



What is the best exercise for you?

No matter if your level is Beginner or Experienced read through the entire lesson. It will help spark creativity in developing or adding to your exercise regimen.

Beginner

There are so many factors to consider when designing an exercise regimen. Your personal health is the most important, so consult with your doctor if you are making the lifestyle change of incorporating an exercise regimen. As a beginner the most important thing is to start SLOW. The slower you ease into exercise the more likely you will continue to practice a daily routine. When you initiate exercise after being predominantly sedentary you will feel sore muscles, no matter the type of exercise. Sore muscles are a good feeling because that means you have had a successful workout! Sore muscles feel very tight, and that tightness can be relieved through static stretching (defined later). Pain and injury often occur from not preparing your body with a warmup or cool down. Sharp abrupt pain is not equivalent to being sore. If something doesn't feel right or you are in pain, consult with your doctor. Soreness, however, is normal and will go away over time. The second and third day after your first day of exercise is typically when you will find yourself the sorest. Again, this can be alleviated with static stretching.

Experienced

Advancing forward in your workout journey is also important, and often this is where we begin to face plateau. The difference between plateauing and maintaining is based on individual goals. Plateauing can be negative if you are working on weight loss, building strength, or gaining endurance. You find yourself stuck and struggling to meet individual goals. Whereas maintaining is having reached your goals and retained all the progress made so far! It is ideal to maintain all the progress developed throughout the year.

Avoiding a plateau in your exercise journey can be curved by having a variety of exercise options.

REMEMBER: Weight loss specifically is primarily through diet, although incorporating exercise helps the process. No matter what type of training you do, you will develop more muscle mass which is GREAT and HEALTHY. Muscle mass weighs more than fat mass. So numbers on the scale may indicate plateau, but you are building muscle and reducing fat mass. This is a great example of why the InBody scan is a wealth of information. It breaks down muscle, fat, and water mass so even though

Perceived Exertion Chart

10	Very, Very Hard Activity Completely out of breath, unable to talk.
9	Very Hard Activity Can only speak one word at a time.
7-8	Hard Activity Out of breath; can speak a sentence or two
4-6	Moderate Activity Can still carry a conversation
2-3	Light Activity Breathing is easy
1	No Activity

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your weight plateaus you can see the muscle mass percentage growing and fat mass percentage decreasing!

Everyone is different!

As adults we understand everyone's bodies are very different, not only size and shape, but also in how our bodies function. Our bodies break down food or energy sources differently as well! Carbohydrates are immediate sources of energy and healthy fats (i.e. nuts) are long term energy. If we carry that idea over to exercise, we find different exercises require quick immediate energy while others need longer lasting energy. Anaerobic activities such as resistance or strength training require quick access energy storage. This energy typically comes from the carbs we eat that have turned into glucose. Aerobic activities are also known as cardio, short for cardiovascular, or endurance training. Aerobic activities will burn through the immediate energy quickly and start getting fuel from long term storage, as well as transport and absorb oxygen through the body. Thinking of exercise and the food we consume as a fuel source for our bodies can help us adapt healthier meal choices. Our car cannot run without an energy source, and neither can our body.

Why?

Both forms of exercise play a crucial role in maintaining a healthy body! The function of your heart is to pump oxygenated blood from the lungs throughout the body and then back to the lungs to be oxygenated again. Aerobic activities directly impact the most important muscle of your body, the heart. If your heart isn't working well, neither is the rest of your body. Anaerobic activity strongly impacts your health as well. Resistance training or anaerobic activity not only builds muscle but also maintains bone density! Women are often diagnosed with osteoporosis which is when bones become brittle because of lack of bone density.

Sneak peek to muscle physiology

We all have three types of muscle: cardiac muscle (heart), smooth muscle (in our intestines), and skeletal muscle (biceps, triceps, glutes, etc.). Aside from our heart which is used 24/7, we focus on our skeletal muscles when we exercise. Skeletal muscles are made up of two types of muscle fibers - type I and type II. Type I, or slow twitch muscle fibers, have high fatigue resistance and perform well for endurance. They create energy from ATP which is created from the oxygen carried throughout the body. Type II, or fast twitch muscle fibers, perform well for short bursts of energy and have low fatigue resistance. Everyone's body has both fast and slow twitch muscle fibers, however we typically have a predominant type. The only way to truly know is through a biopsy of muscle fibers. However, how our bodies progress through an exercise regimen can indicate the answer. People with mainly type I muscle fibers flourish in endurance activities such as long-lasting runs. Individuals with predominantly type II muscle fibers find themselves burning out quicker in long aerobic workouts, but succeed in short energy burst workouts that allow for recovery time.

This is not to say individuals with type II muscles are not built for aerobic activity and vice versa. This information just helps you develop a personalized workout routine that has aerobic

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workouts with rest periods such as high intensity interval training (HIIT) or circuit training. These allow for muscle recovery time while a steady long run does not. These types of exercise increase the heart rate enough to qualify as aerobic exercise and exercise your heart.

How to Calculate

Karvonen Method

Resting Heart Rate (RHR)

When you wake up in the morning check your heart rate. You want to do this before you even get out of bed, so you haven't exerted yourself in any way.



Place your index and forefinger on your wrist over the radial artery, and counting the beats for 1 minute.

Age-Predicted Max Heart Rate (APMHR)

$220 - \text{Age} =$

Heart Rate Range (HRR)

$\text{APMHR} - \text{RHR} = \text{HRR}$

Lower & Upper Target Heart Rate

Target Heart Rate (50%) = $(\text{HRR} \times 0.50) + \text{RHR}$

Target Heart Rate (85%) = $(\text{HRR} \times 0.85) + \text{RHR}$

Target Heart Rate

As mentioned above, heart rate plays a role in exercise and can tell you if you are pushing yourself enough. The Perceived Exertion Chart above is helpful in determining heart rate as are wrist monitoring devices such as Apple watches, Fitbits, or other wearable tech that are fairly accurate. It is important to understand these tools may not be applicable if you are taking certain medications or have certain health conditions. ALWAYS consult with your doctor when making lifestyle changes.

When looking into monitoring heart rate, you need to determine Maximum Heart Rate. First identify Resting Heart Rate (RHR) as indicated in the chart. Next calculate Maximum Heart Rate (APMHR) as shown. A safe estimation can be determined through this formula utilizing your age. The wiggle room of about 10-15 beats of max heart rate leaves you safe to use this formula as a guide. You can now calculate individualized exercise intensity! If you

are monitoring your workout through your heart rate you will want to stay in your target heart rate zone. The higher you are in your personal target heart rate zone, the more intense the workout.

Example:

A 27-year-old has the resting heart rate of 69 beats per minute (bpm).

Resting Heart Rate (RHR) is 69 bpm

Age Predicted Max Heart Rate (APMH) is $220 - 27 = 193$ bpm

Heart Rate Range (HRR) is $193 - 69 = 124$ bpm

Target Heart Rate (50%) is $(124 \times 0.50) + 69 = 131$ bpm

Target Heart Rate (85%) is $(124 \times 0.85) + 69 = 174.4$ bpm

The target heart rate zone for a 27-year-old with a resting heart rate of 69 bpm is 131 bpm – 174 bpm.

REMEMBER CONSULT WITH YOUR DOCTOR BEFORE MAKING LIFESTYLE CHANGES. SOME CONDITIONS AND/OR MEDICATIONS WILL IMPACT YOUR HEART RATE RANGE.

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Designing your workout plan

As you approach different exercise opportunities the most important thing to remember is do what you enjoy! If you hate long marathon runs, DON'T DO THEM. If you hate your exercise options, you probably won't stick to an exercise program.

Perceived Exertion and Target Heart Rate is used to gain quality aerobic or cardio workouts. During anaerobic exercises the main focus is slow controlled movements with correct form and completion. Typically, personal trainers would assist in finding your max weight on a series of machines and base a workout off percentages of those. If you don't have access to personal trainers or gyms, work your way up by starting with a comfortable weight whether it is a dumbbell or a machine. When workouts become easy, increase the weight to increase the intensity. For maintenance and muscle building 10-12 repetitions during each set is recommended.

Resistance Training:

Resistance training is using an outside force to create resistance when contracting a muscle. Tools for resistance are: body weight, resistance bands, hand weights (dumbbells), kettle bells, barbells, etc. When practicing resistance training it is important to maintain proper form and slow, controlled motions.

Examples (mix and match exercises):

- Bicep Curls with dumbbell
- Squats with a kettle bell
- Hamstring Curls using a yoga ball
- Bent over rows using a dumbbell
- Deadlifts with resistance bands
- Lateral raise with resistance bands

To build your own workout, break up exercises based on the different regions of your body such as upper body, lower body, and core. Remember, there is no such thing as spot reducing fat. Our bodies pull energy from fat storage from the easiest places first. Your core is probably the last place your body will look for energy, so that is why diet is significantly important. Exercising is all about health and strength. Your core is used during every activity you do. So it is in your best interest to save core targeted exercises to the end of your workout. Your body needs recovery time AT LEAST 24 hours no matter if you are beginner or advanced. It is also important to start slow and give yourself a chance to enjoy exercise!

Circuit Training:

Circuit training and HIIT workouts (listed below) are similar; however, circuit training focuses on strength exercises. A circuit is stations of 5-10 different exercises with a designated amount of repetitions on each exercise. The exercises should target various muscle groups to allow the others to recover from fatigue while at another station. Without rest between each station, rotate through them all. Once you have went through an entire circuit, take a rest for 30 seconds to 1

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minute and begin again. Complete each circuit 3 times. You can complete the same series of stations 3 times or create new stations for each series. Plan it out ahead of time!

Example (mix and match exercises):

- Station 1- Push-ups
- Station 2- Squats with kettle ball
- Station 3 - Crunches
- Station 4 – Tricep Extensions
- Station 5- Lateral Lunges
- Station 6 - Planks
- Station 7 – Seated rows with resistance band
- Station 8 – Calf Raises

High Intensity Interval Training (HIIT):

These 15-25 minute workouts are all about keeping your heart rate up while giving short rest periods of about 15-30 seconds between activities to grab a drink and catch your breath. The fluctuation in your heart rate through activity and rest is great for burning calories! They are ideal for people traveling or non-morning people who like to start their day with a workout. As the name states it is high intensity, so you are working at the top of your target heart rate zone, and between 7-8 on your perceived exertion chart. Pick 5-10 exercises that are more cardio oriented rather than strength building to help keep an elevated heart rate. Complete each exercise for 30-45 seconds and rotate through the exercises chosen 3-5 times.

Example (mix and match exercises):

- Jumping Jacks
- Inchworms
- Mountain Climbers
- Walking Lunges
- Burpees
- Defensive Slides

Interval Training

Interval training is a great way to help build your running distance! It is all about giving yourself a work to rest ratio of 1:1. In the beginning this could look like jog for 30 seconds and walk for 30 seconds continually repeating for about 20 minutes. It really depends on you.. Advanced runners may change this to run: jog or sprint: walk.

Example (adjust speed to best fit you):

- Jog 30 seconds: Walk 30 seconds
- Jog 1 minute: Walk 1 minute

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- Jog 30 seconds: Walk 30 seconds
- Jog 1 minute 30 seconds: Walk 1 minute 30 seconds.
- Jog 30 seconds: Walk 30 seconds
- Jog 1 minute: Walk 1 minute
- Jog 2 minutes: Walk 2 minutes

There are many more workout options, but when it comes to designing your own based off what you like, these are great - no matter what level you are. Your workout routine really depends on what your end goals are!

Here is an example of a basic plan

Day	Beginner	Intermediate	Advanced
Sunday	Rest	Rest	Rest
Monday	Light Cardio	Upper Body	Upper Body
Tuesday	Upper Body	Light -Moderate Cardio	Cardio
Wednesday	Light Cardio	Lower Body	Lower Body
Thursday	Lower Body	Light -Moderate Cardio	Cardio
Friday	Light Cardio	Full Body	Full Body
Saturday	Rest	Rest	Cardio

Additional Resources:

1. NSCA's Essentials of Personal Training 2nd Edition
2. <https://www.frontiersin.org/articles/10.3389/fphys.2019.01150/full>
3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3925973/?gclid=*
4. https://d1wqtxts1xzle7.cloudfront.net/46260774/Strength_training_and_weight_loss20160605-27989-q7eueg-with-cover-page-v2.pdf?Expires=1640628475&Signature=B9PNBDy0KOCLMAYeqFn2~3ycMS-rK6Bw2ySozww9nEPaP718IP3B8d~dCcAmdFG~ararkeEw8NhwqbSq-9TvLqGM9qO73NEV0570tS27~CcGrYHX-CQVUtTlou4UO8nxBZL4s~XYDBPGnXBveOkEktpb7ddpre~TliYd-Ao-7spX9YjQKa7dYlKCrI3hIB~5RyZAYcUjoU66Q4QRVIMZyMT2ss0-KmuvKzxsGsaGW7pa0oY08EYkMuBMtDSyGXYfhim4t1286vgZuUNVBcfgAvmFiGHfH7VUpHTofoVtxTmnr14clTjTbaHN37VbPrdQEFVj3TDwJI6vikkDWIS5IVQ_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA





AHW Lesson Activities

What is the best exercise for you? **“Applying the Lesson”**

Choose one of the following activities to apply what you learned about your health and your healthy goal setting. Write a short response (3 to 5 sentences) to describe what you did and learned from the activity selected. Report your Applying the Lesson results by Online form, email, fax or hard copy to your county Extension Office.

Option 1:

Challenge yourself to try different workout options this week and determine what workout will work best for you! When you find that workout stick to it for a couple weeks, whether it is every day or every other day. After testing out the different types of workouts let us know what workout fits you best, and why.

Option 2:

What keeps you from exercising daily? What will you do to create that time for yourself daily?

Option 3:

What is your target heart rate zone?

