Kinetic Potential's

Sit Less:

Strategies and Exercises to help you get more activity in your day

We’ve all heard it

Sitting is the new smoking. But I would go one step further and say that being sedentary is the new smoking. The negative health effects of an inactive lifestyle are numerous and will be briefly covered in the coming moments. But maybe you’ve already got a standing desk, or a convertible desk. I applaud you for taking the first initiative in sitting less. But what if just standing was not enough to mitigate the cost to your health of being inactive? Is the longest walk of your day to and from your car to your desk, or to the break room for lunch?

The average American takes fewer than 4,700 steps a day. This includes all types of people - active and inactive, and everything in between. This falls well short of the recommended 10,000 steps per day, or what people now consider “active”. We will dive deeper into this in one second. But the main point is that most people could sneak a little more activity into their life.

A (not so) Dynamic Duo

The problem? The (not so) dynamic duo of seats and screens. As our lifestyles have incorporated more technology, we have shifted to a life of sitting in front of computers and other screens for school, work, and entertainment. Gone are the days of going outside to play, explore, and move!

Effects of an Inactive Lifestyle

- **Burn fewer calories**
- **Decreased bone density leading to Osteopenia and Osteoporosis**
- **Weakened Immune Response**

An inactive lifestyle also increases your risk for the following:

- **High blood pressure**
- **Stroke**
- **Heart attack**
- **Depression**
- **Anxiety**
- **High cholesterol**
- **Orthopedic Pain**

How much activity is enough?

The recommendation for 10,000 steps a day actually came out of a marketing campaign for a Japanese step counter in the 1960's. I can't make this stuff up folks. But this number has somehow ingrained itself into the ethos of the American healthcare system.

So are 10,000 enough? The short answer is, yes. This has actually been researched to find out at what point does mortality start to decrease as steps increase. Researchers have found that as steps/activity increases, mortality rates decrease. Basically, more activity means a lower likelihood that you will die from a health related implication.

The researchers found that the average American woman walks roughly 2,700 steps per day but there was a 41% decrease in mortality as that count went up to 4,400 (link). That basically means that by walking one more mile a day, you decrease your risk of dying by 41%.

But is there a number when increased activity becomes less effective? They found that at roughly 7,500 steps there was a leveling off of mortality rate. So, the 10,000 steps per day might be a little off for an activity recommendation, but I would never encourage people to just stop at 7,500 is they are able and wanting to do more. Also, remember that your activity does not have to be walking or running!

But what if I can't get away from my desk?

I know, being desk bound will severely limit your ability to get steps in. But steps are not the only activity that you need to seek out. There are many options to break up your sitting with stretches and exercises than can help reduce your risks for all those nasty conditions listed earlier, and can also help reduce the aches and pains of not moving your body. With minimal equipment, or no equipment at all, you can sneak some movement snacks into your work day.

Tendinous Creep:

Terrible name, Terrible effects

There is a phenomenon that exists in the body called tendinous creep. It’s got a terrible name, and even more terrible repercussions. The gist is that all it takes is 20 minutes of inactivity to begin stimulating a process that results in stiffer tendons and muscles. That’s right, 20 minutes. 20 minutes to start making those gains you got from stretching and exercising go away. This should emphasize the importance of getting up and moving throughout your day.

Say you sat in the car on the way to work for 30 minutes, have been sitting at work all day, and then sit in the car on the way home. How much adaptive shortening and tendinous creep has been occurring in your body? Here’s a quick anatomy lesson. Your hip flexors, that you keep short all day while sitting, attach to your lumbar spine. Here’s a quick physiology lesson. Your muscles have an elastic quality to them, meaning that if you keep a muscle shortened for a long time (ie sitting) they will adaptively stay short, and combined with tendinous creep will be much harder to stretch out. If you then go to stand, these muscles will actually pull your lumbar spine forward, resulting in compressed joints in your low back. This leads us into a discussion on an all too common condition these days: Lower Crossed Syndrome.

Lower Crossed Syndrome

LCS is the name for a group of impairments in the lower body. It is characterized by tightness of certain muscles, and weakness of certain muscles leading to a change in the baseline posture of the lumbar spine, pelvis, and hip joints. The crossed name exists because typically the muscles of the lower back, and anterior hip (hip flexors) are tight, and the core, and glutes are weak.

In most people, there exists a small amount of anterior pelvic tilt. If you imagine the pelvis as a bowl of soup, this means that there will be a little soup dripping out of the front edge of the bowl. The problem becomes when there is a lot of soup pouring out of the front of the bowl. This is the result of LCS! There will likely be an increase in the compressive forces in the lumbar spine, which only go up as we add exercise, walking, and lifting.

Tight	Weak
Lumbar paraspinals	Glutes
Quadratus lumborum	Abdominals
Psoas	Diaphragm
Iliacus	Obliques
TFL	
Rectus femoris	

Chart of tight and weak muscles associated with Lower Cross Syndrome

Upper Crossed Syndrome

UCS is the result of the same adaptive shortening and tendinous creep as Lower Crossed Syndrome, except it presents in the upper body. You will find tight and weak muscles on opposing sides of the upper body resulting in an increased rounding of the shoulders, and forward head posture. And although there is not much evidence that supports these postures being painful, there are definitely going to be changes in the way your body moves. A more rounded spine limits your ability to take deep breathes, put your arms over your head, or even create spinal rotation. All things we need for most athletic endeavors.

Tight	Weak
Suboccipitals	Deep Neck Flexors
Pecs	Rhomboids
Biceps	Mid Traps
Upper Trapezius	Lower Traps
Levator Scapula	Serratus Anterior
Sternocleidomastoid	

Chart of tight and weak muscles associated with Upper Cross Syndrome

So what can you do?

The good news is that you do not need to quit your job, or even get a stand up desk to make a significant impact on the way you feel and your overall health.

The following strategies and exercises work, as I have been recommending them for over a decade and I have seen their results. But what's one thing that I have noticed works the best out of all? Consistency.

Consistency is king. You may hate most of these exercises and tips. But if you find one thing that gets you moving a little more, and a few of the exercises sneak into your every day routine, you will be much better off.

The 30 Minute Rule

This is probably the most basic recommendation I can make, but probably the most important: Do not sit or stand at your desk for longer than 30 minutes.

That's right 30 minutes. As we talked about before, tendinous creep starts setting in after about 20 minutes. You're basically starting to hit save on whatever position you're in and your body starts to adapt, making it easier for you to maintain that position (the body loves efficiency, so if it can find a way to work less it will).

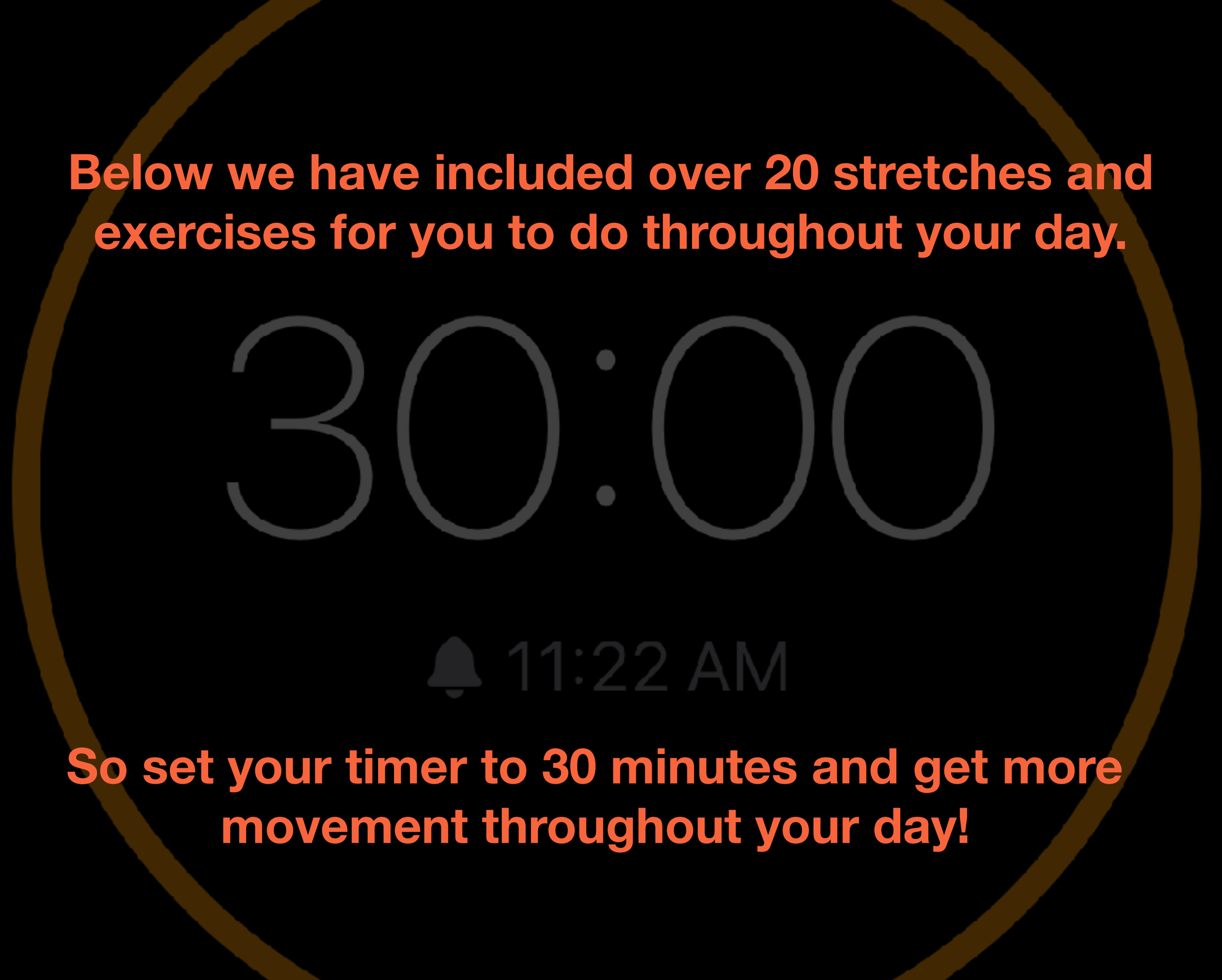
At the very least, set your phone's timer to go off every 30 minutes and change your position. If you're sitting, stand, or standing sit, or half kneel! At the most, get up and take a phone call while walking around the office, pacing in your cubicle, or take one minute to do one of the many stretches or exercises that follow.

How to get more activity in your day:

- Walk while brushing your teeth (2 times a day of course)
- Park as far away at work as you can
- Use half your lunch break to walk
- Take the stairs
- Use the bathroom on a different floor
- Make your in-person meetings walking meeting if possible
- Walk down every aisle of the grocery store even if you don’t need to
- **Exercise at your desk!**

Remember you’re trying to *average* more activity per day. Some days you’ll have less and certain day’s you’ll have more!

Below we have included over 20 stretches and exercises for you to do throughout your day.



So set your timer to 30 minutes and get more movement throughout your day!

Lower Body Exercises

- Figure 4 Posterior Hip Stretch
- Quad Stretch
- Standing Hip Flexor Stretch
- Calf Stretch
- Soleus Stretch
- Adductor Stretch
- Squats
- Split Squats
- Step Back Lunges
- Hip Hinges
- Single Leg Hinges
- Heel Raises

*Click Links for Videos

Upper Body Exercises

- Chin tucks
- Chin tuck with rotation
- Seated Cat Camel
- Scap Pinches
- Hands Behind Head Pec Stretch
- Anterior Shoulder Stretch
- Push ups
- Dips
- Tricep Stretch
- Upper Trap Stretch
- Egyptians
- Trunk Rotations
- Trunk Rotation with Holds

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