CARDIO CHECK WHAT DOES IT ALL MEAN?

The CardioCheck is a powerful and sophisticated digital volume pulse measurement system.
When the heart expels blood into the circulation, it creates a pulse which propagates along the arteries .The first part of the DVP (digital volume pulse) waveform is formed as a result of the direct propagation of this pulse from the aortic root to the finger.
As well as traveling down the arm, the direct pulse propagates along the aorta towards the lower body .At every change in diameter and at arterial bifurcations, part of the pulse is reflected back .All these reflections add up and can be considered as a single reflected wave arising from the lower body.
This reflected wave travels back up the aorta and then down the arm to the finger to form the second part of the DVP.

PPT = PEAK- TO- PEAK

Is an estimation of the propagation time of the reflected wave, if the arterial tree length is proportional to the subject height ,cardio check defines the stiffness index (SI) as the subject height divided by the peak-to-peak time.
There is increasing evidence that large artery stiffness may be the single most important predictor of cardiovascular events.

RI = REFLECTION INDEX

The height of the reflected wave (diastolic component) of the DVP relates to the amount of wave reflection, which is mainly related to the tone of the small arteries. The reflection index (RI) is defined as the relative height of the diastolic peak expressed as a percentage of the total amplitude of the DVP waveform.

SI = STIFFNESS INDEX

The timing of the reflected wave (diastolic component) relative to the direct wave (systolic component) depends on large artery stiffness.
Arterial stiffness determines the speed of the propagation of the pulse. With stiff arteries, the reflected wave will arrive earlier during the cardiac cycle than more elastic arteries.

BA = BIOLOGICAL AGE

“A man is as old as his arteries” Thomas Sydenham, a 17th century physician .From the measured stiffness index (SI) CardioCheck computes the estimated vascular age.

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