SUPER AGE

Reverse Heart Aging with This 2-Year Workout Plan Backed by Science

AUG. 8, 25

This proven cardio plan can lower your heart age by 20 years, increase VO2 max, and protect against cardiovascular decline starting in midlife.

In a paper published **last week in** *JAMA Cardiology*, scientists used a calculator to analyze the "risk age" of 14,140 American men and women between the ages of 30 and 79. The calculator (which you can see here) uses age, gender, cholesterol numbers, blood pressure, and a few other questions to determine the individual's risk of cardiovascular disease, and assign a heart age.

The results of their analysis: More than half of their 14,000 participants had a cardiovascular age that was further along than their *real* age. Women who were studied, for example, were an average of 51.3 years old; but their average "risk age" was 55.4 years. For men, the gap between their real age and their cardiovascular age was worse—their hearts were an average of 7 years old than their birth certificates would suggest.

If you're worried about the age of your heart, take heart: There's tons of time left for middle-aged adults to turn back the clock. According to **a 2018 study from** *Circulation*, you could turn your heart's age back 20 years in just two years with the right exercise plan. When scientists in Texas had 61 sedentary adults aged 45-64 participate in a specific cardio exercise plan, the exercisers' VO2 Max, a gold-standard measure of fitness and key predictor of longevity, improved by 18 percent. Maybe more important, the stiffness of their hearts' left ventricles reduced. That's a big deal for living longer, because a stiff left ventricle is one of the causes of heart failure.

The short version: Do this exercise plan for two years using the cardio methods of your choice, and you

could improve your heart's age by two decades. Here's how it's done.

First, you'll need to know your heart rate in four different training zones:

1. Maximal steady state (MSS): If you've heard of Zone 2 training, this is basically the top of that range, the maximum heart rate and pace at which your body primarily burns fat for fuel, and your body can clear the lactate in produces. To determine this pace, try a talk test—the details for how to do it can be found **in this article**, under "how to do Zone 2."

2. Base pace: This pace is a teensy bit easier than MSS (1-20 heart beats per minute below your threshold).

3. Interval pace: This pace should be at 95 percent of your peak heart rate. You may have heard that your max HR is 220 minus your age, but studies have found that's not very accurate. According to a 2001 study, a more accurate equation for healthy adults starts by multiplying your age by 0.7. Then subtract that number from 208. That's your max heart rate. For these intervals, target 95 percent of that.

Here's how that works if you're 55:

- **Step 1:** 55 * 0.7 is 38.5 (39)
- **Step 2:** 208-39 = 169
- **Step 3:** 169 * 0.95 = 160.55 (161)

4. Recovery: This pace should just be easier than your base pace.

Using these four paces, you'll progress your workouts throughout the months.

One Year Training Program for A Younger Heart

Here's a rough schedule based on what was done in the study:

- **Month 1:** Each week, perform three sessions of 30 minutes per week at *base pace*.
- **Month 2:** Continue the three sessions of 30 minutes at base each week. During the month, add in two sessions of 30 minutes each at your MSS.

- **Month 3:** In month three, you'll add another MSS session, and start doing weekly interval training. For the intervals, you'll do a 4×4 protocol.
    - **Step 1**: Warm up for 5-10 minutes.
    - **Step 2**: Perform 4 minutes of exercise at your "interval pace" heart rate you calculated above.
    - **Step 3**: Perform 3 minutes of exercise in your base pace range.
    - Repeat steps 2 and 3 for four total rounds.

The day after you do these intervals, do a 20-30 minute session of easy walking or light aerobic activity at your "recovery" pace.

- **Month 4-5:** Continue progressing the workouts from month 3. Add a second interval training session each week, or every other week, if you're feeling comfortable and recovered.
- **Month 6-10:** Perform two interval sessions per week, with 20-30 minute recovery days after each. In addition, do one session of one hour at your base pace, and one 30-minute base pace session.
- **Months 11 and beyond:** This is the "maintenance phase." During this period, study participants dialed back the interval training to one session per week. They continued doing the continuous, base pace training (one hour and one 30-minute session), and added in two strength sessions per week.

That's it! One thing to note: The participants in this study were sedentary, meaning they weren't exercising already. But even if you're already a regular exerciser, you can benefit from building your aerobic base with base pace work. Check out this **"Ideal Longevity Workout"** for more information on building your aerobic base and VO2 Max.

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