

**Reaction** – Avazzia’s microchip technology takes measurements with each output pulse, manipulates this data, and displays readings (reactions) from the body, including Initial Reaction (what happens when the electrode is first placed on the body) and Ongoing Reaction (how the body’s tissue is reacting to the microcurrent). The change in these reactions is displayed in four modes: Relax Assess, Blue Relax, RSI and AVA.

**Initial Reaction (IR)** – The relative measure of the body’s conductance during the first second after the Avazzia device is applied to the tissue.

IR will not change during treatment if electrodes are kept in one location on the body.

Lower values of IR indicate lower tissue conductance (higher impedance), Higher values of IR indicate higher tissue conductance.

**Ongoing Reaction (OR)** – This is the relative measure of the body’s conductance. As time passes, while microcurrent is being applied, OR will normally increase.

**Speed of Reaction** – This number indicates how fast the tissue is responding to stimulation. A higher number indicates increased local activity. As treatment progresses, this value will get smaller. When treatment has achieved equilibrium, the Speed of Reaction will indicate “0” or “Zero” to signal that the second aspect of treatment is complete.

**Coefficients of Form Numbers** -- These are two relative numbers and displayed in the center of the bottom line on the display screen. The Coefficient of Ongoing Reaction (COR) and the Coefficient of Initial Reaction (CIR) together indicate the body’s response to microcurrent. The CIR will not change as long as the electrodes (either built-in or through an accessory) do not change location on the body. The COR is a number that indicates the change as conductance changes. The lower the COR, the higher the rate of change.

Coefficients of Form are displayed as CIR and COR. Coefficient of Initial Reaction (CIR) and Coefficient of Ongoing Reaction (COR) indicate of the ratio of change of the tissue’s conductance to the stimulation pulse. Lower values indicate higher conductivity. CIR will remain constant, and normally COR will decrease.

## **FAQ**

### **What if IR is a relatively low value between 18 and 25?**

This may indicate a reduced conductivity of the tissue. One may need to increase hydration to achieve higher values.

**What if the device is on the body, but there is no IR displayed?**

This condition can happen when the tissue impedance is so high that the IR measurement indicates an open air reading.

Try one of the following:

- Continue to hold device on tissue until IR appears because even though, there is no IR showing, the tissue may respond to the stimulation pulses and eventually the tissue conductivity may increase enough to indicate an IR. This can take up to a few minutes, or
- Hydrate the tissue to increase conductivity. (try drinking water if there is no problem with drinking water), or
- Apply stimulation mode for 5 to 10 minutes and then try again, or
- Lift device from tissue and then reapply to tissue until IR appears. This may take a few minutes.

**What if the device is not on the body, and indicates IR or Z?**

If the device is off the skin in Relax Assess mode, and an Initial Reaction (IR) is indicating a value, then calibration is necessary. To calibrate, hold down both the power up (+) and power down (-) keys simultaneously for 1 second. This will calibrate the open-air reading, and the display will show CALIBRATED.

**What if the IR is a relatively high value greater than 100?**

This indicates high conductivity which may be due to perspiration or inflammation

**What is the normal range of IR?**

IR is a relative value and varies from person to person and from place to place on the body and with climate. Normal IR values are typically between 25 and 70.

**What is the meaning of D?**

“D” is an indication of the rate of change of OR relative to IR. Tissue that has higher rates of change of OR compared to IR will indicate “D” sooner. Tissue with slower rates of change of OR compared to IR will indicate D after a longer period of time. Typically, dry tissue will take longer to signal a “D”, and more conductive moist tissue will signal a “D” sooner. D will frequently be indicated in the range of 20 to 40 seconds.

If the conductivity of the load (where the electrode touches the skin) increases, the period of the voltage swing of the damped sinusoidal waveform will increase. If the conductivity of the

load (where the electrode touches the skin) decreases, the period of the voltage swing of the damped sinusoidal waveform will decrease.

**What is the meaning of “Z” or Zero?**

The Z indicates the rate of change of OR relative to IR has stabilized (or stopped changing), and when the rate of change stops, or goes to zero, a Z is displayed. The Speed of Reaction indicates the proximity in time to an indication of Z (how soon Z will be achieved).

Zero can happen in 1 to 10 seconds in either of the following conditions:

- extremely dry tissue
- extremely conductive tissue

For tissue between these extremes, Z may take 30 seconds to 20 minutes or longer.

If Zero is indicated in less than 1 minute, it is recommended to apply Stimulate, Deep Stimulate or Blue Stimulate painting the electrodes over the tissue for approximately 10 minutes.

If Zero takes longer than a minute, treatment progress in that area has reached completion.

**What is the normal sequence of D and Z indications?**

By design, D can occur before Z, or Z can occur before D for reasons stated earlier.

In most circumstances, D will be indicated before Z. If Z is before D, hydrate and treat the area of interest for approximately 10 minutes in a Stimulate mode.

**FDA CLEARED USE FOR IR/OR READINGS: TO INDICATE OPTIMAL STIMULATION OR IF HYDRATION IS APPROPRIATE.**

**What is measured with Reactions:** When the Reactions function is started, the display screen will show relative conductivity of tissue under the electrodes (whether using an accessory, pads or built-in electrode).

The reaction values may indicate when skin-to-electrode contact is less than optimal, or to indicate when the skin needs to be moistened to ensure optimal stimulation is delivered. If the PRO-SPORT Ultra is on the skin in Relax Assess mode, and an Initial Reaction indicator is not displayed, then the skin may be drier than the open-air setting. In this case, tissue may be hydrated before application. Skin moistness should be consistent for all application areas. Moist skin may be more sensitive and require less power to avoid uncomfortable application.