

Supplemental Digital Content 1: Exercise Descriptions for FIT Routines 1 and 2

	Exercise	Description
Round 1 Exercises	Lunges	With feet at hips-distance width, one leg was placed 3-4 feet in front of the other. Both feet faced forward with the front foot planted and the heel of the back foot lifted. Participants bent both knees to lower the body until both knees reached a 90 degree angle, and then returned to starting position.
	Lunges – front foot on step	A lunge was performed (as described above) with the front foot placed on top of the step platform.
	Lunges – back foot on step	A lunge was performed (as described above) with the back foot placed on top of the step platform.
	Squats	Feet were placed hips-distance width apart or slightly wider with toes facing forward. Participants bent their knees to lower the body into a squat position, pushing the hips back while keeping the chest lifted. Participants were instructed to go as low as possible, without exceeding a 90 degree angle in the knees, and then they returned to starting position.
	Squat jumps	A squat was performed (as described above) with participants performing a jump as they lifted out of the squat position.
	Skaters	Participants leaped to the right side, landed on the right foot, bringing the left foot behind the right ankle while keeping the left foot lifted. Then they leaped to the left, landing on the left foot with the right foot lifted.
	Ski jumps – side to side	Participants hopped side to side with both feet landing at the same time.
	Power jumps	Participants started with feet close together, squatted and jumped as high as possible while landing with their feet in a wide stance. Then they repeated the jump movement and landed with feet close together again.
	Modified burpees	With the feet slightly wider than hips-distance apart, participants squatted, placed their hands on the floor, stepped one foot back followed by the other foot into a plank position, then walked both feet back to a squat position, and stood up.
	Burpees	With the feet slightly wider than hips-distance apart, participants squatted, placed their hands on the floor, jumped the legs back to a plank, jumped the legs back to a squat position, and stood up.
	Jumping jacks	Participants started with feet together and arms by their side. They jumped both feet wide while bringing their hands together above their head, and then jumped feet together again.

Round 2 Exercises	Bent over rows	Participants started with feet hips-distance apart while holding the dumbbells in a neutral grip. While keeping the back straight, they hinged forward at the hips, allowing the arms to extend towards the floor. With the upper body stationary, they pulled the dumbbells towards the ribs, while retracting the shoulder blades, and then lowered the dumbbells to starting position.
	Up-up-down-down on step	Participants stood over the middle of the step, with feet on the floor in a straddled position, with the step between their legs. They stepped up onto the step with the right foot, followed by the left foot. Then the right foot stepped off the side of the step and the left foot stepped off the other side of the step to return to starting position.
	Up-up, jump down on step	Starting position was the same as the up-up-down-down. Participants stepped up onto the step with the right foot, followed by the left foot. Then, they jumped off the step, with both feet landing on either side of the step into the starting position, landing ball-to-heel in a squat position.
	Up-up, jump down 2x, burpee	Participants performed the up-up, jump down twice, and then performed one burpee by placing their hands on the step, jumping the feet back to a wide plank, jumping the feet back to the straddled position on either side of the step, and standing up.
	Push-ups on knees	Participants started in a push-up position with hands slightly wider than shoulders and knees on the floor. They lowered the chest until elbows reached a 90 degree angle, and returned to starting position.
	Push-ups on feet	A push-up was performed as described above with participants balanced on the balls of the feet.
	Corner knees on step	Participants began behind the step with feet flat on the floor. They stepped the right foot to the left corner of the step and lifted the left knee. They replaced the left foot followed by the right on the floor and repeated the move on the other side, leading with the left foot.
	Mountain climbers	Participants began in a plank position with shoulders directly over the wrists. While in the plank position, they pulled one knee to the chest. Then they jumped to switch their feet to bring the opposite knee to the chest. They alternated legs as fast as possible while keeping proper form.
	Upright Rows	Participants started with feet hips-distance apart and knees slightly bent with arms extended, holding the dumbbells in front of the thighs. While keeping the dumbbells close to the body, they lifted the dumbbells up to the chest and then returned to starting position.
	Lateral movement over the top of the step	Participants began standing on the floor to the right of the step. They hopped laterally onto the step, with the left foot followed by the right. Then hopped laterally off the left side of the step, left foot followed by right. They then hopped laterally across the step to return to starting position.
	Shuffles	Participants started in a staggered stance with the right foot in front of the other. They jumped and switched legs so the left foot was in front, and continued this movement as quickly as possible.
	Plank Jacks	Participants began in a plank position on their hands and feet. While maintaining the plank position, they jumped both legs out wide and then jumped both legs together.

Round 3 Exercises	Biceps curls	Participants stood with feet hips-distance-width apart with arms extended, holding the dumbbells with an underhand grip, with palms in front of the thighs. They then performed a biceps curl by flexing the elbow to bring dumbbells toward shoulders and then returned to starting position.
	Biceps curls+single leg deadlifts	Participants performed a set of biceps curls followed by single leg deadlifts. For the deadlifts, they extended the left arm while balancing on the right leg. With the knee of the base leg slightly bent, participants lowered the upper body, hinging from the hips, and extended the left leg back while bringing the left hand towards the floor. After reaching a position where the upper body was parallel the floor, they returned to starting position.
	Basic on step	Participants began standing behind the step. They stepped onto the step with the right foot, followed by the left foot. Then they stepped off the step with the right foot followed by the left.
	Basic run on step	Participants did the same steps as described in the “Basic on the Step,” but instead of stepping on and off the step, they ran on and off the step.
	Triceps kickbacks	Participants began standing with knees bent and dumbbells in both hands. While keeping the back straight, they hinged forward at the hips and secured the elbows to the side of the body. To perform the kickback, they extended the elbows, moving the dumbbells behind the body until the elbows were almost fully extended, and then flexed the elbows to return to starting position.
	Triceps push-ups on knees	Participants started in a narrow push-up position with hands on the step, wrists directly under the shoulders and knees on the floor. Keeping the elbows tight to the body, they lowered their chest to the floor, stopping when elbows reached a 90 degree angle, and returned to starting position.
	Knee lifts	In a standing position with arms raised overhead, participants performed alternating knee lifts while pulling the hands down to the hips with each knee lift. These were kept low impact because one foot was always on the floor while the opposite knee was lifted.
	Jog in place	Participants jogged in place, bringing the heels toward the glutes.
	High impact knees	Participants performed alternating knee lifts. These were made high impact because the participants alternated knees quickly as if they were running so that the knee was lifted before the opposite foot landed on the floor.
	Hammer curls	These were performed like the biceps curl, but with the hands in a neutral position.
	Triceps dips	Two risers were placed under the step. Participants placed palms on the edge of the step, with their hips in front of the step and legs extended. They performed a dip by bending their elbows to lower the body towards the floor until the hips almost touched the floor. Then, they extended their arms to return to starting position.

Round 4 Exercises	Planks on knees	Participants held a plank position, balancing on their forearms and knees.
	Planks on feet	Participants held a plank position, balancing on their forearms and toes.
	Spinal balance	Participants started in a prone position on their hands and knees, making sure shoulders were above the wrists and hips were above the knees. They extended the right arm in front while simultaneously extending the left leg. They replaced the arm and leg and switched to the other side.
	Crunches/Ball pass with stability ball	Participants either performed crunches or a ball pass, where they began in a supine position and passed the stability ball from the hands to between the ankles. Those with osteopenia and osteoporosis were instructed to do the ball pass to minimize spinal flexion.
	Hamstring curls with stability ball	Participants began in a supine position with heels elevated on the stability ball. While pressing the hands into the floor, they lifted the hips, flexed the knees to draw the ball towards the glutes, extended the knees, and lowered the hips to the floor.
	Hip lifts with stability ball	Participants began in a supine position with heels elevated on the stability ball and the knees bent at a 90 degree angle. While pressing the hands into the floor, they lifted the hips and lowered them back down to the floor.