

## Hands-Off Graph

SmartMan shows information on Fraction or Hands-Off Time in two different ways. In the Results Summary it is displayed to the tenth of a second for the total activity. In the Hands-Off Graph it is real time graph related to the quality of compressions and time.

The Hands-Off Button displays the graph which illustrates the effect of interruptions and strings of poor quality compressions. It is calculated in real time in response to the quality of skills. It is calculated on a per second basis.



### The Colors and Blood Flow

Bright Red = no or almost no blood flow  
 Dark Red = poor movement but up to 49% blood flow  
 Dark Green = movement improving and above 50% blood flow  
 Bright Green = good perfusion and closer to 100% blood flow

### Real Time Interaction With Quality of Compressions

Calculation of the visual display is based on the research that shows it can take 10 or more high quality compressions to return coronary and cerebral blood flow to the same level it was before compressions were stopped. To calculate this At-A-Glance Display the following parameters have been used:

- 1. Pauses For 2 Seconds Reduce Blood Flow to Zero**  
All blood pressure within the circulatory system becomes zero and in essence the learner is starting again from zero.
- 2. Ten Compressions Before Their Full Effect on Blood Flow**  
If you perform several perfect compressions and then perform several bad compressions, you will lose much of the benefit of the good compressions. It is putting together high quality compressions consecutively that establishes strong cerebral perfusion.
- 3. Quality of Compressions Matters**  
Consecutive compliant compressions produce the maximum blood flow. Blood flow is reduced due to non-releases, compressions that are too fast or too slow (by different amounts, slow is worse) and incorrect depth.
- 4. Blood Flow is Shown Per Second, Not Per Compression.**  
Values are averaged across previous compressions since the pause. Hence, its common to get a spike with good compressions at the beginning of a cycle.

### Graph Display at End of Activity

Once the Activity is completed the display is no longer related to real time (one second basis). Rather the static display is shown as a per compression graph. Also the graph is for the complete activity regardless of which cycle you are showing in the re-display of feedback area.

#### The Replay Button

It is possible to REPLAY a cycle and to show the Hands-off graph. This is only an indication of the performance. It is not as accurate as the hands-off display during the skills performance. The REPLAY Button converts the hands-off display to a per compression value rather than a per second value.