward Walk



POWER - Rope

Snakes with Squat

Waves

Squat to Lateral Raise

ENDURANCE - Connexus Step+

End to End

Standing Chest Press with Balance Board

Rotational Chop with Balance Board (5)

STRENGTH - Dumbbells

Alternating Lateral Lunge

Lateral Raise with Very Light (2 or 5-lb) Weights

Goblet Squat

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 24 5/22/24 7:32 AM

Week 33 & 34

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26-30 SPM

Underhand Grip,
Light 26-30 SPM

Overhand Grip,
Heavy 22-25 SPM

POWER - Suspension Straps

Assisted Squat to Toes

Chest Press

Alternating Reverse Lunge



ENDURANCE - Med Ball / Slam Ball

Lateral Toe Taps

Front Raise

Wood Chops (5)

STRENGTH - Band

Skaters

Band Halos

Squat to Press

Week 35 & 36

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

High Grip Sled Push

Backward Walk

POWER - Rope

Alternating Lateral Step Out
with Small Waves

Waves (Big)

Snakes with Squat



ENDURANCE - Connexus Step+

Toe Taps

Dip or Static Hold

Straddle Toe Taps

STRENGTH - Suspension Straps

Alternating Reverse Lunge

T-ups

Squat to Row

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 25 5/22/24 7:32 AM

Week 37 & 38

W/R: 60:30
TEMPO: WEEK 1: 2-0-2 WEEK 2: 2-1-0
TEACH EXERCISES: 2 MIN.
WARMUP: 6–10 MIN.
TRANSITION: WEEK 1: 90 SEC. WEEK 2: 60 SEC.
WORKOUT: ~20 MIN.
GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride at medium effort

Ride at medium effort

Ride at medium effort



POWER - Suspension Straps

Assisted Squat to Toes

Bicep Curls

Hip Drop (10)

ENDURANCE - Med Ball / Slam Ball

High Knee March

Front Raise

Rainbow Ground Slams

STRENGTH - Band

Skaters

Hip Hinge to Face Pull

Standing High to Low Chops (5)

Week 39 & 40

W/R: 60:30
TEMPO: WEEK 1: 2-0-2 WEEK 2: 2-1-0
TEACH EXERCISES: 2 MIN.
WARMUP: 6–10 MIN.
TRANSITION: WEEK 1: 90 SEC. WEEK 2: 60 SEC.
WORKOUT: ~20 MIN.
GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

Backward Walk

High Grip Sled Push



POWER - Rope

Reverse Lunge Hold and Small Waves

Waves (Big)

Snakes with Squats

ENDURANCE - Connexus Step+

Back-to-front Foot Rock (5)

Rotational Chops with Balance Board (5)

Sit to Stand Straddle Squat

STRENGTH - Suspension Straps

Alternating Reverse Lunge

Chest Press

Squat to Row

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 26 5/22/24 7:32 AM

Week 41 & 42

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26-30 SPM

Underhand Grip,
Light 26-30 SPM

Overhand Grip,
Heavy 22-25 SPM

POWER - Plyo Box

Toe Taps

Alternating Seated Overhead Press with Very Light Weight or No Weight

Mountain Climbers



ENDURANCE - Dumbbells

Alternating Lunge

Bicep Curl

Squat with Alternating Cross-body Press

STRENGTH - Band

Back Pedal

Tricep Press

Skaters

Week 43 & 44

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

High Grip Sled Push

Backward Walk

Walk / Jog

POWER - Rope

Snakes with Squat

Waves

Squat to Lateral Raise



ENDURANCE - Connexus Step+

End to End

Rotational Chop with Balance Board (5)

Standing Chest Press with Balance Board

STRENGTH - Dumbbells

Alternating Lateral Lunge

Split Row (5)

Chops (5)

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 27 5/22/24 7:32 AM

Week 45 & 46

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride with medium effort

Ride with medium effort

Ride with medium effort

POWER - Suspension Straps

Alternating Reverse Lunge

T-ups

Squat to High Row



ENDURANCE - Med Ball / Slam Ball

Lateral Toe Taps

Front Raise

Rainbow Ground Slams

STRENGTH - Band

Back Pedal

Face Pull

Single-arm Chest Press (10)

Week 47 & 48

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - S-Drive

Walk / Jog

High Grip Sled Push

Backward Walk

POWER - Rope

Isometric Squat Waves

Single-arm Snake (10)

Squat to Lateral Raise



ENDURANCE - Connexus Step+

Toe Taps

Dip or Static Hold

Straddle Toe Taps

STRENGTH - Suspension Straps

Assisted Squat to Toes

Bicep Curls

Hip Drop (10)

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 28 5/22/24 7:32 AM

Week 49 & 50

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Total Body Cycle

Ride with medium effort

Ride with medium effort

Ride with medium effort

POWER - Suspension Straps

Alternating Reverse Lunge

T-ups

Hip Drop (10)



ENDURANCE - Med Ball / Slam Ball

High Knee March

Standing Chest Press

Alternating Lunge with Rotation

STRENGTH - Band

Skaters

Single Arm Chest Press (10)

Squat to Row

Week 51 & 52

W/R: 60:30

TEMPO:
WEEK 1: 2-0-2
WEEK 2: 2-1-0

TEACH EXERCISES: 2 MIN.

WARMUP: 6–10 MIN.

TRANSITION:
WEEK 1: 90 SEC.
WEEK 2: 60 SEC.

WORKOUT: ~20 MIN.

GROUP STRETCH: 6–10 MIN.

CARDIO - Rower

Overhand Grip,
Light 26–30 SPM

Underhand Grip,
Light 26–30 SPM

Overhand Grip,
Heavy 22–25 SPM

POWER - Rope

Alternating Lateral Step Out
with Small Waves

Single-arm Snake (10)

Squat to Lateral Raise



ENDURANCE - Connexus Step+

Toe Taps

Rotational Chop with
Balance Board (5)

Single-leg Walk Over,
Long Axis (5)

STRENGTH - Suspension Straps

Alternating Reverse Lunge

High Rows

Wall Slides

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 29 5/22/24 7:32 AM

REFERENCES

1. Brill PA, Matthews M, Mason J, Davis D, Mustafa T & Macera C. Improving functional performance through a group-based free weight strength training program in residents of two assisted living communities. Physical and Occupational Therapy in Geriatrics (1998) 15(3): 57-69.
2. Mertz KJ, Lee D, Sui X, Powell KE & Blair SN. Falls among adults: The association of cardiorespiratory fitness and physical activity with walking-related falls. American Journal of Preventive Medicine (2010) 39(1): 15-24.
3. Brown AK, Liu-Ambrose T, Tate R & Lord SR. The effect of group-based exercise on cognitive performance and mood in seniors residing in intermediate care and self-care retirement facilities: A randomised controlled trial. British Journal of Sports Medicine (2009) 43: 608-614.
4. Jernigan TL, Archibald SL, Fenema-Notestine C, Gamst AC, Stout JC, Bonner J & Hesselink JR. Effects of age on tissues and regions of the cerebrum and cerebellum. Neurobiology of Aging (2001) 22: 581–594.
5. Colcombe S & Kramer AF. Fitness effects on the cognitive function of older adults: A meta-analytic study. Psychological Science (2003) 4: 125–130.
6. Ahlskog JE, Geda YE, Graff-Radford NR & Petersen RC. Physical exercise as a preventive or disease-modifying treatment of dementia and brain aging. Mayo Clinic Proceedings (2011) 86(9): 876-884.
7. Northey JM, Cherbuin N, Pumpa KL, Smee DJ & Rattray B. Exercise interventions for cognitive function in adults older than 50: A systematic review with meta-analysis. British Journal of Sports Medicine (2017) 1–9.
8. Pereira AC, Huddleston DE, Brickman AM, Sosunov AA, Hen R, McKhann GM, Sloan R, Gage FH, Brown TR, & Small SA. An in vivo correlate of exercise-induced neurogenesis in the adult dentate gyrus. Proc Natl Acad Sci USA (2007) 104(13): 5638-43.
9. Erickson KI, Prakash RS, Voss MW, Chaddock L, Hu L, Morris KS, White SM, Wójcicki TR, McAuley E & Kramer AF. Aerobic fitness is associated with hippocampal volume in elderly humans. Hippocampus (2009) 19(10): 1030-9.
10. Puetz TW. Physical activity and feelings of energy and fatigue: Epidemiological evidence. Sports Med (2006) 36(9): 767-780.
11. Hickie IB, Hooker AW, Hadzi-Pavlovic D, Bennett BK, Wilson AJ & Lloyd AR. Fatigue in selected primary care settings: Sociodemographic and psychiatric correlates. Med J Aust (1996) 164: 585–588.
12. Menshikova EV, Ritov VB, Fairfull L, Ferrell RE, Kelley DE, & Goodpaster BH. Effects of exercise on mitochondrial content and function in aging human skeletal muscle. The Journals of Gerontology: Series A (2006) 61(6): 534–540.
13. Robinson MM, Dasari S, Konopka AR, Johnson ML, Manjunatha S, Esponda RR, Carter RE, Lanza IR & Nair KS. Enhanced protein translation underlies improved metabolic and physical adaptations to different exercise training modes in young and old humans. Cell Metabolism (2017) 25(3): 581-92.
14. Bayod S, Guzmán-Brambila C, Sanchez-Roige S, Lalanza JF, Kaliman P, Ortuño-Sahagun D, Escorihuela RM & Pallàs M. Voluntary exercise promotes beneficial anti-aging mechanisms in SAMP8 female brain. J Mol Neurosci (2015) 55: 525-532.
15. Marques-Aleixo I, Santos-Alves E, Balça MM, Rizo-Roca D, Moreira PI, Oliveira PJ, Magalhães J & Ascensão A. Physical exercise improves brain cortex and cerebellum mitochondrial bioenergetics and alters apoptotic, dynamic and auto(mito)phagy markers. Neuroscience (2015) 301: 480-95.
16. Erickson KI, Prakash RS, Voss MW, Chaddock L, Heo S, McLaren M, Pence BD, Martin SA, Vieira VJ, Woods JA, McAuley E & Kramer AF. Brain-Derived neurotrophic factor is associated with age-related decline in hippocampal volume. J Neurosci. (2010) 30: 5368–5375.
17. Erickson KI, Voss MW, Prakash RS, Basak C, Szabo A, Chaddock L, Kim JS, Heo S, Alves H, White SM, Wojcicki TR, Mailey E, Vieira VJ, Martin SA, Pence BD, Woods JA, McAuley E & Kramer AF. Exercise training increases size of hippocampus and improves memory. Proc Natl Acad Sci USA (2011) 108: 3017–3022.
18. Polyakova M, Stuke K, Schuemberg K, Mueller K, Schoenknecht P & Schroeter ML. BDNF as a biomarker for successful treatment of mood disorders: A systematic & quantitative meta-analysis. J Affect Disorders (2015) 174: 432-40.
19. Craft LL & Perna FM. The benefits of exercise for the clinically depressed. Prim Care Companion J Clin Psychiatry (2004) 6(3): 104–111.
20. Caldwell HAE, Bryan AD & Hagger MS. What keeps a body moving? The brain-derived neurotrophic factor val66met polymorphism and intrinsic motivation to exercise in humans. J Behav Med (2014) 37(6): 1180-92.
21. Ziere G, Dieleman JP, Hofman A, Pols HA, van der Cammen TJ & Stricker BH. Polypharmacy and falls in the middle age and elderly population. Br J Clin Pharmacol (2006) 61(2): 218-23.
22. Goman AM & Lin FR. Prevalence of hearing loss by severity in the United States. American Journal of Public Health (2016) 106(10): 1820-1822.
23. Sherrington C, Whitney J, Lord S, Herbert R, Cumming RG & Close JC. Effective exercise for the prevention of falls- a systematic review and meta-analysis. Journal of the American Geriatrics Society (2008) 56(12): 2234-2243.
24. Thomas AG, Dennis A, Rawlings NB, Stagg CJ, Matthews L, Morris M, Kolind SH, Foxley S, Jenkinson M, Nichols TE, Dawes H, Bandettini PA & Johansen-Berg H. Multi-modal characterization of rapid anterior hippocampal volume increase associated with aerobic exercise. NeuroImage (2016) 1(131): 162-170.
25. Colcombe SJ, Erickson KI, Scalf PE, Kim JS, Prakash R, McAuley E, Elavsky S, Marquez DX, Hu L & Kramer AF. Aerobic exercise training increases brain volume in aging humans. J Gerontol A Biol Sci Med Sci (2006) 61(11): 1166-1170.
26. Baniqued PL, Gallen CL, Voss MW, Burzynska AZ, Wong CN, Cooke GE, Duffy K, Fanning J, Ehlers DK, Salerno EA, Aguinago S, McAuley E, Kramer AF & D'Esposito M. Brain network modularity predicts exercise-related executive function gains in older adults. Front Aging Neuroscience (2018) 9(426): 1-17.
27. Huang TT, Liu CB, Tsai YH, Chin YF & Wong CH. Physical fitness exercise versus cognitive behavior therapy on reducing the depressive symptoms among community-dwelling elderly adults: A randomized controlled trial. Int J Nurs Stud (2015) 52(10): 1542-1552.
28. Bischoff HA, Stähelin HB, Monsch AU, Iversen MD, Weyh A, von Dechend M, Akos R, Conzelmann M, Dick W & Theiler R. Identifying a cutoff point for normal mobility: A comparison of the timed 'Up & Go' test in community dwelling and institutionalized elderly women. Age and Ageing (2003) 32(3): 315–320.

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 30 5/22/24 7:32 AM

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 31 5/22/24 7:32 AM

MATRIX

S24.01 A

MX24_TRAINING_INT-NA MX4 Active trainer manual_S24-01 A_v4.indd 32 5/22/24 7:32 AM