8.1 SmartMan Manual – 8. Results 1. Compressions

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8.1 Results Chest Compressions

Results are an accurate analysis of every practice or test performed on SmartMan. This document provides a description of the detail found in the results for chest compressions. Results are available for display as soon as an activity is complete.

Alternatively you can come back and view the results at a later time. To do this, as an example, follow this procedure to see previous compressions:

1. Login to person whose results you wish to display,
2. In the Actions Menu, click on View Previous Results.
3. Click Compressions
4. Click on the results you wish to display

Compressions Results Main Page

When a practice or test is completed the screen will appear as in the picture below. Each area contains information about the skills performed. Note the number on the circled areas.

Each area contains details on some aspect of the performance. Notice the areas circled in green.

Circle 1 = Percentage Score
Circle 2 = More Scores
Circle 3 = Real Time Feedback Area
Circle 4 = Show Next Cycle Button
Circle 5 = Show More Detailed Analysis Button

Below is a detailed description of the information in each area.

8.1.1 The Percentage Score

The overall score for the performance appears in the top right hand side of the screen.

This is calculated from all of the sub skills considered to be important to performing that skill and the degree of accuracy required to perform that skill.

The score allows individuals to set a target achievement level. It is also useful in allowing individuals to compare their current score with their previous scores and how others have done in the same skill.

8.1.2 More Scores

This area provides more detail on the performance.

Print Screen						Print Results

Final Score: 40.23%
Compressions: 64/60
Time Taken: 44s/37s

Compressions (Depth): 42.2%
Compressions (Rate): 51.6%
Depth, Rate, Release: 15.6%

Besides the final score it provides the following information.

- Final Score: This is the overall percentage score
- Compressions: How many compressions are actually performed and the target number
- Time Taken: The actual time taken and the target time
- Compressions (Depth): Percentage of compressions accurate for depth
- Compressions (Rate): Percentage of compressions accurate for rate
- Depth, Rate, Release: Percentage of compressions accurate for all three

8.1.3 Real Time Feedback Area

8.1.3.1 The Colored Bars

The colored bars give a quick easy way for the person performing a skill on SmartMan to know how they are performing and what they need to change in order to improve their score. The higher score means they are performing better quality compressions. The more bright greens the better they are performing.

A person aims to produce pure bright green bars at all times. If there is any other color, then he/she needs to modify their performance on compressions.

	Bright Green means everything is correct.		Dark Green means correct rate but incorrect depth		Orange means rate too fast.		Orange means rate too fast.
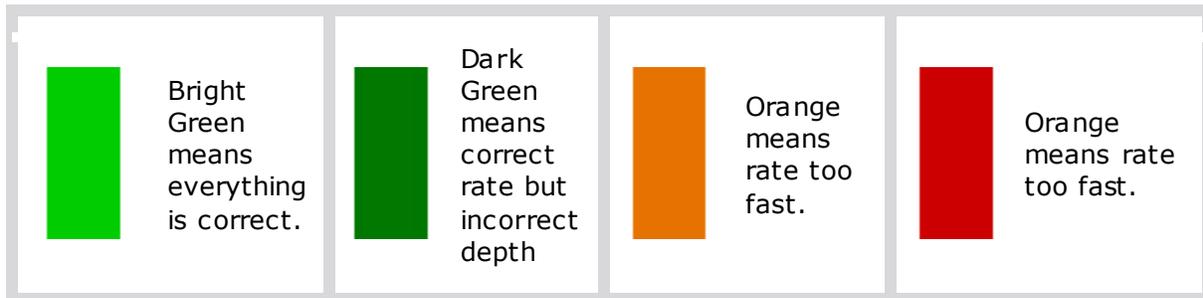
8.1.3.2 Depth Indications on Screen

The two green horizontal lines on the screen show the target depth for the compression. Push the chest until the bar goes between these two green lines.

The compressions should be at least 5.0cm and not more than 6.0cm (roughly 2.0 inches and 2.5inches). The EU specifies a top limit for depth but the AHA does not. It cites that there is no evidence to say that compressions deeper than this are beneficial.

The red line is the maximum depth for that manikin. It is the point at which you bounce off the bottom.

5.1.3.3 More Detail on Depth of Chest Compressions

Yellow bar on the bottom: This shows the amount that the chest has not been released. The higher it is from the bottom, the greater the non-release.

Yellow bar on the top: This shows that the depth went deeper that 2.5" (greater than 6.0cm).

Red bar on the top: This means that the chest hit the maximum depth of the manikin. The yellow on top will turn red if you hit the bottom
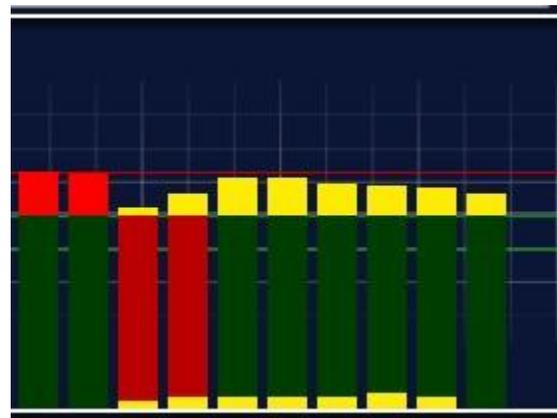
An Example

Here is an example taken from a set of 30 compressions. Each bar on the graph was produced as the chest was compressed. It was produced in real time and it can be reviewed.

In the graph below,

The red bars indicate the compressions were too slow.

The yellow on the bottom indicates a lot of the compressions were performed without proper release of the chest. The amount of non-release varied.

The bright green indicates that many of the compressions were performed at the correct rate, the correct depth. However many have a yellow bar below them meaning that the chest was not fully released.

The dark green indicates they were at the correct rate but in this case were not quite deep enough. They did not reach the minimum required depth.
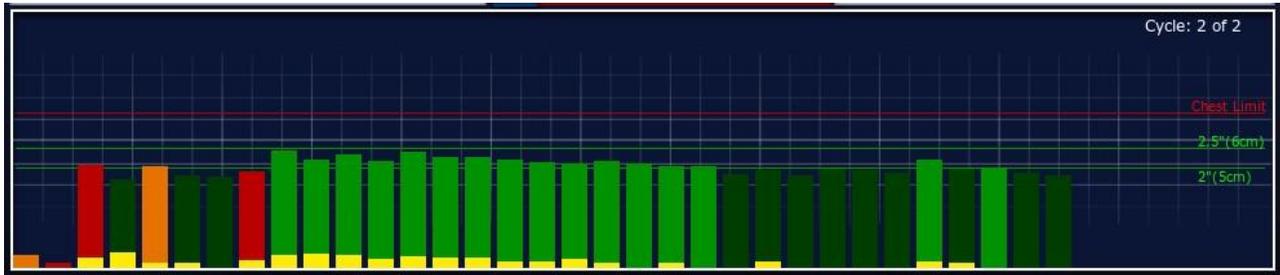
8.1.4 Show Next Cycle Button

The 'Next Cycle' button is on the lower far left edge of the screen. It is at the left edge of where the colored bars are displayed. When you click on this button, the screen will display the bars for the next cycle of 30 compressions.
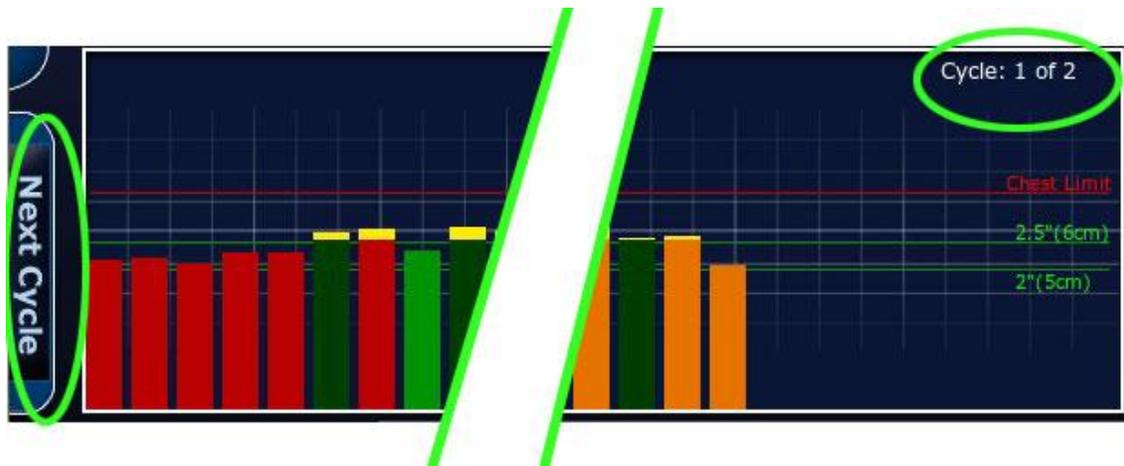
In the top right of the bar area the cycle you are displaying is shown.

Each time you click the Next Cycle button, it will show the results for the next cycle of compressions. Clicking the button again will scroll through each cycle until you are back at the first cycle again.

8.1.5 Show More Detailed Analysis Button

To see further detail on any skills performance, click on the button at the far left edge of the page. See area number 5 in the picture at the top of page 2. This button is just above the Next Cycle Button. See also the close up picture below.
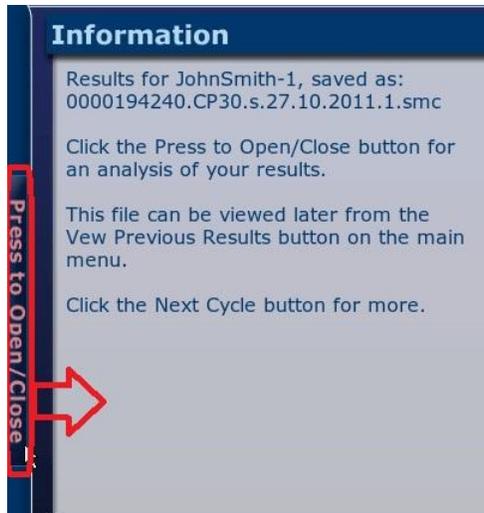
When you click on this button you will see a Summary and other Analyses. See the next section for a detailed explanation of what is on these pages.

8.1.5.1 Results Analysis – Summary Button

This will reveal the Summary Analysis page as seen below.
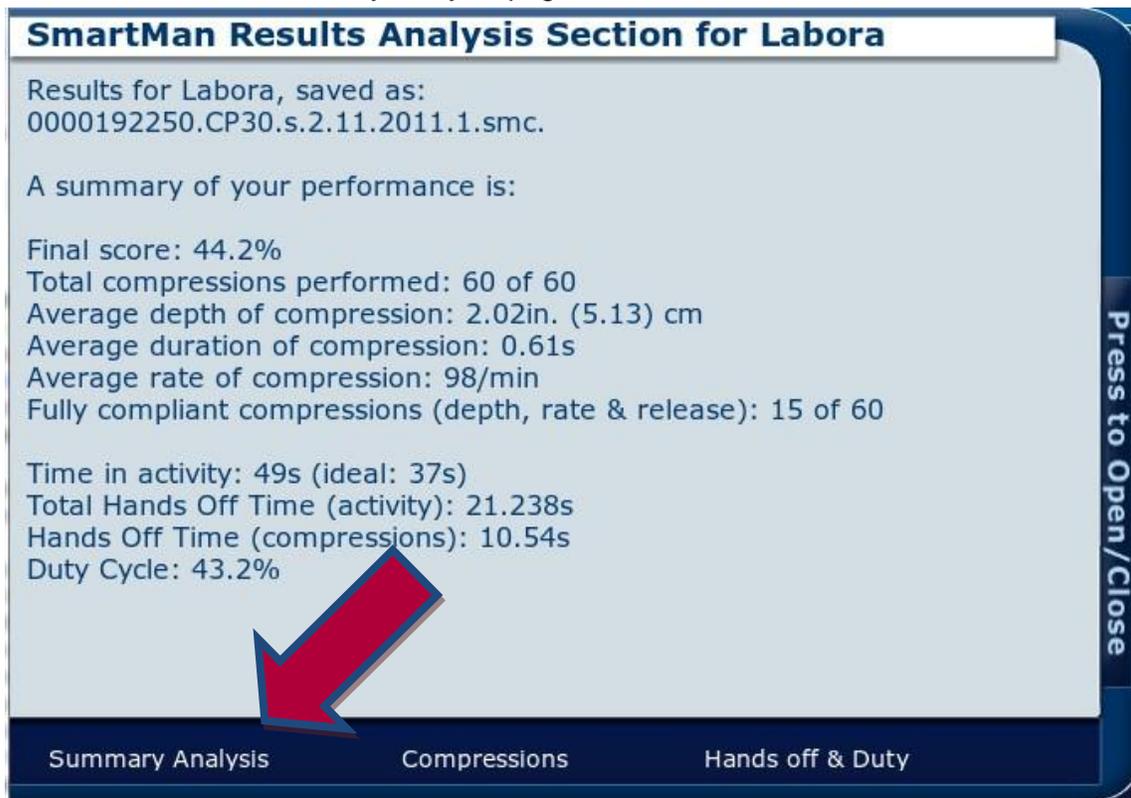
The screen will tell you the name of the person who is logged in along with the name of the results file which is being displayed.

The Summary Performance Information will be

      Final Score: This is the overall percentage score

      Total Compressions performed: number performed of the target number

      Average depth of compression: actual average depth of all compressions performed

      Average duration of compressions: actual average duration of all compressions performed

      Average rate of compressions: average rate per minute of all compressions performed

      Fully compliant compressions (depth, rate, release): how many compressions were 100% correct on all parameters

      Time in activity: actual time for the activity versus the target time

      Total Hands Off Time (activity): total time not on the chest including ventilation time

      Hands Off Time (compressions): total time not on chest not including ventilation time

      Duty Cycle: duty cycle

8.1.5.1 Results Analysis – Compressions Button

If you are viewing information at one of the other two buttons, click on the Summary Analysis button circled in red above, to return to the information.)

Press the button at the right to close this window and return to the main results display page.

SmartMan Results Analysis Section for JohnSmith-

Summary of your chest compression performance.

Depths: (inches) 0	- 0.5 -	1.0 -	1.5 -	2.0 -	2.5 -	Max	SCORE
Compressions	0	0	1	16	36	2	7	58.1

Rate: (/min)	> 200 -	150 -	120 -	100 -	86 -	75 >	SCORE
Compressions:	0	0	35	26	0	1	0	41.9

Non Releases (inches) 0	0+ -	0.05 -	0.1 -	0.2 -	0.4 -	0.6>	SCORE
Compressions:	2	57	2	1	0	0	0	98.4

Summary Analysis   Compressions   Hands off & Duty

Press to Open/Close

If you click on the Compressions Button you will see the depth, rate and on-release scores grouped by category. The target values are in green. See the picture above for an example.

Press the "Open/Close" button at the right to close this window and return to the main results display page.

8.1.5.3 Results Analysis – Hands off & Duty Summary Button

The third button in this window is Hands Off and Duty Cycle. This provides detailed information related to how long has been spent in pressing/releasing the chest and delay times between compressions and time for ventilations.

The current guidelines specify the importance of spending as much time as possible in compressions. Also the stress on quality of CPR correlates with what is referred to as Duty Cycle. The guidelines site research which shows that a duty cycle below 50% relates to coronary pressure and whether blood flow has been establish through the brain. A lower score is better.

SmartMan Results Analysis Section for JohnSmith-

Your results are:
1) Total hands off time: 5.397s of 33.7402s
2) Hands Off Time (compressions): -1.5 seconds.
3) Hands Off Time (ventilations): 6.897 with 4s recommended.
4) Your duty cycle value was 48.3%

Total Hands Off Time: Refers to the time when the rescuer is not actively performing chest compressions. This includes pauses between compressions plus the time for ventilations and change of rescuers.

Hands Off Time (compressions): The time during which the chest is not being compressed or released.

Hands Off Time (ventilations): The time during ventilations.

Duty Cycle: The time spent compressing the chest as a proportion of the time from the start of one compression to the start of the next compression.

Press to Open/Close

Summary Analysis   Compressions   Hands off & Duty

This screen provides details on the following points.

Total hands off time: This refers to the time when the rescuer is not actively performing chest compressions. This includes pauses between compressions plus the time for ventilations and, if applicable, changeover of rescuers.

Hands Off Time (compressions): This refers to the time when the chest is not being compressed and not being released.

Hands Off Time (ventilations): The time taken for ventilations.

Duty Cycle: The time spent compressing the chest as a proportion of the time from the start of one compression to the start of the next compression.

Press the "Open/Close" button at the right to close this window and return to the main results display page.

8.1.6 Other Buttons

The main results page also contains a Print Screen Button and a Print Button.

See the section on "SmartMan Manual - 5. Results 5. Print" for more information on printing a file