



E-BOOK SERIES

YOUR INTERNAL HEALTH

MEASURED IN 30 SECONDS



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Preface

This e-book will provide you with information allowing you to better understand your body and its response to lifestyle choices such as diet and exercise. You will be introduced to the power you have to create positive change, feel better and live longer.

Use of the iHeart oximeter-based Internal Age System will be explained as an effective way for you to visualize your health and understand the importance of Aortic Stiffness and Core Mobility. The Aorta is your body's largest blood vessel that travels just in front of your spine from the heart through the chest and abdomen.

Aortic Stiffness is a powerful measure of your body's health and your expected lifespan that has previously been hidden from view. This book will explain, using understandable language and drawings, how iHeart is able to obtain Aortic Stiffness readings from your fingertip arterial pulse wave to provide you with the most vital sign of all, Aortic Pulse Wave Velocity, and display your body's actual Internal Age.

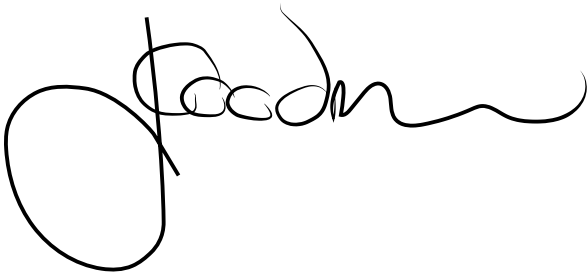
As with so many things in life, it's what's inside that really counts. But there's never before been an easy, economical way for a person to measure, understand and interpret the really important internal indicators that affect health and life expectancy... until now.

The arterial pulse wave will be shown in this book to be information rich and able to provide you with insight into mobility of your body's central regions that house your internal organs. You will gain understanding into relationships between Core Mobility, organ function and health.

Using the iHeart Internal Age System to track Aortic Stiffness will give you a clear and helpful picture of your health over time. You will develop an ability to 'listen' to your body and allow it to experience better health than ever before.

iHeart will give you an ability to 'look inside' and connect you with life sustaining physiological principles that were previously mysterious and hidden from view.

So come on... get younger with iHeart!

A handwritten signature in black ink, appearing to read "J Goodman", with a large, stylized initial "J" and a long, flowing horizontal stroke.

Dr. Jess Goodman
President & Chief Medical Officer
VitalSines, Inc.



The Idea

Moy Moy Lin Shin, a Taoist Monk, was my Tai Chi teacher and mentor for 20 years. Mr. Moy introduced me to a view of health and healing complimentary to my medical school education. He gave me an understanding of the way the bones, muscles, organs and circulatory vessels move in synchrony and balance. Mr. Moy showed me relationships between movement and health and taught me that there is no separation between mind and body. He helped me heal old injuries that had affected me for many years and showed me how to help others develop body awareness and improve health.

My Tai Chi teacher challenged me many times to attempt tasks for which I felt apprehensive and anxious and in this way gave me an opportunity to discover that anything is possible when you approach the effort with a good heart.

At the end of his life, Mr. Moy asked to me show people “Why they should stretch between the heart and the kidneys”. He had often emphasized the spine as an important structure, ordering and organizing movements of the limbs and great cavities. He had other students and myself work for hours to be able to feel the spine stretch and turn in a spiral fashion. He had us ‘sit’ during Tai Chi practice, dropping and separating the bones at the bottom of the spine, so that we could feel our lower back and pelvis opening in a way that freed up the ‘tailbone’, as he called it.

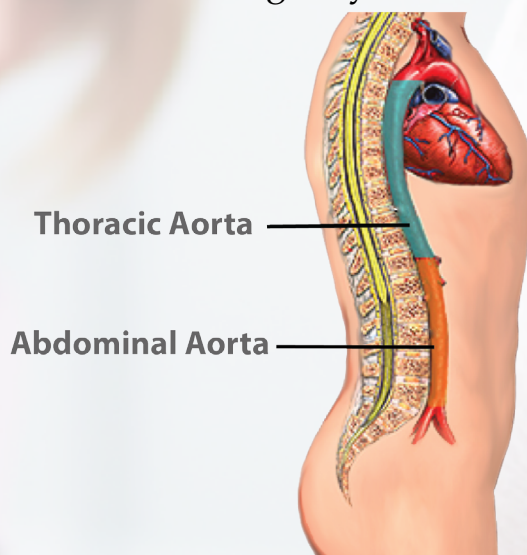
After Mr. Moy’s death I reviewed human anatomy related to the spine and the scientific literature about health effects of stretching along the spinal axis. It was a great surprise to find out that there was a large and expanding body of scientific evidence that stiffness of the aorta, the body’s largest blood vessel running just in front of the spine from the heart through the chest, abdomen and pelvis, is closely related to a person’s heart health and predicts risk of death from all causes. Aortic Stiffness is determined by measuring Aortic Pulse Wave Velocity (AoPWV).

This book celebrates Mr. Moy’s efforts and continues his life work of helping people to feel better, live longer and appreciate the great gift we have all been given.

The Most Important Health Metric You've Never Heard Of

Imagine a single health metric able to identify people in their 20's at increased risk for development of heart disease, stroke and dementia. What if this health indicator could estimate how long you will live? Incredibly, for the last 20 years medical scientists have known that [Aortic Pulse Wave Velocity](#), which is used to measure stiffness of the Aorta, is closely related to risk of death from all causes and able to define risk in young people for development of heart disease, stroke and dementia.

Aortic Pulse Wave Velocity is closely related to and is a measure of stiffness along the spinal column. Increased stiffness of the spine results in decreased mobility of the body's core regions, affecting chest wall and diaphragmatic motion. I have coined the term [Core Mobility](#) to describe the overall mobility of the spine, chest cage, abdominal wall and pelvis. When Aortic Pulse Wave Velocity increases in speed, indicating greater [Aortic Stiffness](#), Core Mobility is reduced and the Internal Organs receive less of a massaging action with each breath. This decreases internal organ circulation and circulation of fluid within the brain, affecting organ function, overall health and longevity.



The body's Internal Organs are contained in four 'Great Cavities'. With well maintained Core Mobility, each breath enhances internal circulation of the Internal Organs.

Mobility of your spine and your body's core regions is closely related to Aortic Stiffness, which slowly increases as we age. Aortic Stiffness is a way to measure and follow Core Mobility. iHeart is a device that will allow people to exercise with a new focus on Core Mobilization in a way that leads to better internal organ function and overall health.

Aortic Pulse Wave Velocity not only assesses risk of illness but also shows improvement with attention to diet, exercise and stress management. Aortic Pulse Wave Velocity is a way to 'look inside' and can help people objectively appreciate the benefit of positive lifestyle choices.

How Aortic Pulse Wave Velocity Was Measured In The Past

You and your doctor probably haven't heard of Aortic Pulse Wave Velocity because its measurement previously required expensive and complicated equipment.

Measurement in the past used pressure sensors placed precisely over the Carotid artery in the neck and the Femoral artery in the groin to measure speed with which pulse waves travel down the Aorta. Aortic Pulse Wave Velocity (AoPWV) is the common way scientists measure Aortic Stiffness.

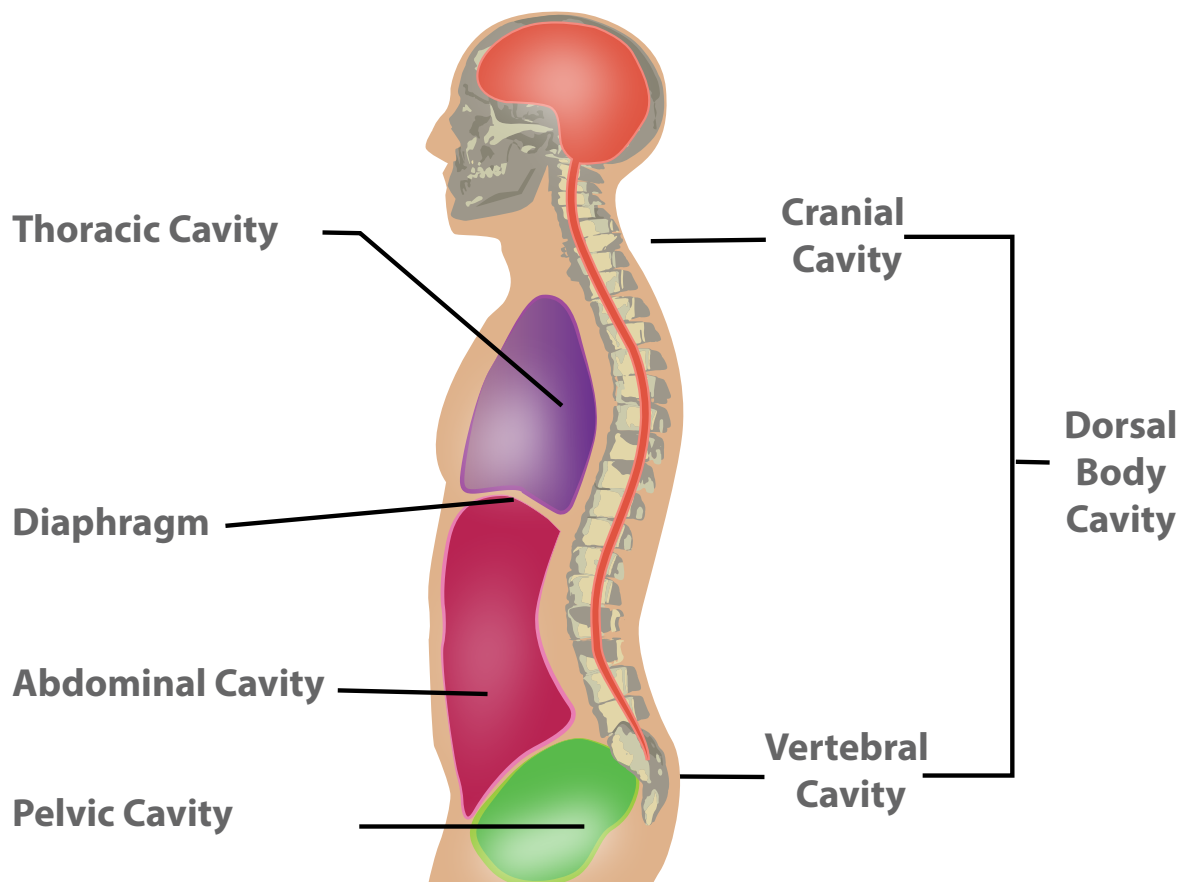


The [Sphygmocor](#) system is the “gold standard” medical scientific device for Aortic Stiffness and Pulse Wave Velocity testing. This device costs \$25,000 USD and has been used to validate iHeart's methods of measuring Aortic Pulse Wave Velocity. iHeart has been shown to correlate well with Sphygmocor measurements.

iHeart Revolutionizes Aortic Pulse Wave Velocity Measurement

iHeart is different from all other personal health monitoring systems. iHeart gives you the ability to 'see inside', to monitor health and follow the beneficial effects of healthy lifestyle choices. With iHeart and attention to inner health you will feel better and live longer.

iHeart provides you with a powerful new way to visualize and monitor Core Mobility and health of your body's chest, abdominal and pelvic regions containing your life sustaining internal organs. iHeart uses well validated scientific principles to show you an overall picture of your health. iHeart helps you follow changes in expected lifespan as a result of attention to exercise, diet and stress management.



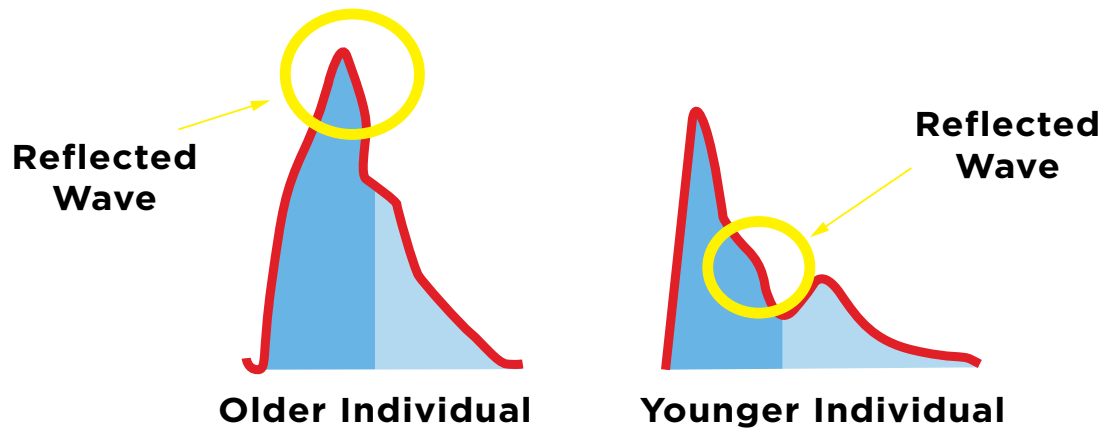
The Aorta is located immediately in front of the Spine. Stiffness of the Aorta is intimately linked to Spinal stiffness and Core Mobility.

iHeart uses a fingertip sensor to 'read' your arterial pulse wave and an iPhone or iPad to extract information about your inner health. Here you can see an iHeart user taking their Internal Age reading while sitting in their own home.



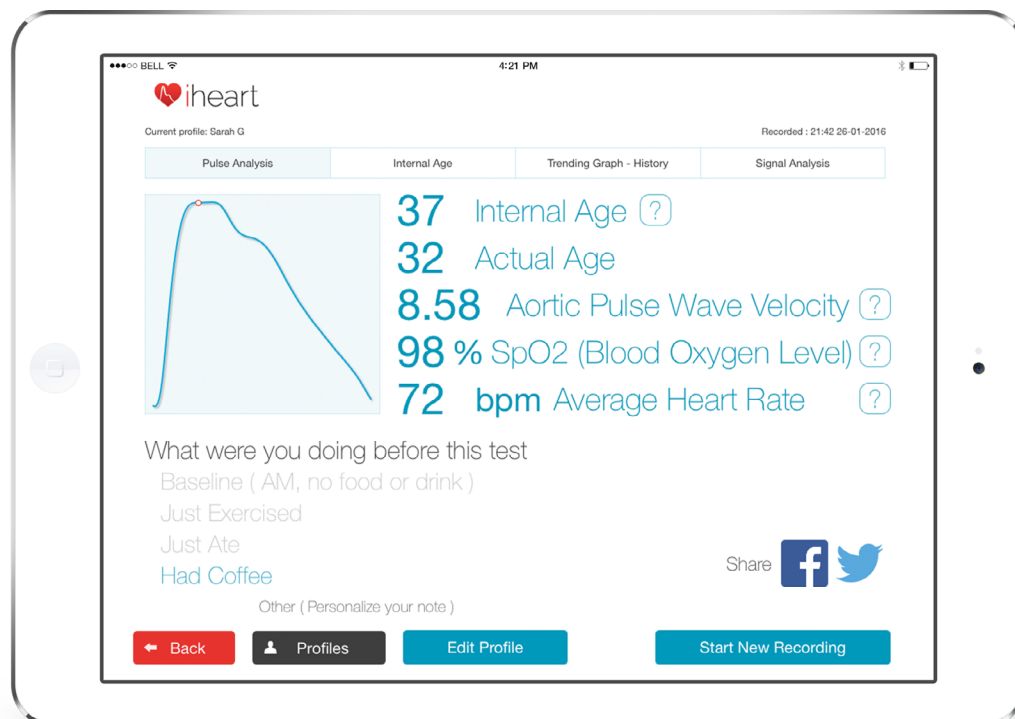
The human pulse wave changes in very characteristic ways as we age. The pulse wave has three clearly visible component waves with one, the Reflected Wave, closely related to Aortic Stiffness and stiffness of your body's core regions containing the internal organs.

Shown below are pulses from an older and younger person showing characteristic pulse shapes and the three-wave pattern common to every human being's fingertip pulse wave with the second wave being the Reflected Wave.



iHeart closely examines Reflected Wave timing in order to calculate Aortic Pulse Wave Velocity (AoPWV) and measure Aortic Stiffness. This book will give you the ability to understand these physiological concepts and use them to develop a repair and maintenance strategy for your life.

iHeart uses your AoPWV reading to determine your Internal Age. This is done by comparing your AoPWV reading with age-averaged AoPWV readings. Testing hundreds of people of varying age provided iHeart developers with the average



values used in the iHeart app.

iHeart allows you to follow changes in your pulse wave, AoPWV and Internal Age that objectively show improvement with attention to exercise and diet. iHeart will show the way to better health.

iHeart shares information between all of your iOS iPhone and iPad devices. You are also able to follow your iHeart health tracking information, which is automatically sent to your secure online dashboard.

Using iHeart on a regular basis allows you to understand short-term health effects related to activities such as exercise and coffee consumption. It also shows long term changes after regular fitness training and dietary improvements. iHeart will let you know when you are heading in the right direction in order for you to feel your best and have a long life.

The iHeart team's overall goal is to help people understand how easy it is to 'see inside'; allowing you to efficiently and effectively maintain health, feel better and live longer.

How To Use iHeart To Improve Your Health And Wellness

The body is dynamic and responds quickly to different external stimuli like exercise, dietary changes, mood and stress levels, and even supplementation. iHeart is a great tool to use to find out how your lifestyle habits are affecting you.

iHeart readings are sensitive to blood pressure and it is very important to avoid blood pressure effects to keep iHeart readings as consistent as possible. Always rest in a seated position and relax for at least two minutes before iHeart testing. Avoid caffeine, smoking, eating and exercise before testing.

A [baseline test](#) should be done using iHeart in the morning before you've had any food or drink, or exercised. This test should be done at the same time each day to see how you are doing on your path to optimal health and wellness. Create a baseline profile in the iHeart Internal Age App and test using this profile each morning you do an Internal Age recording. This way you will see trends over time.

The iHeart device is small and can be taken with you anywhere you go. A very interesting way to use iHeart is to test before and after certain activities (fitness classes, meditation, yoga, etc) to see which varieties of these activities affect your body most positively, and stick with those.

iHeart can also show you how your body is reacting to negative stimuli like stress, emotional upset, sickness, or even too much coffee. Testing when you aren't feeling your best will also provide evidence as to how these situations affect the body internally.

Many Factors Can Increase Pulse Wave Velocity And Internal Age:

- Sedentary lifestyle
- Minimal exercise/movement
- Poor diet
- High stress levels
- Smoking
- Excessive drinking

With your iHeart device you can see how your lifestyle choices are affecting Aortic Stiffness and Internal Age. You can tweak your lifestyle to achieve the lowest possible Internal Age, improving health and increasing lifespan.

Over time, with regular testing and positive lifestyle choices you will see your Internal Age decreasing, indicating improving health and increasing lifespan. This is an ongoing effort and it's important to use iHeart like a scale or blood pressure monitor. Test often to make sure you're still on track.

Click HERE

to find out more.

TIPS TO IMPROVE PULSE WAVE VELOCITY



BEGINNER

If you've been lagging in health, let's help you get off the couch and into better shape. Try the following:

- Walk for 30 minutes each day
- Stretch before bedtime
- Decrease caffeine consumption



REGULAR EXERCISER

You're fit, but there's always room for improvement. If you want to see that Pulse Wave Velocity score and Internal Age decrease, try the following:

- Stretch thoroughly after workout
- Add core mobilizing exercises to exercise routine
- Decrease caffeine consumption
- Increase omega 3's
- Increase hydration



ATHLETE

Many athletes train extremely hard but don't take the time to stretch the body and muscles out after training. Some tips to lower Pulse Wave Velocity today:

- | | |
|----------------------|------------------------|
| • Stretch | • Increase omega 3s |
| • Meditate | • Lower caffeine |
| • Yoga | • Improve sleep |
| • Increase hydration | • Supplement vitamin D |

**talk to a doctor before initiating any changes to your diet and fitness regime*

TERMINOLOGY

Aortic Pulse Wave Velocity (AoPWV) - Aortic Pulse Wave Velocity is a measure of Aortic Stiffness. The Aorta is the body's largest blood vessel and runs from the chest through the abdomen. Pulse waves, generated with each heart beat, travel along the Aorta at a speed determined largely by Aortic Stiffness and blood pressure. Aortic Pulse Wave Velocity is the most common method used by scientists to measure Aortic Stiffness.

Aortic Stiffness - Stiffness of the Aorta, the largest blood vessel in the body, has been proven to be a marker of heart health, brain health, and in many scientific studies published over the past 20 years has been shown to predict risk of death from all causes. Aortic Stiffness is being recognized as a single health metric able to assess overall health, estimate lifespan and show improvement with exercise, good diet and stress reduction. Using Aortic Stiffness measurement to guide lifestyle choices is an effective way to keep your body healthy.

Baseline Test - To experience iHeart most successfully you should take a baseline reading at the same time each day. This is the reading you want to see change as you improve your lifestyle habits. Blood pressure affects Aortic Pulse Wave Velocity and iHeart readings. You should always control for blood pressure effects by resting in a seated position for at least two minutes. To minimize blood pressure effects you should avoid caffeinated drinks, chocolate, smoking, eating and exercise before testing. First thing in the morning is often the best time to do a baseline reading.

Core Mobility - The chest, abdomen, pelvis and spine/skull are sometimes called the 'Great Cavities'. Our Internal Organs (brain, liver, spleen, kidneys, reproductive organs, etc.) reside in the Great Cavities. Core Mobility is a measure of mobility along the axis of the spine, affecting the Great Cavities and their organ contents. With each breath, expansion and contraction of the chest, diaphragm muscle, abdominal wall,

spine and pelvis compress and then release the soft and spongelike Internal Organs. With well maintained Core Mobility, the Internal Organs benefit from a boost in their internal circulation with each breath. With good Core Mobility, circulation of fluid nourishing and cleansing the brain and spinal cord is enhanced. Frequent movement is essential to organ function, wellness and longevity. Core Mobility is a measure of mobility and stiffness along the axis of the spine, affecting the Great Cavities and their organ contents.

Internal Age -iHeart determines your Internal Age by measuring Aortic Pulse Wave Velocity. Internal Age changes with over time due to increased Aortic Stiffness. Internal Age is affected by both positive and negative lifestyle factors such as exercise, diet and stress management.

Experimental Test - You can use iHeart to determine what kinds of exercises, foods, and other lifestyle factors affect your body by doing experimental tests. For example, you can perform iHeart experimental testing before and after specific workouts or different kinds of food and drink. iHeart provides a snapshot of the body at that moment in time, so you can see how your body is affected by different types of external stimuli, and tweak your lifestyle to focus on things that lower Internal Age. iHeart is a guide to help you make wise lifestyle choices that lead to wellness and long life.

Sphygmocor - Sphygmocor is the “gold standard” scientific system used for Aortic Stiffness determination through Aortic Pulse Wave Velocity measurement. The Sphygmocor has a cost of \$25,000 USD and requires a skilled technician for precise placement of multiple arterial pressure sensors. The Sphygmocor system was used to validate iHeart’s methods of measuring Aortic Pulse Wave Velocity. iHeart’s fingertip-based monitoring of Aortic Pulse Wave Velocity correlates well with Aortic Pulse Wave Velocity measured using the Sphygmocor system.

Learn more at www.goiHeart.com