

Exercise Design

Your name: _____

The goal of this worksheet is to design simple workouts (**from start to finish, including warm up, varying your pace throughout, and cool down**) for each of the main physiological exercise targets.

Endurance-related movement (walking, cycling, jogging, swimming, rowing, etc.) target different energy systems with their frequency / week dependent on your goals:

- **ATP depletion to increase fat burning in muscle:** Intervals 1-2 min, pace > VO₂ max, strides for warm-up & cool-down, target is leveraging gene expression for fat burning
- **All energy systems:** Glucose & Krebs cycle (lactate & fat burning) with VO_{2max} low-intensity intervals (“strides”) 4-8 min at VO₂ max pace i.e. 10 min “race (fastest) pace”
- **At the shift from glucose- to fat-burning dominant:** Lactate “threshold pace” ~ 1 hr fastest pace done for 10-40 min to equalize all organ systems involved with energy and oxygen delivery targets whatever is most limiting in your body, broken conversation
- **Cardiovascular emphasis / easy pace:** Mainly fat burning **during** the exercise & best for heart, done at > 2 hr race pace for a 10-120+ min, during most of which you could hold a conversation (unless longer session brings you near fatigue)
- **Movement:** To slow instead of speed up the aging rate do activities as part of normal life that you could in theory maintain most of the day regardless of how long done

Define your personal reasonable (potentially doable) endurance activity focused on each target

To combine workouts, describe the interval/stride portion(s) separate & put an arrow to the workout it’s in

Energy system target	Describe your COMPLETE theoretically ideal workouts
Sprints: ATP depletion for raising BMR via DNA: to near fatigue i.e. >VO ₂ max pace	1-6 high-intensity intervals or sprints of 1-2 min each within this workout:
Strides target all energy & organ systems to reduce main limiter(s): VO ₂ max=10’ race pace	1-3 VO ₂ max (10 min race pace) strides of 2-8 min each w/in this workout:
Threshold (cross over of glucose to fat burn): 1 hour race pace	Threshold (1 hour race) pace for 10-40 min: For all of these, describe how you increase the pace to warm up, vary the pace throughout & cool down
Cardiovascular as the main target: Mainly fat burning including O ₂ delivery	Cardio >2 hr race pace for 10-120+ min (describe full workout): For all these, list the duration at each intensity as you warm up & cool down etc.
Movement: Longevity	Main movement activities you are doing or movement targets to improve:

Define your likely most sustainable strengthening activity focused on each target

- **Reminder:** warm up first and then go to near-failure with perfect form i.e. absolutely no change in biomechanics. Otherwise you risk injury that can linger and return repeatedly.
- > 10 repetitions / set i.e. “light” or “L” for muscular endurance and neurological training
- < 10 repetitions / set i.e. “heavy” or “H” for homogenous micro-tearing of muscle for increased strength
- **What could you do at home or when traveling with your body weight or with minimal equipment?** Make your best effort to answer using every-day objects or simple portable equipment, NOT fancy gym equipment or even weights, to creatively come up with movements that to achieve your target. At least do not use the same movement w/different weight settings; use movements best matched for each range.

Write in the SPECIFIC MAIN movement you could do for each of the following:

General movement	Your “light” movement for > 10 repetitions per set	Your “heavy” movement for < 10 repetitions per set
Pushing FORWARD		
Pushing UP above you		
Pulling BACK to you		
Pulling DOWN to you		
Simple leg PUSHING movement		
Additional leg movement perhaps with larger range of motion e.g. lunge		

Your minimalist 1-week program including each type of strength & endurance activity

- Fill in the exercise sessions that are the most important to you personally FIRST
- Specify the endurance **movement** (walk, swim, cycling, etc) & **target** (sprint, stride, threshold, cardio)
- Specify strength body **part** (push, pull, leg, or whole body “WB”) & repetition range (<10 H or >10 L)

Day	1	2	3	4	5	6	7
Endurance movement & target							
Strength body part & <10 “H” or >10 “L”							