

## Exercise Tiers

**\*The goal is to safely improve your physical conditioning. Start slowly and listen to your body. Stop if you feel tired. All these exercises are interval training, bursts of activity followed by rest periods or slowdowns. Done correctly, none of these exercises should induce more than a gentle fatigue. We want to completely avoid PEM. Begin with tier 1 and progress as you feel confident in your ability to move on. Theoretically, you will increase your core energy as you are able to exercise efficiently and safely. Efficient exercise requires adequate fuel and hydration, strong muscles, sufficient oxygen intake, and an appropriate balance of activity and rest. Naturally, it is important to pace effectively in your other daily activities.**

### **Tier 1- Stretching exercises or yoga.**

Find techniques by searching YouTube for terms such as bed stretches, chair stretching exercises, yoga for beginners, gentle yoga, or bed yoga. Find what looks good to you and begin slowly. Make sure to rest long enough between stretches and listen to your body.

### **Tier 2 – Isometrics**

Isometrics are contractions of the muscles, creating tension but not completing the action. Tension for ME/CFS people should only be to a two-count. Then rest 3 to 10 seconds. Stop if you feel tired.

1. Lie in bed on your back and push the palms of your hands into the bed.
2. Hold arms out with elbows bent. Press palms together
3. Put one hand on the palm-side wrist of the other and pull your arm up. Then switch to the other arm.
4. Lie on your belly and push up
5. Sit in a chair, hold the sides of the chair, and push up with your legs
6. Stand up 2 or 3 feet from a wall. Place your hands on the wall and push out.

### **Tier 3 – Easy leg exercises**

All these leg exercises should be interval training. This means taking intermittent rests every 5 to 30 seconds of activity, depending upon fatigue, muscle strength, and whether you feel out of breath. Rest periods will usually last 10 to 60 seconds.

1. Heel raises. Stand up and place both hands on the wall. Raise your heel so you are standing on your toes. Release and repeat.
2. Walking in place. Lift your knees high and swing your arms high. Stop and rest after 5 to 10 steps, then repeat. The number of steps between rests can be adjusted as you feel safer with more steps.
3. Indian dance (bounce lightly on one foot twice, switch to the other foot, and repeat)
4. Knee bobs (Like a knee bend, but only go down  $\frac{1}{4}$  of the way).

**\*As you move into these last four tiers, bear in mind that muscles need time to repair. As you do vigorous exercises that tear down muscle tissue, you will need rest days. Therefore, if you lift weights, do the same muscle groups only every other day. With aerobic exercise like jogging**

or biking, do only 50% or 75% of your full workout on the second day. You can accomplish this by reducing both distance and intensity.

**Tier 4 - Exercise machines (These are optional. If you do not have access to an exercise machine, you could bike outdoors using interval training principles or go to tier 6 - walking outdoors)**

It is easy to regulate your energy while using exercise machines. You can stop whenever you like, and some are seated. This activity should be interval training with frequent rest periods or slowdowns. Popular types are recumbent bikes, stationary bikes, elliptical machines, and treadmills. Do not remain on the easiest settings. You will want some resistance to build muscle, but not too much. Find your sweet spot!

**Tier 5 – Weightlifting (This can be added to the aerobic exercises you are already doing)**

Start small. Use an amount of weight that you can easily lift 20 or 30 times. Each movement is called a repetition. If you lift a 10-pound weight 20 times, that will be 20 “repetitions.” If you take a rest, and then do 20 repetitions again, you will have performed two “sets” of that exercise. Take a sufficient rest period after each set.

**Tier 6 - Walking outside- intersperse slow and fast walking**

Choose a distance that seems really easy to handle. To perform interval training, alternate between walking at a normal rate and walking fast. A suggested starting ratio is to walk at a normal rate for 90% of the distance and to walk fast for 10% of the distance. So, to begin, you might walk fast for 5 steps, followed by walking at a more normal rate for 45 steps. Then, repeat the sequence till you finish. You can increase both the ratio and the distance as you feel more fit.

**Tier 7 - Walk/jogging- intersperse walking and jogging**

Following the same protocol as in tier 6, substitute jogging for fast walking. So, now you are alternating between normal walking and jogging. Best to begin with a 90/10 ratio, walking 90% of the distance, jogging 10% of the distance.

**\*Swimming can also be effective using the same principles.**