restech
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DataView v4 User Guide

Software version 4

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DataView v4 Software User Guide

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This publication is supplied for use with the Dx–pH Measurement System™ only. Refer to the latest version of the Dx–pH Measurement System Instructions for Use in order to properly use the DataView v4 software with the Dx–pH Measurement System.

Respiratory Technology Corporation is responsible for the reliability and performance of the Dx–pH Measurement System™ only if the following conditions are met:

- All repairs and modifications are carried out by Respiratory Technology Corporation or its assigned agents.
- The equipment is used in accordance with the Instructions for Use.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The Dx-pH Measurement System complies with the requirements of Health Canada Medical Devices Regulation SOR/98-282, in accordance with ISO 13485:2003 Medical Devices – Quality Management Systems – Requirements for Regulatory Purposes, under the Canadian Medical Devices Conformity Assessment System (CMDCAS), and TGA Australian regulatory guidelines for medical devices (ARGMD).

CE 0843 – The device complies with the Medical Device Directive (MDD 93/42/EEC). The four-digit number refers to the Notified Body who issued the certificate relative to this directive.

CE 0843

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1. Introduction to DataView v4

DataView is provided by Restech authorized personnel on media (thumb drive, SD card or disk) and installed in person during a field support visit; or during an online technical support session.

DataView features the following enhancements:

1) STANDARD CLOCK
   Displays time in 24 hour clock format.

2) SIMPLIFIED MENU AND TABS
   Main Navigation Menu and dialog boxes for user-friendly control.

3) EDITABLE PH STUDY GRAPH
   Allows the user to precisely edit the pH Study Graph using the Graph Toolbar.

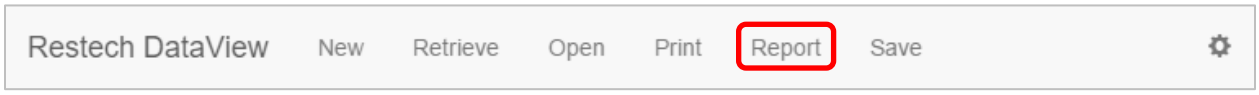
4) COMPREHENSIVE REPORT
   Displays a comprehensive Report page with the pH Study Graph, Event Calculations Table, Symptom Correlations Table, Acid Exposure Graph, and RYAN Score.

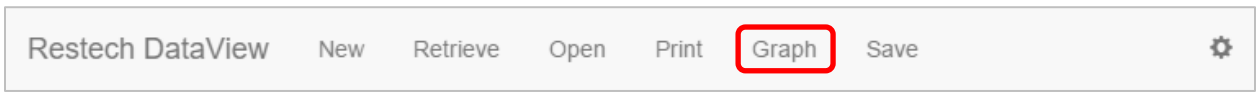
5) MULTIPLE BASELINES
   Displays event and symptom calculations for four different baseline pH levels.

6) FAST EVENT AND SYMPTOM CALCULATIONS
   Automatically calculates and presents events and symptoms in an easily viewable table on the Report page.

7) ADJUSTABLE COLORS
   Allows the user to customize graph color settings.

DataView has a simplified Graphical User Interface that incorporates an easily accessible menu.





Report and Graph toggle allows the user to easily switch between Report and Graph view using the Main Navigation Menu.

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2. System Requirements

Operating System Compatibility
The DataView program runs on the following operating systems: Windows 7®, Windows 8®, and Windows 10®.

Minimum System Requirements
The following are the minimum recommended system requirements for computers using DataView:

Description	Minimum Requirement
Processor type	Intel Pentium® Dual-Core or equivalent
Random Access Memory	512 MB
Free Disk Space	150 MB for program; 6 MB per study file
Pointing device	Mouse, touchpad, or equivalent device
Data Card reader	Compatible with SD memory card

Program/User Security Requirements
Entry into the DataView software program is not password protected. Users are expected to password protect the computing device on which the program runs. Access to patient data and files will be controlled by users.

User permissions
The user must be logged into an account to properly install DataView.

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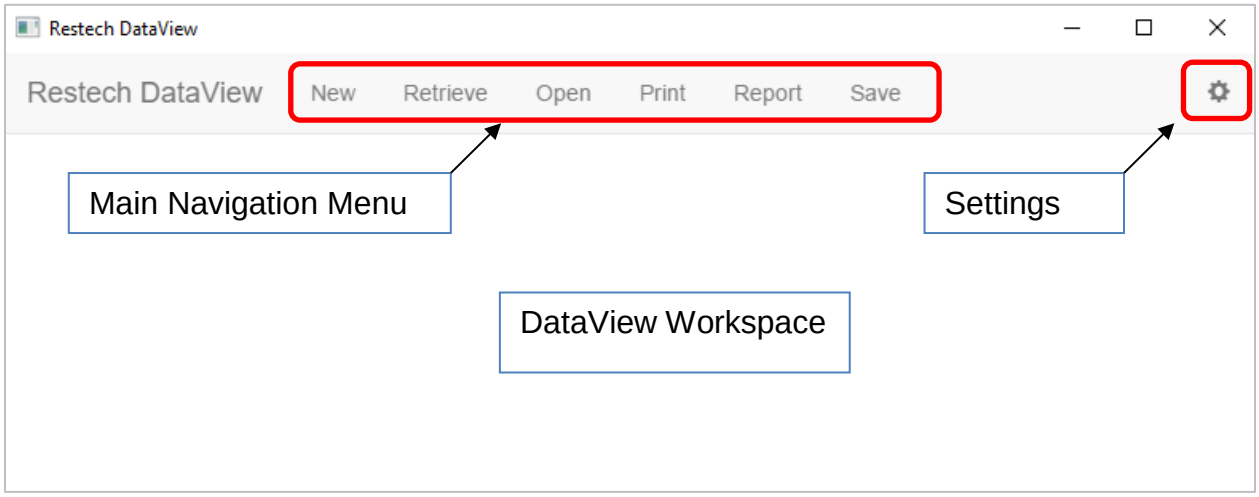
3. Starting the DataView Software

To start DataView, click on the Restech DataView Icon from the Taskbar or Desktop.

DataView launches with the Main Navigation Menu and Settings in the DataView Workspace.



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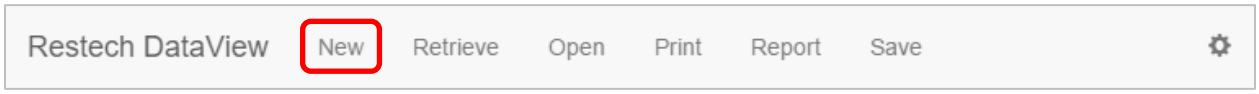
4. Main Navigation Menu Selection “New”

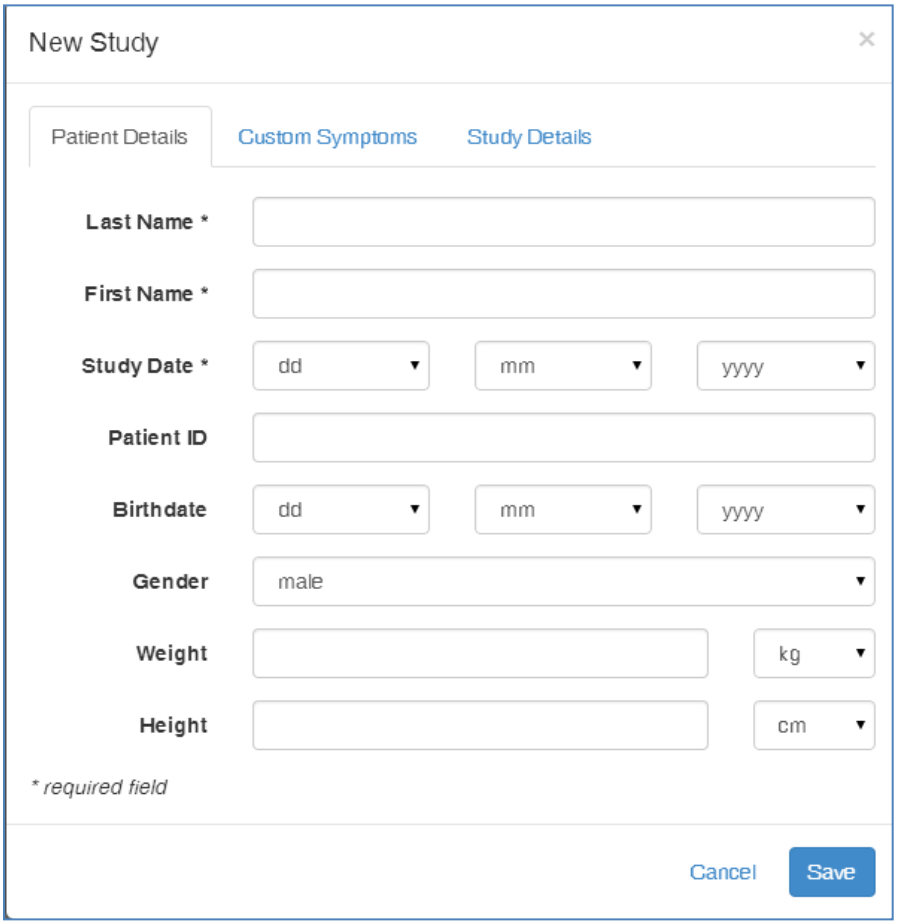
4.1 Entering and Saving New Study Information

To set-up a New Study, insert a RESTECH formatted SD card into your computer's SD card reader. (If a navigation pane emerges with the data card file directory, close it and continue.)

The "New" Main Navigation Menu Selection displays a New Study dialog box with input fields for the user to enter Patient Details, Custom Symptoms, and Study Details in separate tabs.



Click on "New" and enter Patient Details, Custom Symptoms, and Study Details according to the following **Sections 4.1.1 – 4.1.3**.



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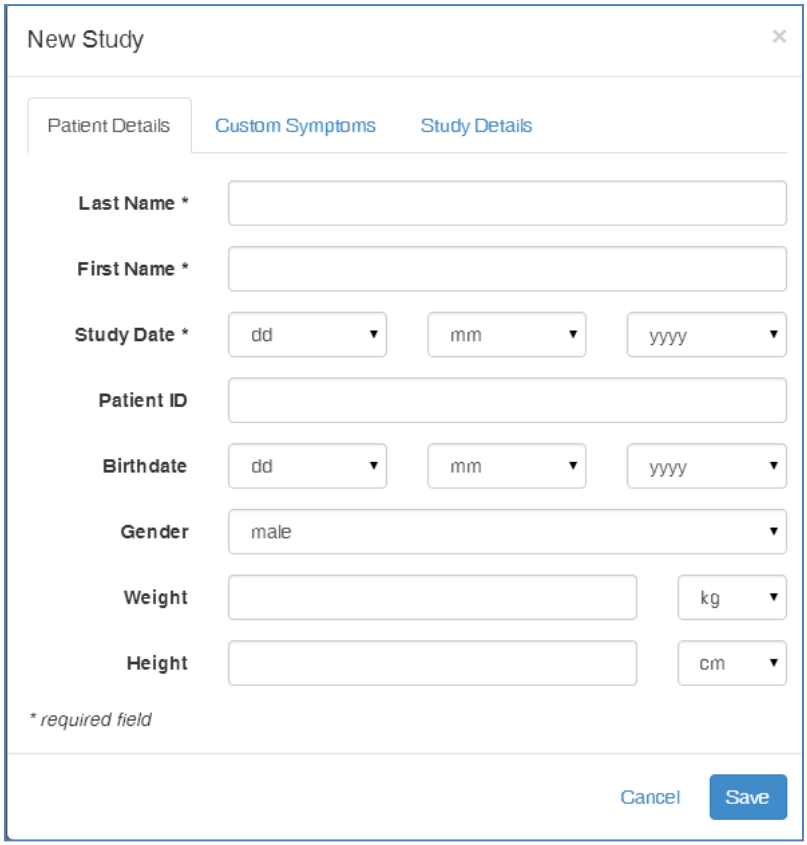
4.1.1 Patient Details Tab

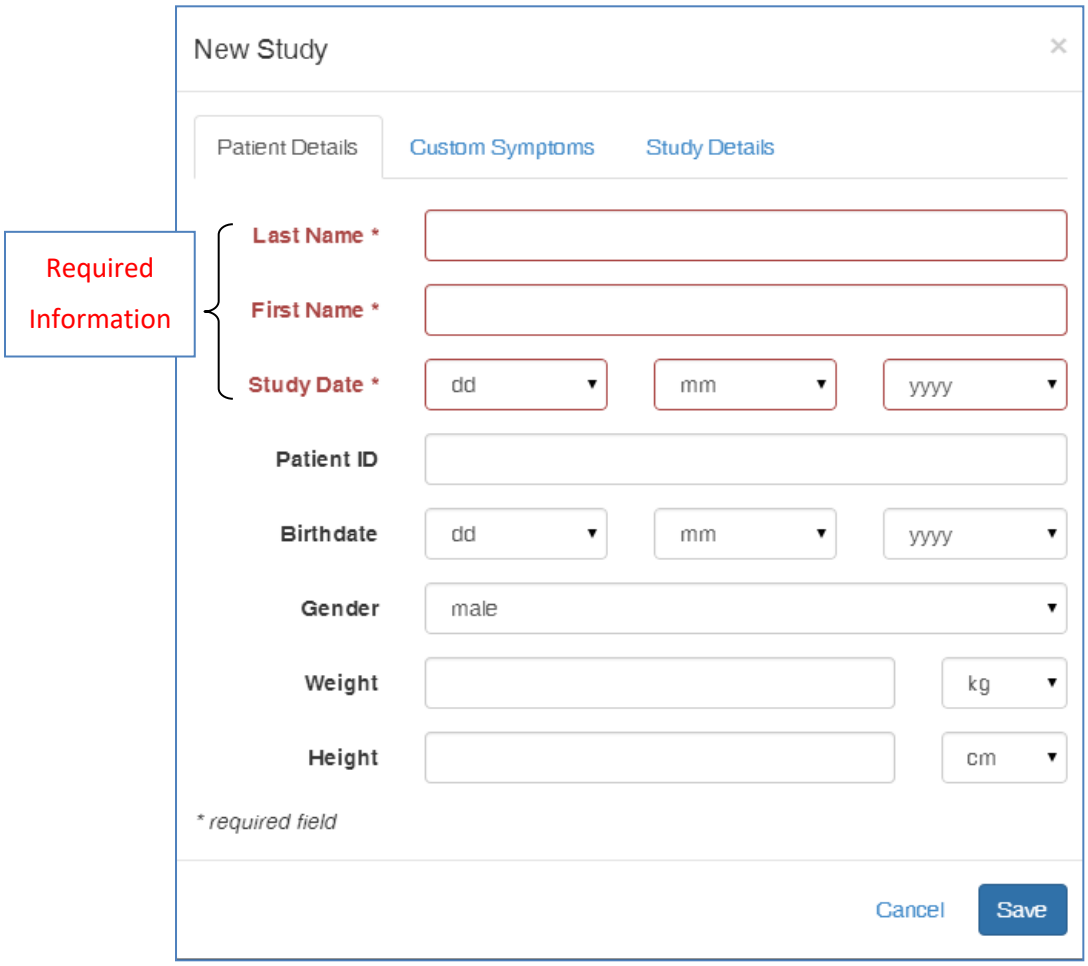
Click on the "New" Main Navigation Menu Selection to open a New Study dialog box. There are 3 tabs provided for entering information. The first tab displays Patient Details input fields.

Click in the field boxes to input patient data according to the available controls:

Field	Available Controls
Patient Last Name	30 characters
Patient First Name	30 characters
Study Date	dd-mm-yyyy [selectable, drop down]
Patient ID	30 characters
Birth Date	dd-mm-yyyy [selectable, drop down]
Gender	male/female [selectable, toggle]
Patient Weight	n pounds (n kg) [selectable, toggle]
Patient Height	n inches (n cm) [selectable, toggle]



The required fields Last Name, First Name, and Study Date are labeled with an asterisk. If the user clicks "Save" without entering patient information into these field boxes, the required fields turn red.



Enter patient information into the required fields and any other desired fields.

Information entered in Patient Details will appear on the Report header after the study is completed.

Next, click the Custom Symptoms tab to enter specific symptom information.

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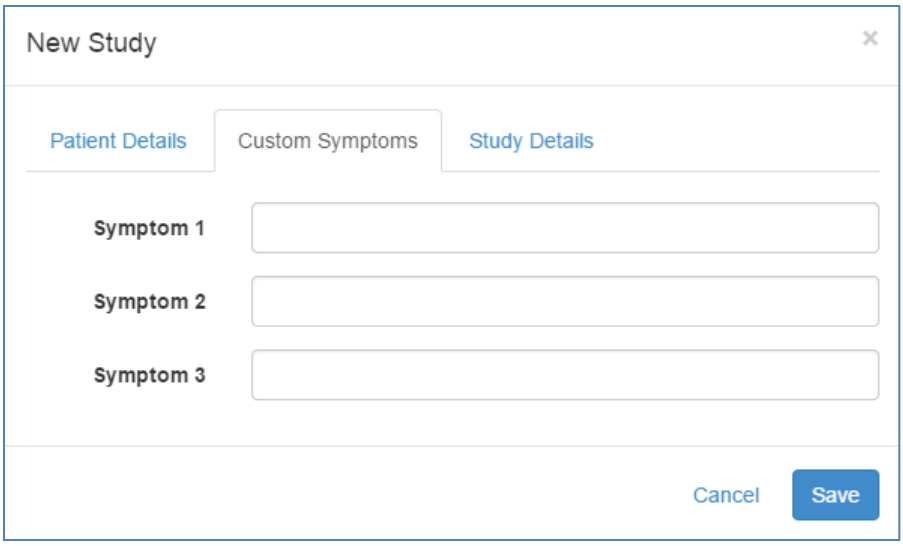
4.1.2 Custom Symptoms Tab

Click on the "New" Main Navigation Menu Selection to open a New Study dialog box. The second tab displays Custom Symptoms input fields.

Click in the Symptom fields to input symptoms according to the available controls:

Field	Available Controls
Symptom 1	4 characters
Symptom 2	4 characters
Symptom 3	4 characters



The symptoms will appear on the Recorder screen during the pH study.

Next, click the Study Details tab to enter study specific information.

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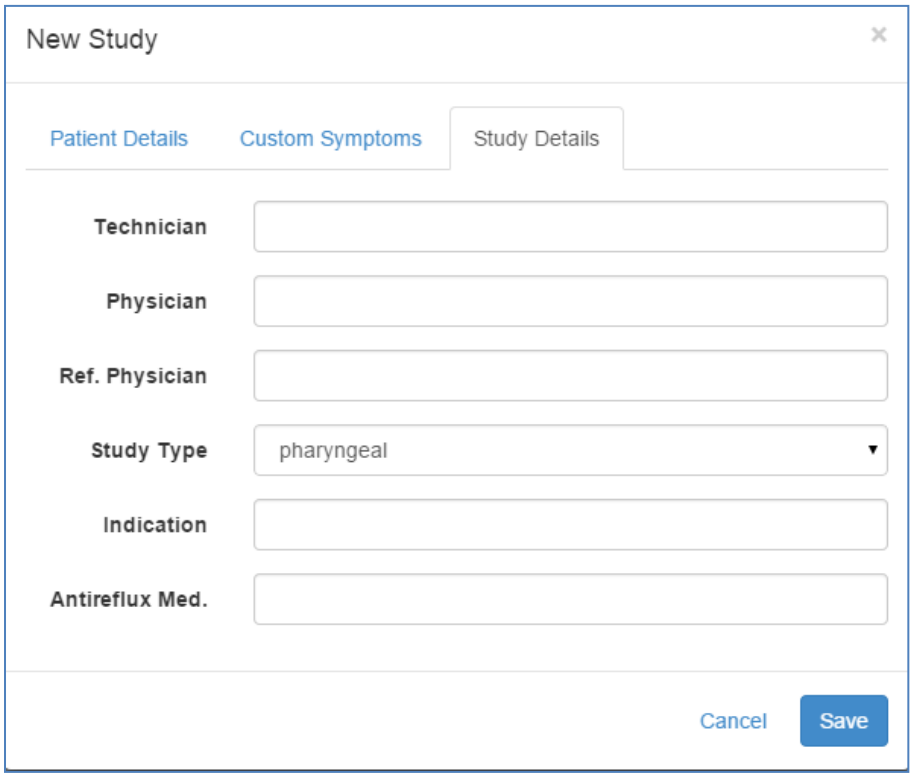
4.1.3 Study Details Tab

Click on the "New" Main Navigation Menu Selection to open a New Study dialog box. The third tab displays Study Details input fields. Enter information according to the available controls:

Field	Available Controls
Technician	30 characters
Physician	30 characters
Referring	30 characters
Study Type	pharyngeal [selectable]
Indication	Infinite characters
Antireflux Med.	30 characters

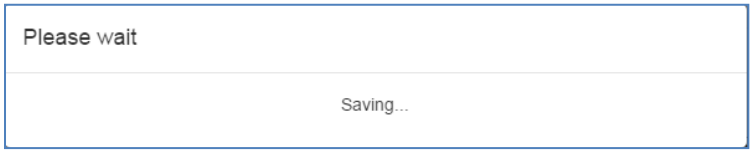


Information entered in Study Details will appear on the Report header after the study is completed.

See the next section for Saving the New Study information.

4.1.4 Save New Study Information

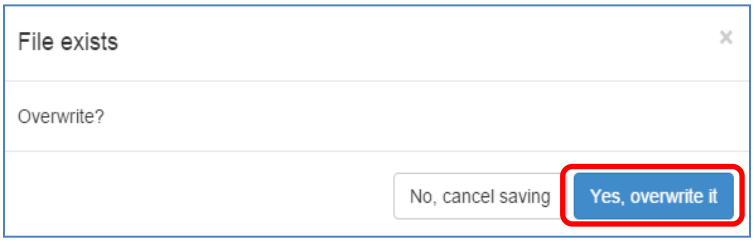
Click "Save" from any tab in the New Study dialog box. The 'Please wait Saving' box is displayed.



Once the New Study information is saved to the RESTECH SD card, the 'Please wait Saving' box disappears and the DataView Workspace is displayed.

Note: You can click “Save” on any of the three tabs and still enter additional information on the other tabs. Just click “Save” again to save the additional information.

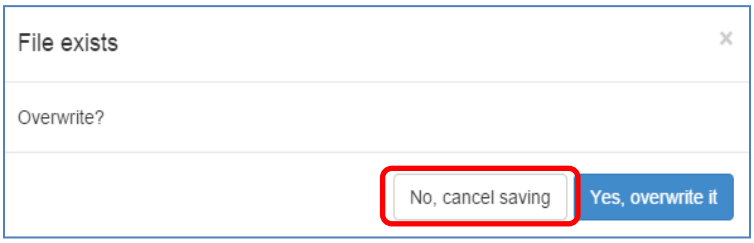
If there is an existing study on the RESTECH SD card, when the user clicks "Save" from any tab in the New Study dialog box, a 'File exists Overwrite?' dialog box is displayed.



If the existing study has already been saved to the computer, click "Yes, overwrite it." The 'Please wait Saving' box is displayed.

Once the New Study information is saved to the RESTECH SD card, the 'Please wait Saving' box disappears and the DataView Workspace is displayed.

If the existing study has not been saved to the computer, click "No, cancel saving." The 'File exists Overwrite?' dialog box disappears and the DataView Workspace is displayed. To save the existing study on the SD card follow the instructions in Section 5.1 Retrieve a Completed Study, then return to Section 4.1 Entering and Saving New Study Information.



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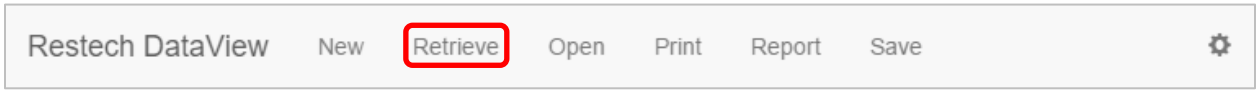
5. Main Navigation Menu Selection “Retrieve”

5.1 Retrieve a Completed Study

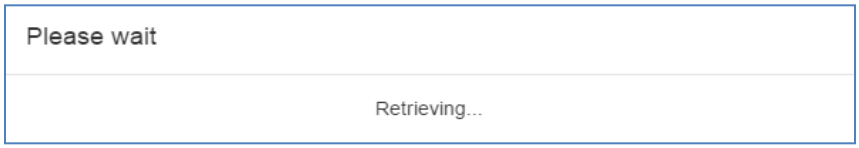
The "Retrieve" Main Navigation Menu Selection allows the user to save a completed study into the Restech data folder and to pull up the study data into the Graph Workspace.



To retrieve a patient study, remove the RESTECH formatted SD card from the Dx-Recorder and insert it into your computer's SD card reader. You may use the SD card reader supplied by Restech if your computer does not have a built-in card reader. A navigation pane may display the data card file directory. Close it and continue.

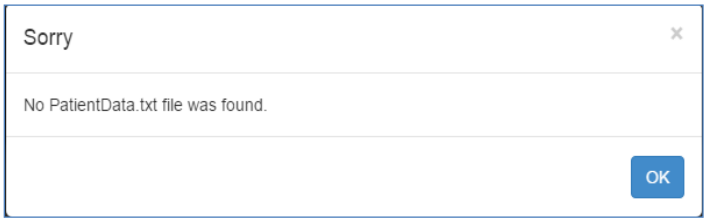
Start the DataView software by clicking on the Restech DataView Icon. DataView launches with the Main Navigation Menu in the blank DataView Workspace.

Click on the "Retrieve" Main Navigation Menu Selection. A 'Please wait Retrieving' dialog box is displayed.



When DataView completes the data retrieval, the 'Please wait Retrieving' dialog box will disappear and the Graph Workspace will show the patient's pH Study Graph.

If there is no patient study on the SD card, a 'Sorry No PatientData.txt file was found' dialog box is displayed. Click "OK" to return to the DataView Workspace. Insert another SD card with a patient study to retrieve a study.



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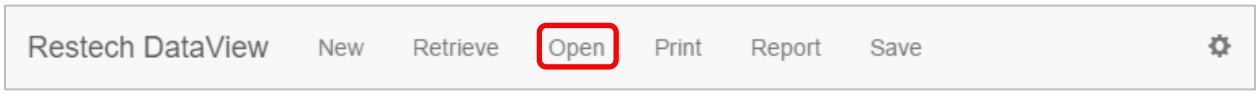
6. Main Navigation Menu Selection “Open”

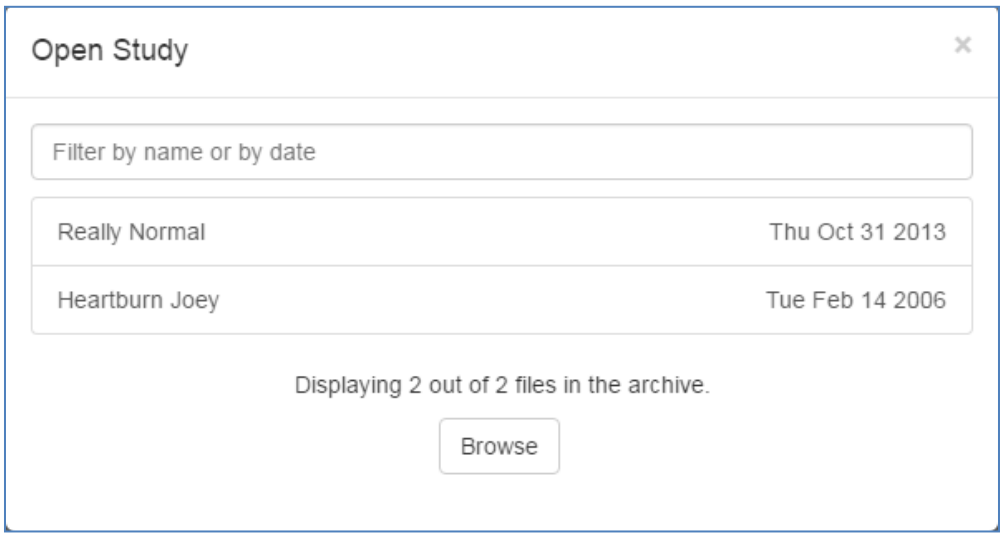
6.1 Open an Existing Study

The "Open" Main Navigation Menu Selection displays an Open Study dialog box with a file search field. A list of recently saved patient files is displayed. A "Browse" button is provided for the user to open a patient study from anywhere on the computer or a shared drive location.



To open a patient study, click on the "Open" Main Navigation Menu Selection.

With the initial installation of the DataView software, there will be two example patient study files available in the Open Study list, 'Heartburn Joey' and 'Really Normal'. Additional patient study files will be added when completed studies have been retrieved according to Section 5.1.



Once 10 or more additional patient study files have been retrieved and saved in DataView, the Open Study dialog box will display a list of the 10 most recent patient study files in the format 'Last name First name study date.' The dialog box includes a searchable list by name or date.

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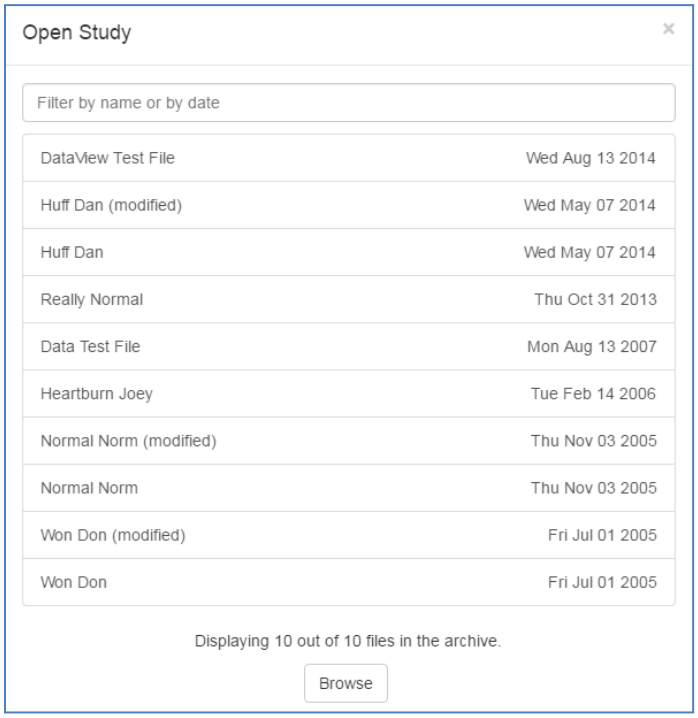
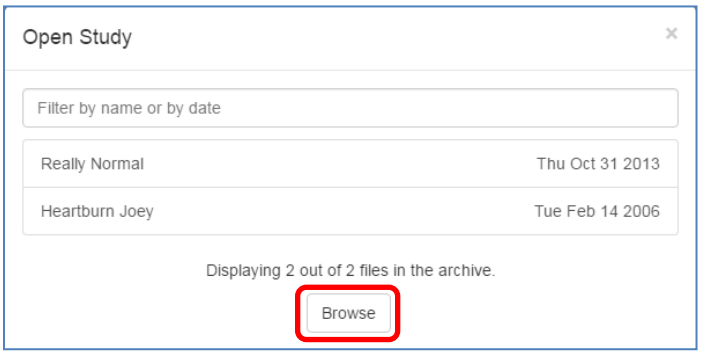
Click on a name or study date to open the file. DataView will open the pH study Graph.



If the patient's name or study date does not appear in the list, enter the first few letters of the patient name or the study date in the search field "Filter by name or by date". When the desired file is displayed, click on the file and DataView will open the pH study Graph.

To open a patient study that is not in the Open Study list and is not available in the search field, click the "Browse" button.



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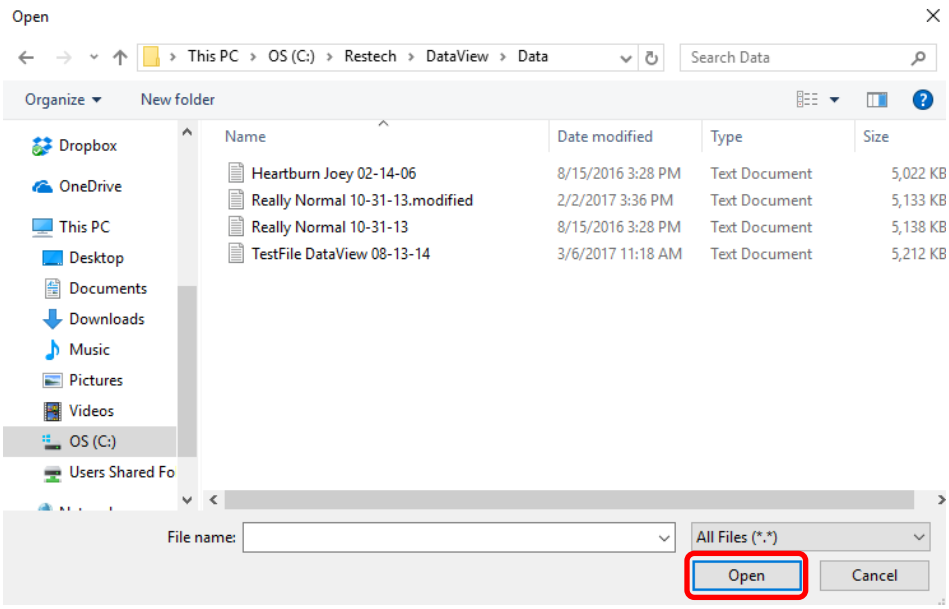
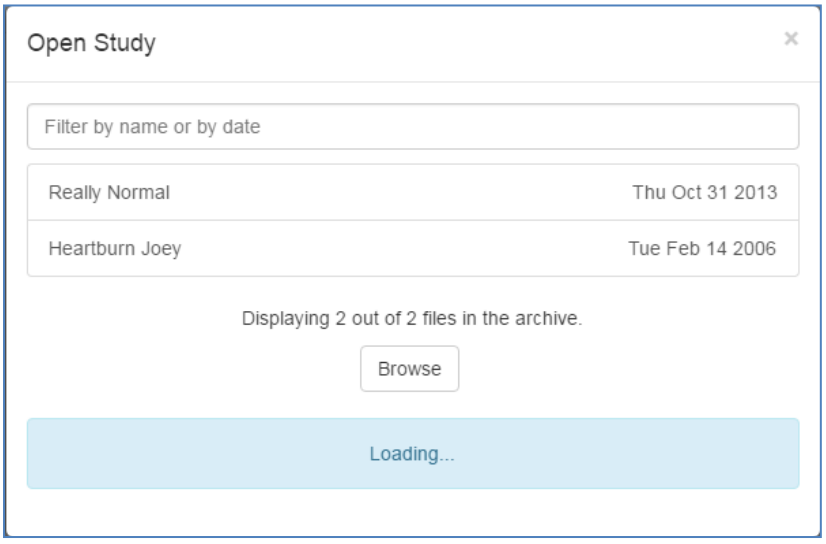
A Windows Navigation Pane will be displayed. This allows navigation to the computer or a shared drive location to find and open the desired patient study. Select the desired file name and click Open.



DataView will display "Loading..." at the bottom of the Open Study dialog box.

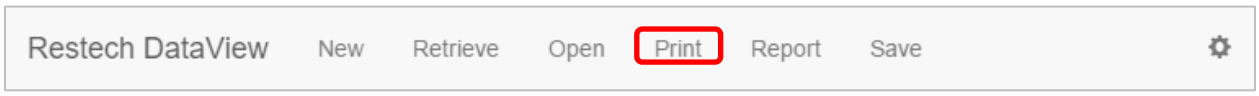


The Open Study dialog box will disappear and DataView will open the pH study Graph.

7. Main Navigation Menu Selection “Print”

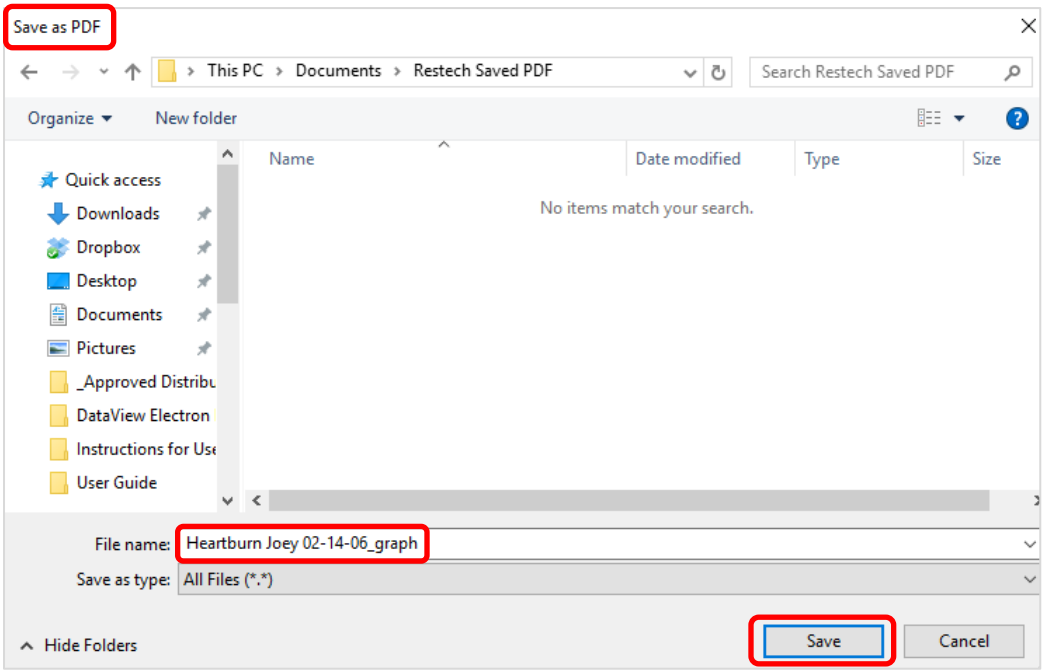
7.1 Print Graph

The "Print" Main Navigation Menu Selection allows the user to save a PDF document of Graphs and Reports.



To print a Graph from the Graph Workspace, select "Print" from the Main Navigation Menu.

A “Save as PDF” dialog box will be displayed. This allows navigation through the computer to locate the desired patient studies folder. The user can create a destination folder anywhere on the computer or a shared drive. In the example below the folder “Restech Saved PDF” was created in the user’s Documents folder.



DataView will automatically name the file with last name, first name, study date, and graph.

Select “Save” and the Graph file will be saved in the selected destination folder.

After saving the file as a PDF, the Graph is displayed as a PDF document, using the available PDF program on the computer. DataView automatically selects Landscape Layout for displaying and printing the Graph.

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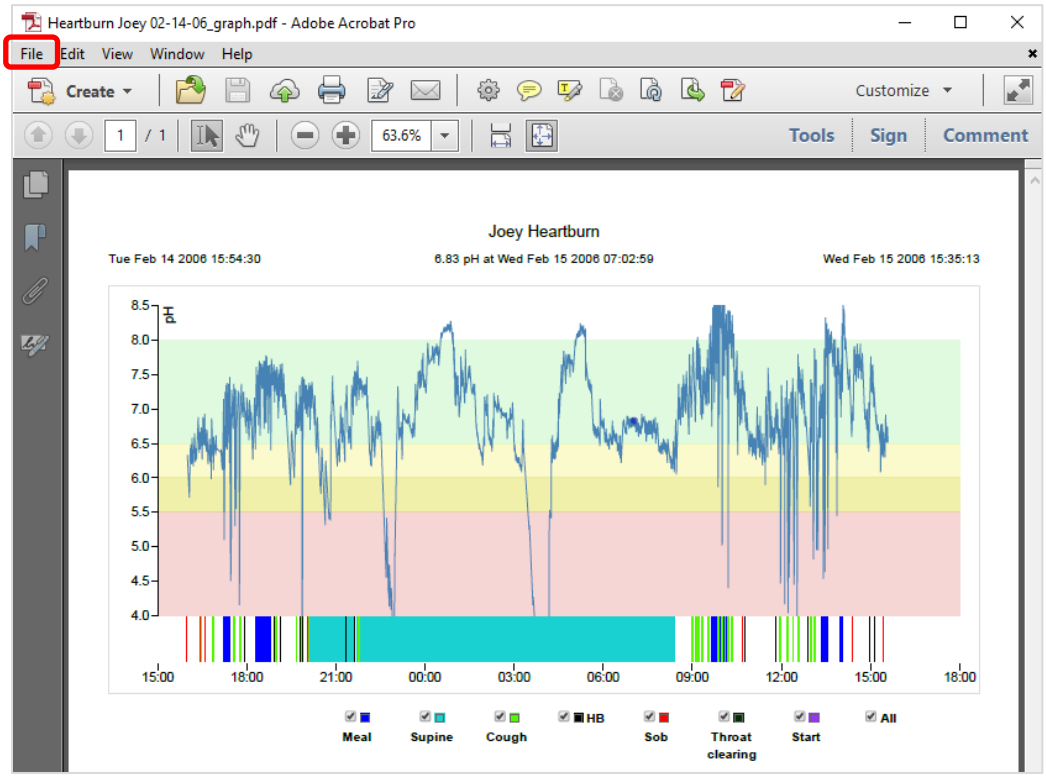
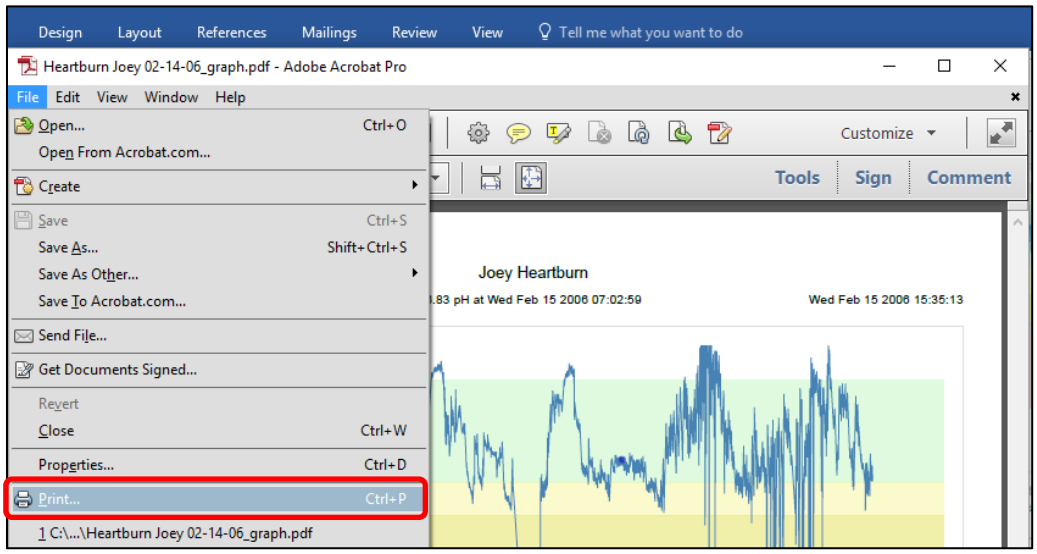
The menu items and controls displayed will vary based on the PDF program on the computer.

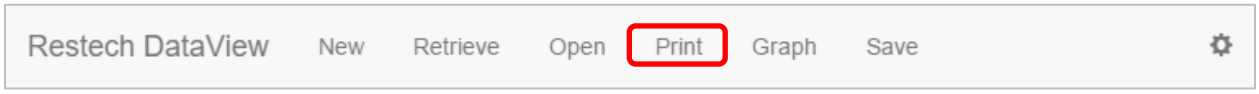


In the opened Graph PDF, select “File” from the menu. Then select “Print” for the desired printer. Follow the Print menu in the PDF program to Print the Graph.



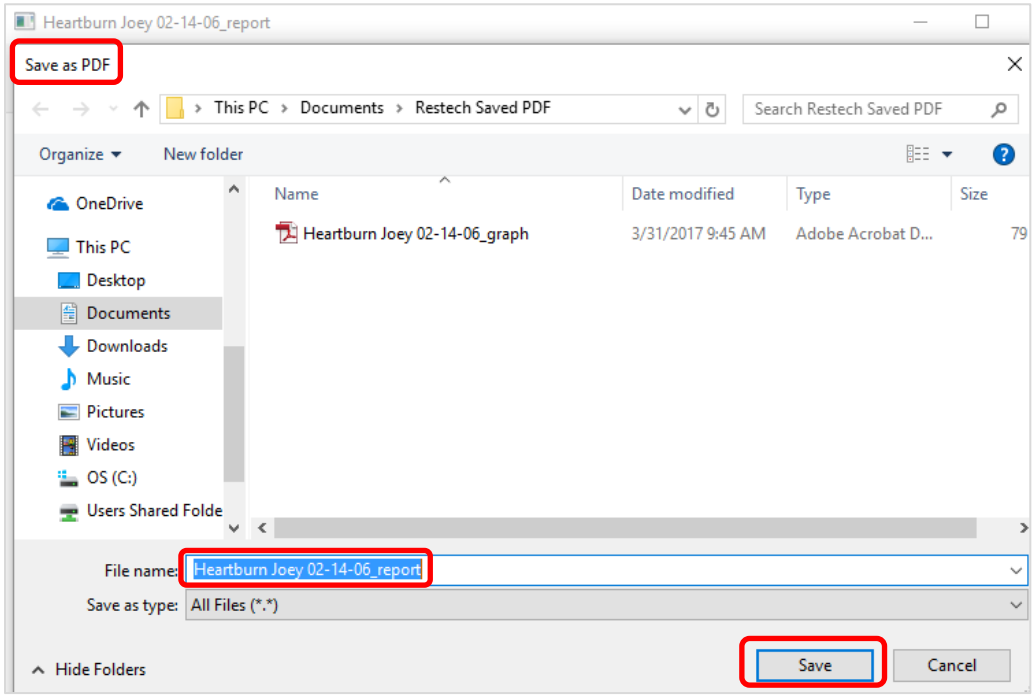
7.2 Print Report

The "Print" Main Navigation Menu Selection allows the user to save a PDF document of Graphs and Reports.



To print a Report from the Report Workspace, select "Print" from the Main Navigation Menu.

A “Save as PDF” dialog box will be displayed. This allows navigation through the computer to locate the desired patient studies folder. The user can create a destination folder anywhere on the computer or a shared drive. In the example below the folder “Restech Saved PDF” was created in the user’s Documents folder. The Graph was also saved as a PDF in this folder.



DataView will automatically name the file with last name, first name, study date, and report.

Select “Save” and the Report file will be saved in the selected destination folder.

After saving the file as a PDF, the Report is displayed as a PDF document, using the available PDF program on the computer. DataView automatically selects Portrait Layout for displaying and printing the Report.

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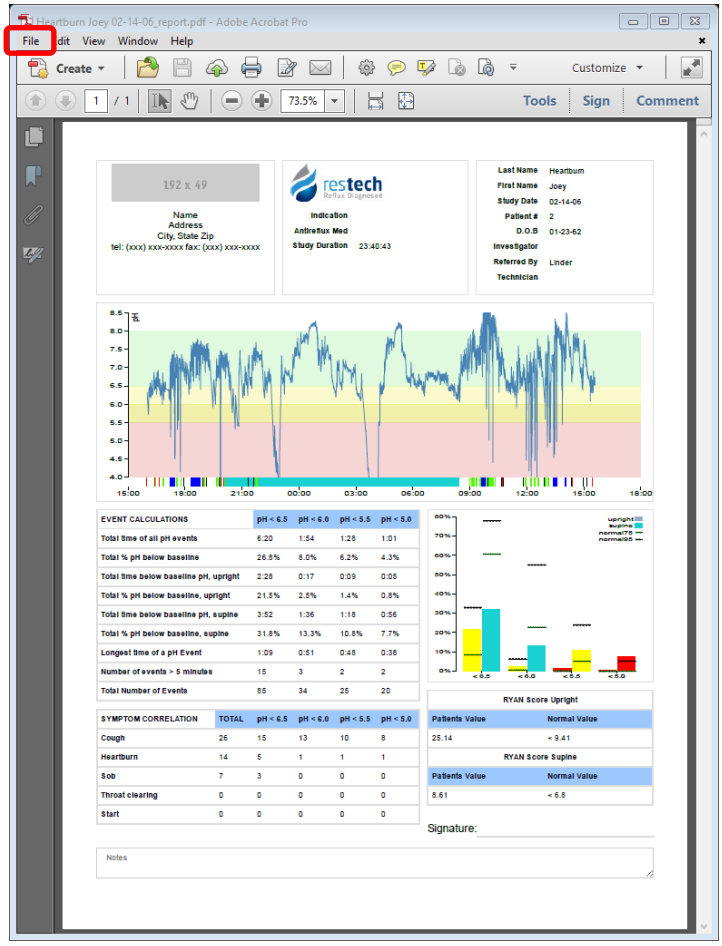
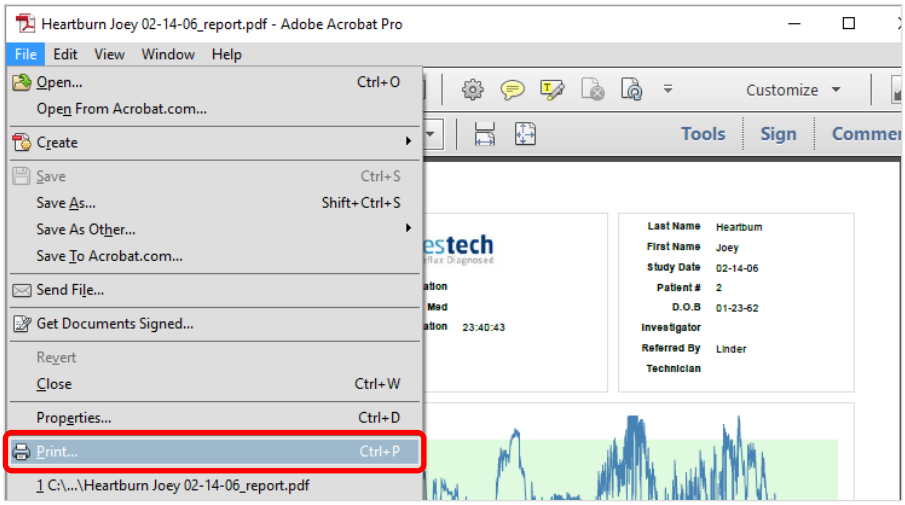
The menu items and controls displayed will vary based on the PDF program on the computer.



In the opened Report PDF, select “File” from the menu. Then select “Print” for the desired printer. Follow the Print menu in the PDF program to Print the Report.

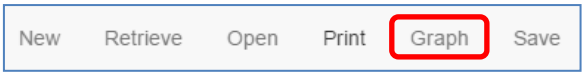


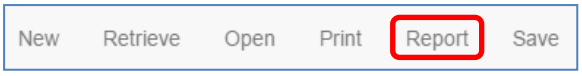
8. Main Navigation Menu Selection “Graph”

8.1 View and Edit pH Study Graph

The default representation of the patient study files is given in the Graph Workspace. The pH Study Graph displays the pH values versus time. The Event Graph below the pH Graph displays patient symptoms and pH study events.

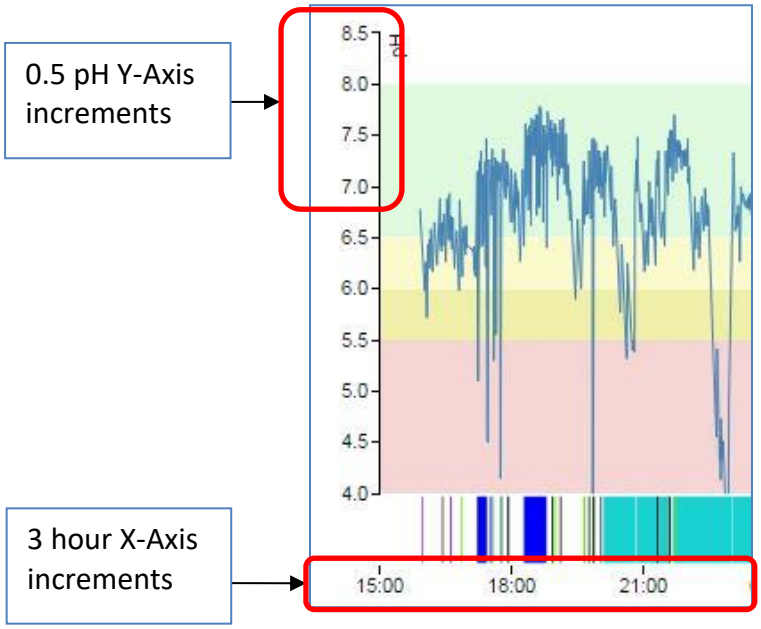
The "Graph" and "Report" Main Navigation Menu Selections toggle between the Graph and Report Workspaces.



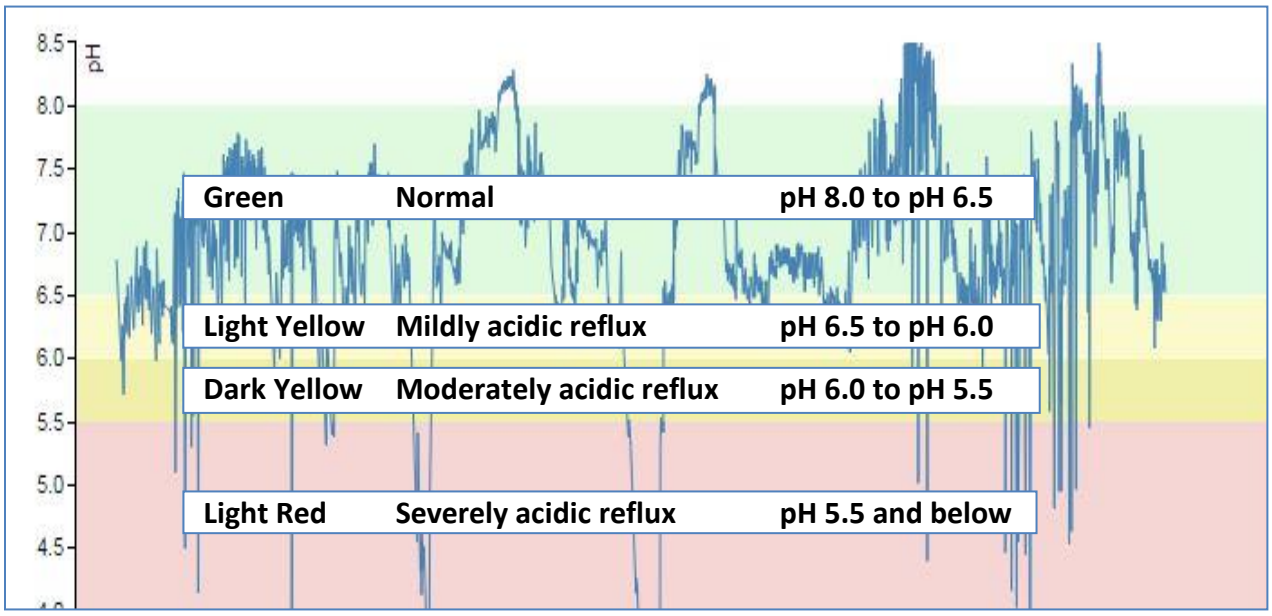


The Patient Name is displayed at the top of the Graph Workspace above the Graph toolbar. The study start time and end time are displayed above the pH Graph.

The vertical axis of the pH Study Graph displays pH at 0.5 pH increments and the horizontal axis displays time at 3 hour increments.



Four horizontal color bands appear on the pH Study Graph for each pH baseline.
The colors of these bands may be changed in the "Settings" Main Navigation Menu Selection.



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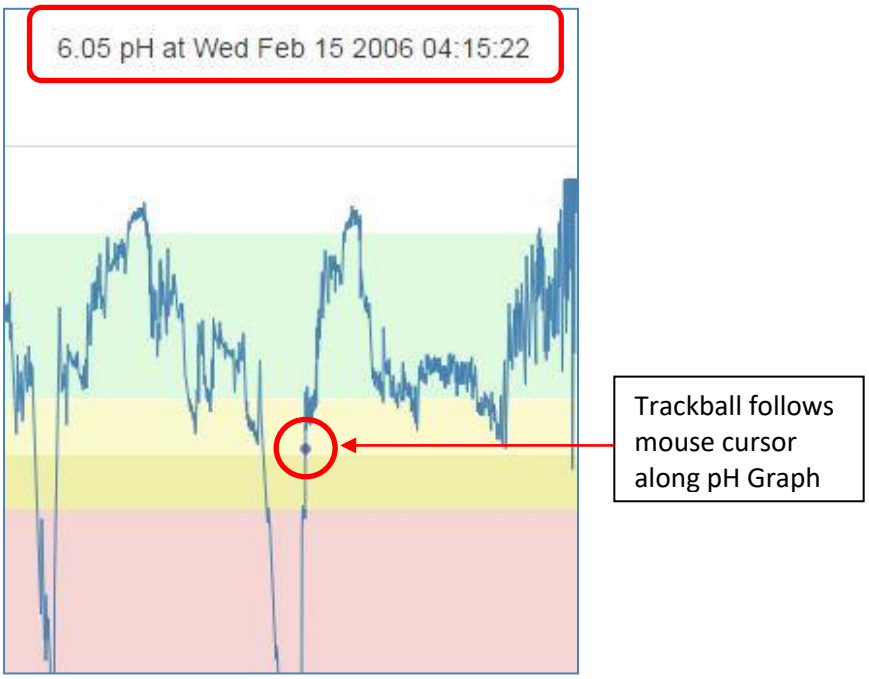
Trackball

The trackball function allows the user to locate specific pH data points or time within the study using the cursor.

Hover the mouse cursor over the pH data of the pH Graph and move horizontally along the points of the study. The trackball follows the movement of the mouse cursor along the pH Graph.

The trackball pH and time are displayed above the pH Graph in the area below the Graph toolbar. The pH value and time on the trackball display change to match the pH, time, and date of each point on the pH Graph.



Missing time periods and dry out events

If the data transmission is interrupted during the study, the pH Graph will display a straight line connecting the last transmitted pH value and the next transmitted pH value.

If the pH Probe dries out during the study, the pH Graph will display a straight line connecting the last transmitted pH value and the next transmitted pH value.

If the pH Probe is removed from the patient and dries out before the pH study ends, the pH Graph will display a straight line from the last transmitted pH value to the end of the study.

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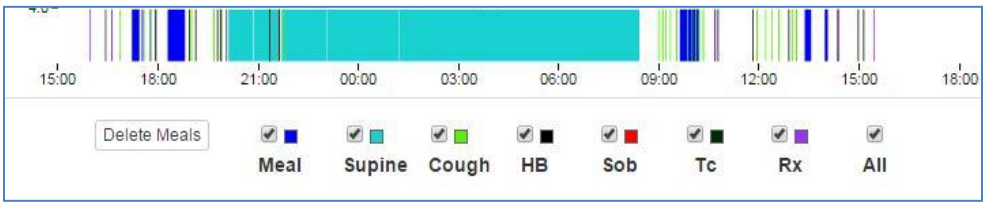
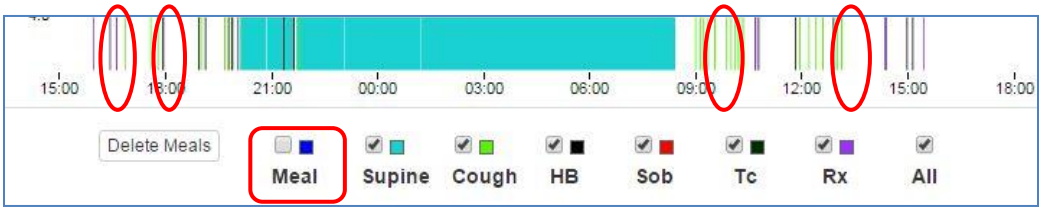
8.2 View and Edit Event Graph

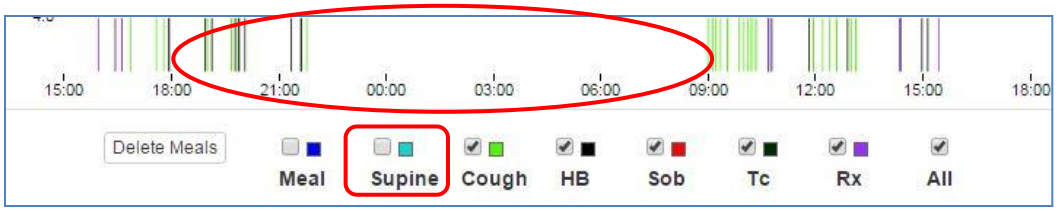
The Event Graph displays events marked by patient button presses on the Dx-Recorder during the pH study. You may visually correlate patient symptoms, meals, and supine periods with changes in pH. The pH Graph and Event Graph share the X-axis (time).



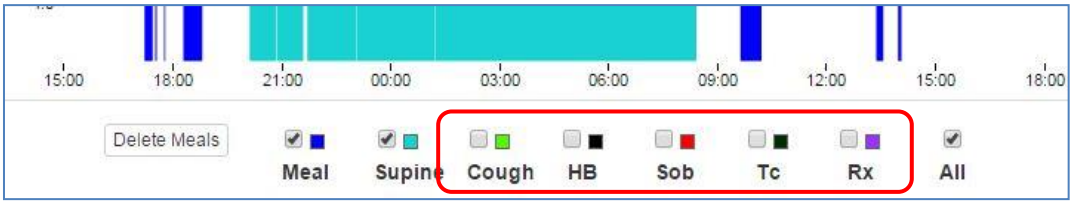
Each checkbox allows the user to show or hide the corresponding symptom. Unchecking the meals checkbox removes the blue meal markers from the Event Graph.



Unchecking the supine checkbox removes the teal supine markers from the Event Graph.



Unchecking the symptom checkboxes removes the button press symptom markers from the Event Graph.



Unchecking the All checkbox removes all event and symptom markers from the Event Graph.

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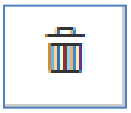
8.3 Graph Toolbar

The DataView Software contains tools located in the Graph toolbar to precisely edit the pH Graph to match the written patient diary entries.

Add events and symptoms in a selected range

Remove events and symptoms in a selected range — does not remove pH data



Delete pH data, events, and symptoms in a selected range — removes pH data

Undo the last undoable command: erases the last change done to the Graph reverting it to the previous state

Zoom in on pH data in selected range

Zoom out to original size of Graph

Adjust the Y-axis pH scale

NOTE: CHECK the patient's diary entries before editing the pH Graph.
COMPARE THE EVENT GRAPH TO THE WRITTEN PATIENT DIARY ENTRIES.

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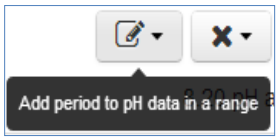
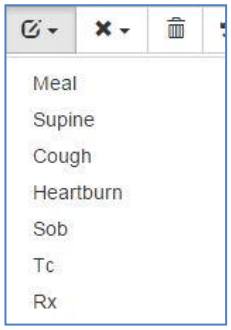
8.3.1 Add Event and Symptom Information

The Add button in the Graph toolbar allows the user to add Events and Symptoms to the Graph.

Hover the mouse over the Add button and the tooltip displays "Add period to pH data in a range."



Select a time range on the pH Graph using the click and drag function. Click the Add button. The Add button displays a dropdown menu containing a list of available Events and Symptoms. The last three Custom Symptoms will vary depending on the symptoms input for each patient study.



If a meal is added to a selected range, a new meal marker will appear in the Event Graph.

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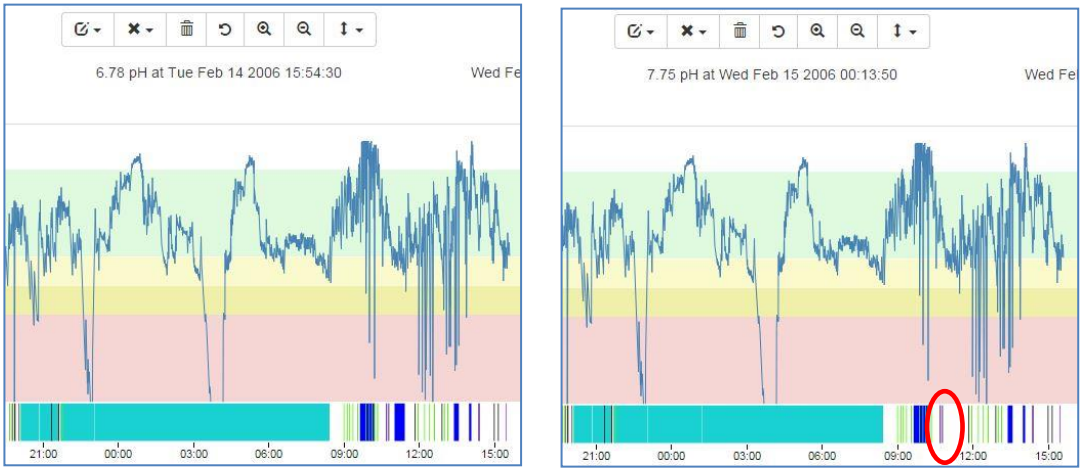
8.3.2 Remove Event and Symptom Information

The Remove button in the Graph toolbar allows the user to remove Events and Symptoms on the Graph. The data is not removed from event calculations.

Hover the mouse over the Remove button and the tooltip displays "Clear periods from pH data in a range."

Select a time range on the pH Graph using the click and drag function. Click the Remove button. The Remove button displays a dropdown menu containing a list of available Events and Symptoms. The last three Custom Symptoms will vary depending on the symptoms input for each patient study. Clicking "All" removes all Events and Symptoms.

If a meal is removed in a selected range, a meal marker will disappear in the Event Graph.



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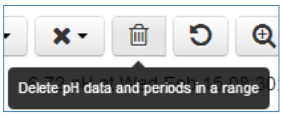
8.3.3 Delete Event Information

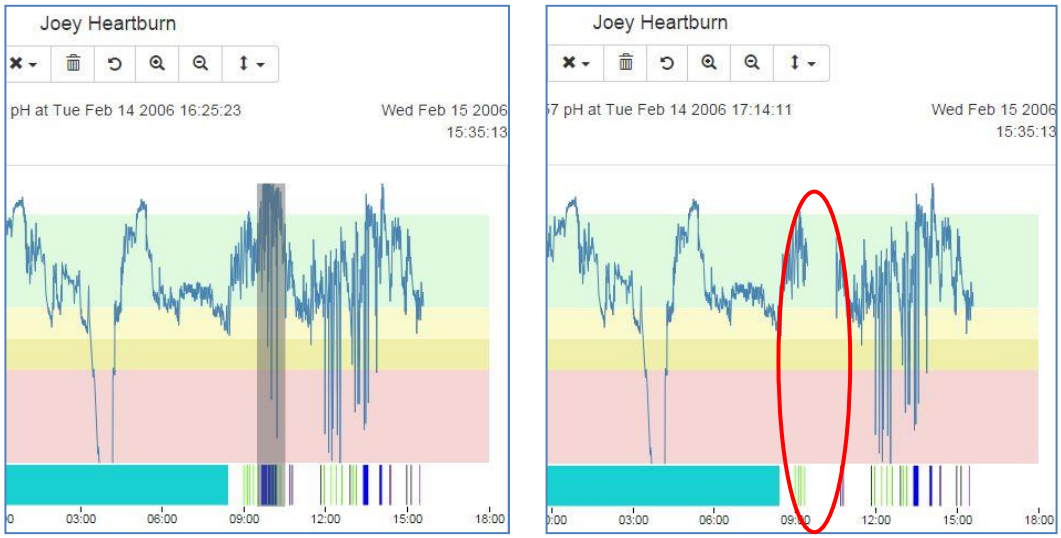
The Delete button in the Graph toolbar allows the user to delete pH data, Events, and Symptoms on the Graph. The data is removed from event calculations.

Hover the mouse over the Delete button and the tooltip displays "Delete pH data and periods in a range."



Select a time range on the pH Graph using the click and drag function. Click the Delete button. The Delete button completely removes pH data, Events, and Symptoms in the selected range.

If a time range that includes a meal period is deleted, all of the pH data, including the meal, is completely deleted.



8.3.4 Undo Changes

The Undo button in the Graph toolbar allows the user to undo commands in the Graph function. Hover the mouse over the Undo button and the tooltip displays "Undo the last undoable command."

Click the Undo button. The Undo button reverts to the last change made. Click the Undo button multiple times in order to undo all the changes made during the current session.

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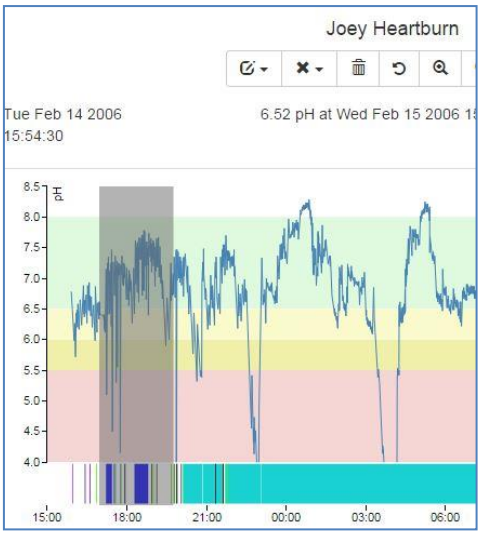
8.3.5 Zoom In

The Zoom In button in the Graph toolbar allows the user to view a magnified section of the Graph by expanding the X-axis. Hover the mouse over the Zoom In button and the tooltip displays "Zoom in on pH data in selected range."

Select a time range on the pH Graph using the click and drag function. Click the Zoom In button. The Zoom In button magnifies the pH Graph data of the selected range.

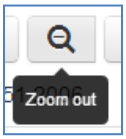


Select a time range

Zoomed in view of selected range

8.3.6 Zoom Out

The Zoom Out button in the Graph toolbar allows the user to restore the graph display to the original time interval of the Graph. Hover the mouse over the Zoom Out button and the tooltip displays "Zoom out."



Click the Zoom Out button. The Zoom Out button returns the pH Graph to its original size.

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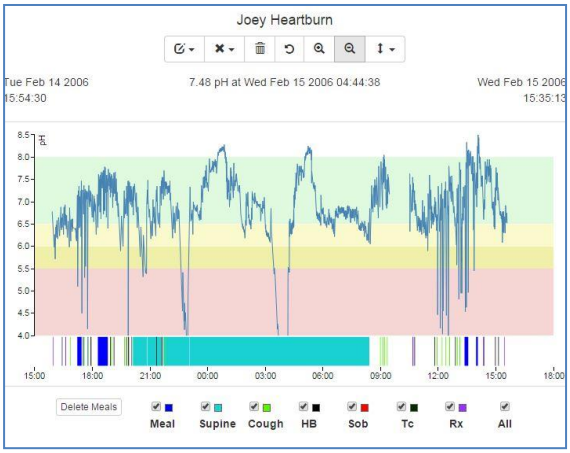
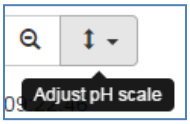
Zoomed in view



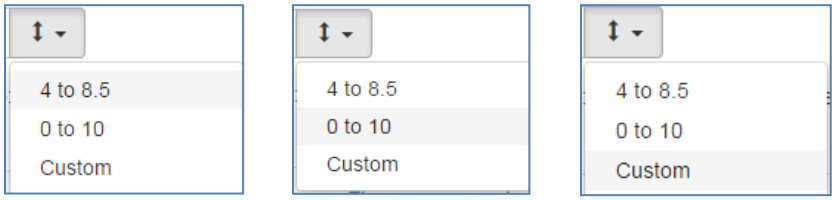
Zoom out to return to original size

8.3.7 Y-Axis (pH Scale) Adjustment

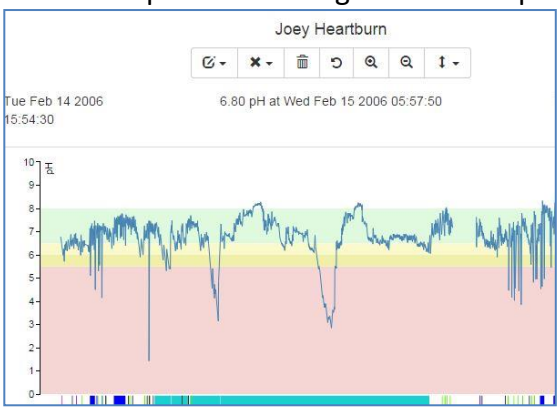
The Y-Axis Adjustment button in the Graph toolbar allows the user to adjust the Y-Axis pH scale of the Graph. Hover the mouse over the Y-Axis Adjustment button and the tooltip displays "Adjust pH scale."



Click the Y-Axis Adjustment button. The Y-Axis Adjustment button displays a dropdown menu containing a list of available pH ranges: 4 to 8.5, 0 to 10, and Custom.



Select the 0 to 10 pH setting from the dropdown menu. The Graph Y-Axis changes to 0 to 10 pH.



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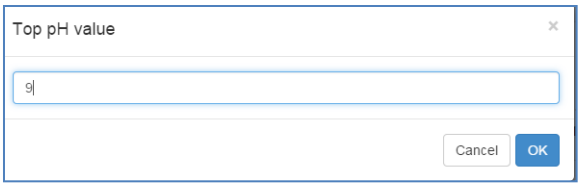
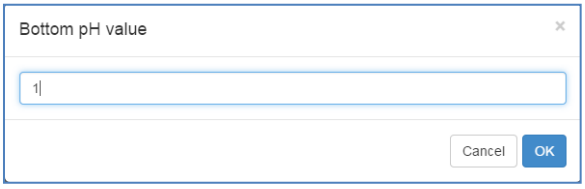
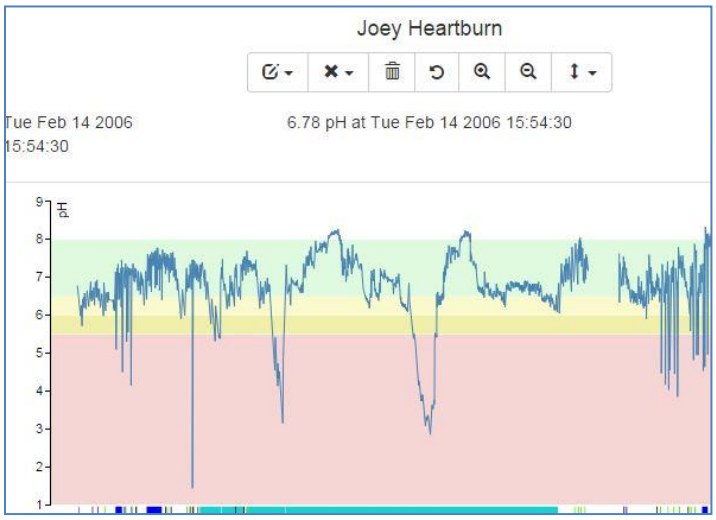
Select the Custom pH setting from the dropdown menu. A Y-Axis Adjustment dialog box is displayed for entering the custom Top pH value. The number 9 is entered as an example here. Click "OK" to continue.



A Y-Axis Adjustment dialog box is displayed for entering the custom Bottom pH value. The number 1 is entered as an example here. Click "OK" to continue.



The Y-Axis Adjustment dialog box closes and the pH Graph changes to the new Y-Axis scale.

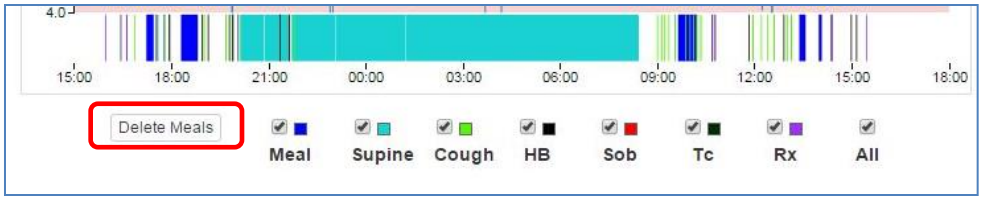


To return to the default Y-Axis, click the Y-Axis Adjustment button and select 4 to 8.5 in the dropdown menu.

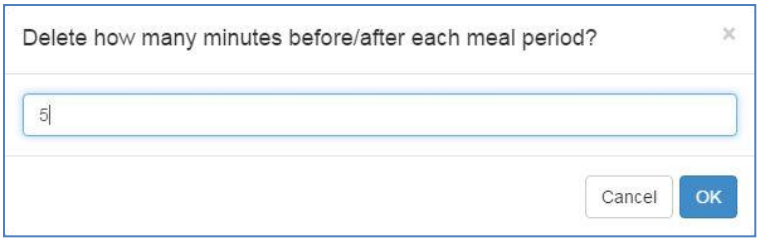
8.3.8 Delete Meals

The Delete Meals button in the Graph Workspace allows the user to delete pH data associated with all meals on the pH Graph.

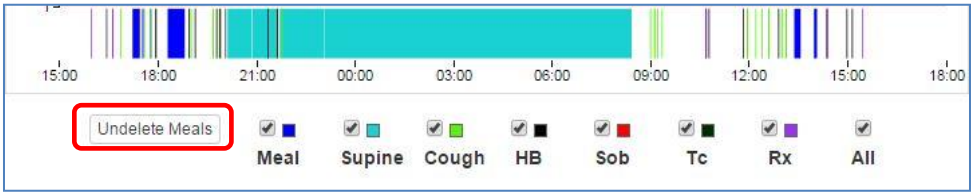
Clicking the Delete Meals button changes the calculations for the Event Calculations Table, but *does not remove the meal markers* from the Event Graph and *does not remove pH data* from the pH Graph.



Click the Delete Meals button. The 'Delete how many minutes before/after each meal period?' dialog box is displayed. The default number is 5 minutes, but the number may be changed in the selection field. Click "OK" to continue.



The Delete Meals button now displays "Undelete Meals" and the Event Graph still shows the meal events.



To confirm that meals have been deleted from the calculations, click Report on the Main Navigation Menu and locate the center header. The Restech Information Block displays 'Meals Removed from Calculations."

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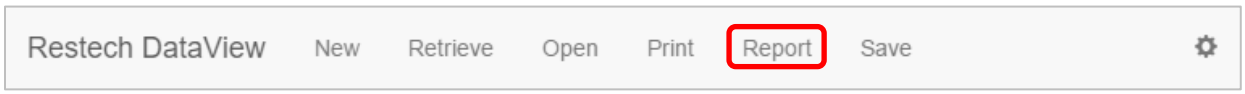
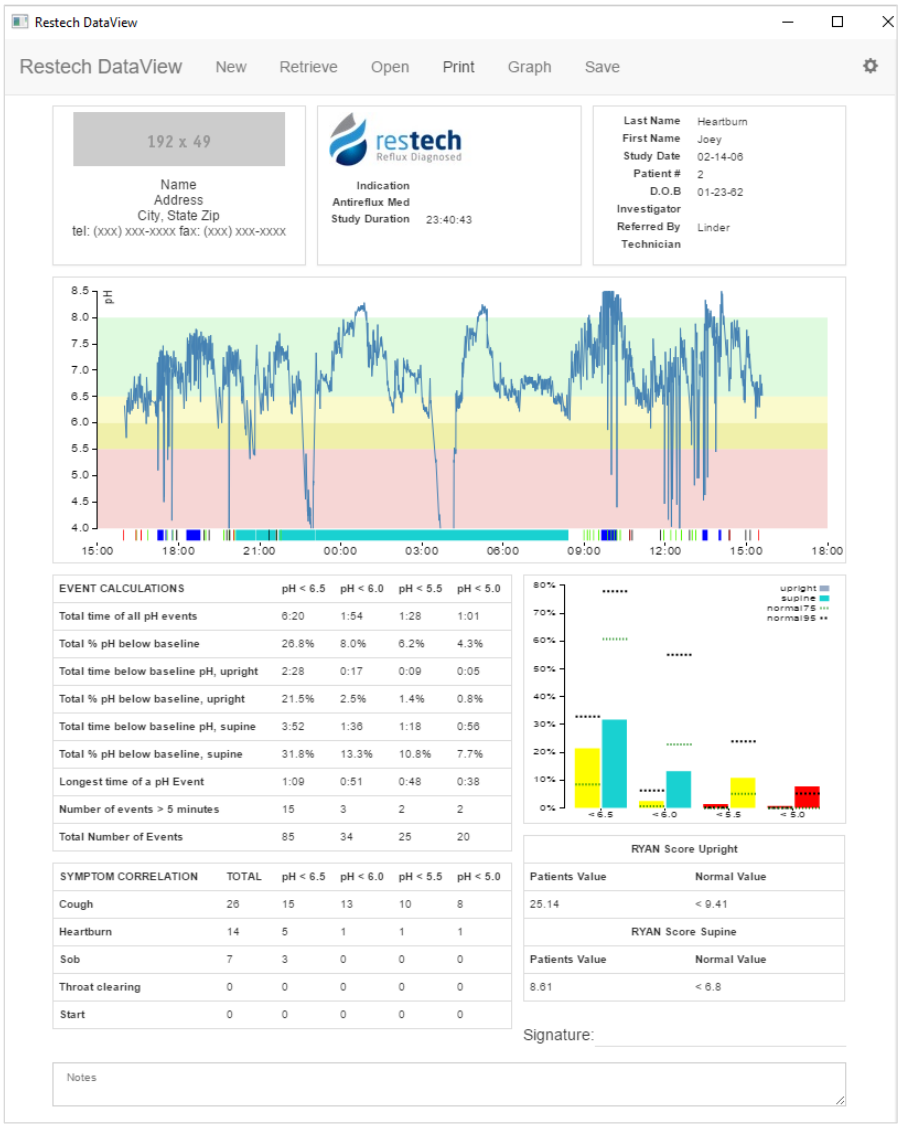
9. Main Navigation Menu Selection “Report”

9.1 View and Edit Reports

The "Report" Main Navigation Menu Selection displays a representation of the patient study file in the Report Workspace.



The Report Workspace displays the Site Information, Restech Information, Patient Study Information, pH Study Graph, Acid Exposure Graph, Event Calculation Table, Symptom Calculation Table, RYAN Score, Notes field, and Signature field.



EVENT CALCULATIONS	pH < 6.5	pH < 6.0	pH < 5.5	pH < 5.0
Total time of all pH events	6:20	1:54	1:28	1:01
Total % pH below baseline	26.8%	8.0%	6.2%	4.3%
Total time below baseline pH, upright	2:28	0:17	0:09	0:05
Total % pH below baseline, upright	21.5%	2.5%	1.4%	0.8%
Total time below baseline pH, supine	3:52	1:36	1:18	0:56
Total % pH below baseline, supine	31.8%	13.3%	10.8%	7.7%
Longest time of a pH Event	1:09	0:51	0:48	0:38
Number of events > 5 minutes	15	3	2	2
Total Number of Events	85	34	25	20

SYMPTOM CORRELATION	TOTAL	pH < 6.5	pH < 6.0	pH < 5.5	pH < 5.0
Cough	26	15	13	10	8
Heartburn	14	5	1	1	1
Sob	7	3	0	0	0
Throat clearing	0	0	0	0	0
Start	0	0	0	0	0

RYAN Score Upright	
Patients Value	Normal Value
25.14	< 9.41
RYAN Score Supine	
Patients Value	Normal Value
8.61	< 6.8

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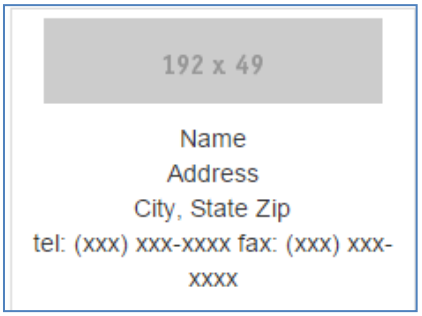
9.1.1 Site Information Block

The Site Information Block displays the site logo image and header in the upper left corner of the Report Workspace.

The user has the option to upload an image and edit site information in Settings. See Section 11.1.1 for instructions to edit and save site information.

Once an image is uploaded and edited using site information in Settings, the changes will be saved on DataView until the software is uninstalled. The user may edit and overwrite site information saved in Settings.



9.1.2 Restech Information Block

The Restech Information Block displays the Restech logo image and header, patient indications and anti-reflux medication, and study duration in the upper middle section of the Report Workspace.

If meals have been deleted from the calculations, the Restech Information Block displays 'Meals Removed from Calculations.'

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9.1.3 Patient Study Information Block

The Patient Study Information Block displays the Patient Details and Study Details inputs in the upper right corner of the Report Workspace.

Information in the Patient Study Information Block is saved from the "New" Main Navigation Menu Selection using the Patient Details Tab and Study Details Tab.

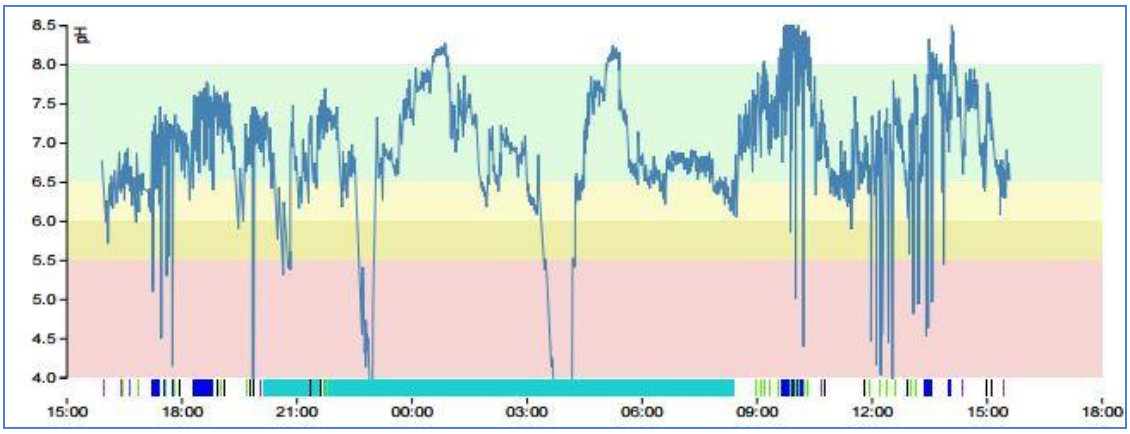
Last Name	Heartburn
First Name	Joey
Study Date	02-14-06
Patient #	2
D.O.B	01-23-62
Investigator	
Referred By	Linder
Technician	

9.1.4 pH Study Graph

The pH Study Graph displays a reduced scale replica of the pH Study Graph and Event Graph displayed on the Graph Workspace.

Unlike the pH Study Graph and Event Graph on the Graph Workspace, the pH Study Graph on the Report Workspace is not editable. Changes made on the Graph Workspace will automatically appear on the Report Workspace.

The Y-Axis of the pH Study Graph on the Graph Workspace determines the Y-Axis of the pH Study Graph on the Report Workspace.



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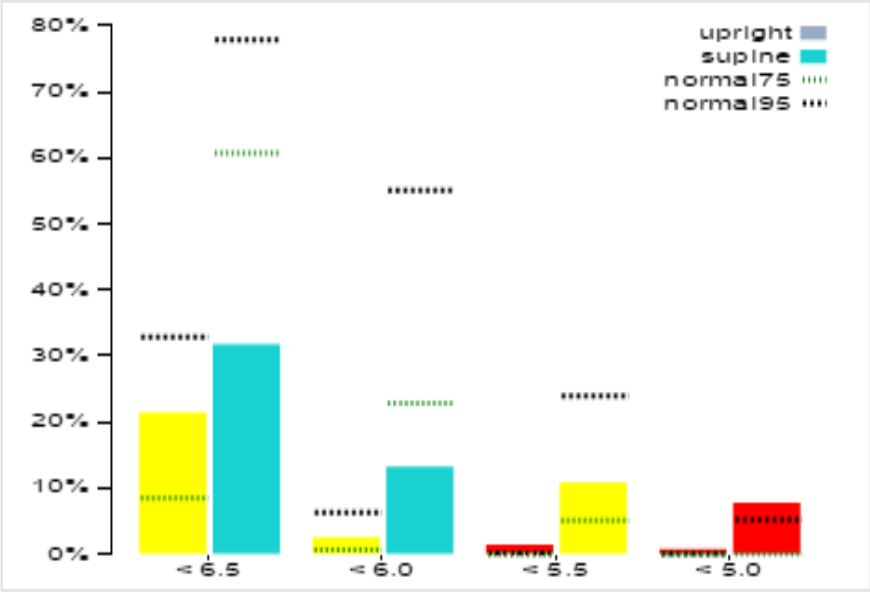
9.1.5 Acid Exposure Graph

The Acid Exposure Graph displays the "Total % below baseline, upright" and "Total % below baseline, supine" in bar graph format. These values are in the Event Calculations Table (see Section 9.1.6). Upright (left bar) and supine (right bar) are displayed at the four baseline pH ranges presented in the Event Calculations Table.



Example Acid Exposure Graph

The Y-Axis of the Acid Exposure Graph is fixed at 80% for all patients.
The X-Axis of the Acid Exposure Graph is fixed for each pH baseline.

Normal Value Markers
75th percentile = Thin horizontal dashed lines are marked for each pH baseline
95th percentile = Bold horizontal dashed lines are marked for each pH baseline

Color Key Upright
Gray = normal; patient's total % below baseline does not exceed the acid normal values.
Yellow > 75th percentile; patient's total % below baseline exceeds 75th percentile normal value.
Red > 95th percentile; patient's total % below baseline exceeds 95th percentile normal value.

Color Key Supine
Teal = normal; patient's total % below baseline does not exceed the acid normal values.
Yellow > 75th percentile; patient's total % below baseline exceeds 75th percentile normal value.
Red > 95th percentile; patient's total % below baseline exceeds 95th percentile normal value.

More information about the percentile ranges can be found in the Normative DataChart in the Settings → Help menu.

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9.1.6 Event Calculations Table

The Event Calculations Table automatically calculates and displays events on the Report Workspace for each baseline in both the upright and supine position.

EVENT CALCULATIONS	pH < 6.5	pH < 6.0	pH < 5.5	pH < 5.0
Total time of all pH events (hh:mm)	6:20	1:54	1:28	1:01
Total % pH below baseline pH	26.8%	8.0%	6.2%	4.3%
Total time below baseline pH, upright	2:28	0:17	0:09	0:05
Total % pH below baseline, upright	21.5%	2.5%	1.4%	0.8%
Total time below baseline pH, supine	3:52	1:36	1:18	0:56
Total % below baseline pH, supine	31.8%	13.3%	10.8%	7.7%
Longest time of a pH event	1:09	0:51	0:48	0:38
Number of events > 5 minutes	15	3	2	2
Total Number of Events	85	34	25	20

Event calculations for each baseline are not cumulative. They are standalone calculations at each pH range for percent, time, and number of events.

Example: If the patient's pH goes below 6.0 pH and then continues further below 5.5 pH and then below 5.0 pH, that pH "event" will be counted as time below 6.0 pH, then as time below 5.5 pH, and then as time below 5.0 pH for the period of time the pH was below each of those levels. When the pH increases to above a pH level, it is no longer counted for that pH level.

Total time and total % pH below baseline in the upright position are calculated from pH data in the upright position only. The percent of time below baseline upright is divided by the amount of upright time in the pH study.

Similarly, total time and total % pH below baseline in the supine position are calculated from pH data in the supine position only. The percent of time below baseline supine is divided by the amount of supine time in the pH study.

Clicking the 'Delete Meals' button on the Graph Workspace deletes the pH data during the meal including the selected pre-and post-prandial range, changing the affected calculations presented in the Event Calculation Table.

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9.1.7 Symptom Correlation Table

The Symptom Correlation Table automatically calculates and displays symptoms on the Report Workspace for each baseline in both the upright and supine position.

SYMPTOM CORRELATION	TOTAL	pH < 6.5	pH < 6.0	pH < 5.5	pH < 5.0
cough	26	15	13	10	8
heartburn	14	5	1	1	1
Sob	0	0	0	0	0
Throat clearing	0	0	0	0	0
Start	7	3	0	0	0

The “Total” column displays total button presses for each symptom. Values displayed in the table for each pH level indicate how many times the patient pressed that symptom button while in that pH range. In the example above, there were 13 cough button presses during the period when the patient’s pH was below 6.0 pH. There were 10 cough button presses when the patient’s pH was below 5.5 pH, and 8 cough button presses when the patient’s pH was below 5.0 pH. There were 26 cough button presses during the pH study.

Clicking the 'Delete Meals' button on the Graph Workspace deletes the pH data during the meal including the selected pre-and post-prandial range, changing the affected calculations presented in the Symptom Correlation Table.

9.1.8 RYAN Score Table

The RYAN Score Table displays a score for both the upright and supine positions. The RYAN Score published values are displayed as normal values.

RYAN Score Upright	
Patient's Value	Normal Value
25.14	< 9.41
RYAN Score Supine	
Patient's Value	Normal Value
8.61	< 6.8

More information about the RYAN Score can be found in the DeMeester RYAN Score article in the Settings → Help menu.

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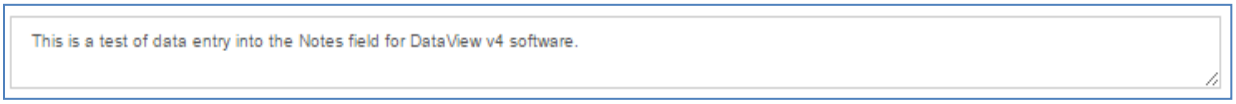
9.1.9 Notes

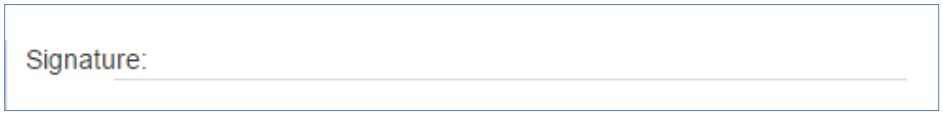
The Notes field displays an editable text box that allows the user to directly type in notes. The notes will be saved and displayed on the printed Report.



9.1.10 Signature

The Signature field allows the user to manually enter a signature on the printed Report. The signature field will appear blank on the Report Workspace.

A signature cannot be directly input from the Report Workspace.



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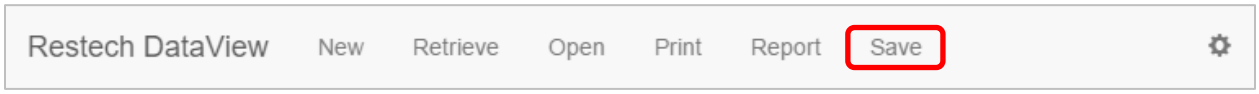
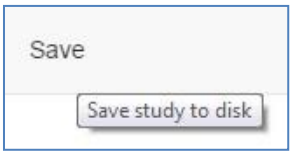
10. Main Navigation Menu Selection “Save”

The "Save" Main Navigation Menu Selection allows the user to save a modified version of the patient study after editing the Graph.

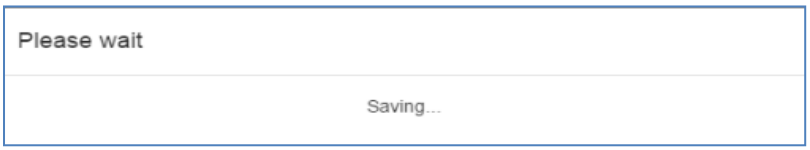
Note: A patient study retrieved from a RESTECH formatted SD card will automatically be saved. Do not use “Save” when retrieving a patient study from the RESTECH SD card.



Hover the mouse over the "Save" Main Navigation Menu Selection and the tooltip displays "Save study to disk."



If modifications have been made to a pH study, click “Save” in the Main Navigation Menu. The 'Please wait Saving' box is displayed.



The modified study will be saved using the patient’s last name, first name, study date, followed by ‘modified’.

The original unmodified patient study will remain unchanged in Restech DataView data folder.

Once the modified study is saved to the computer, the 'Please wait Saving' box disappears and the DataView Workspace is displayed.

To verify that a modified study has been saved, click "Open" in the Main Navigation Menu and the modified patient study will be displayed in the Open Study dialog box.

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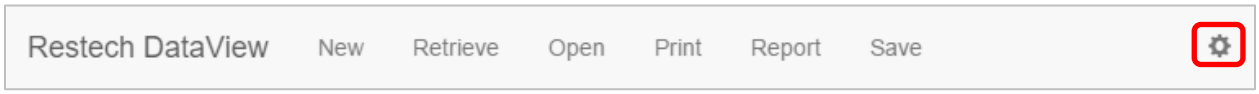
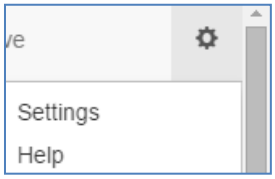
11. Main Navigation Menu Selection “Settings”

11.1 Settings

The "Settings" Main Navigation Menu Selection provides users with submenu items.



Click "Settings" in the Main Navigation Menu. The settings menu displays a dropdown menu with the submenu items: 'Settings' and 'Help.'

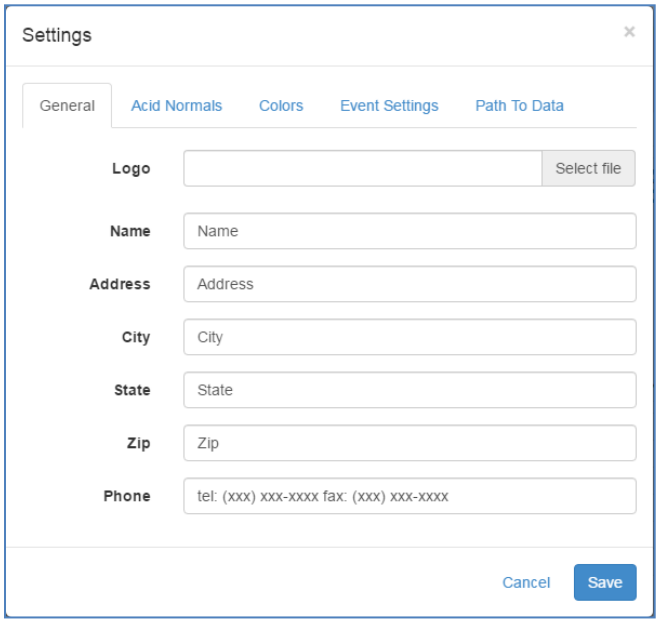


11.1.1 General Tab

Click on the 'Settings' submenu item to open the Settings dialog box. The first tab displays General input fields.

Click in the entry fields to input Site Information data according to the available input fields.

The first field allows the user to upload an image logo.



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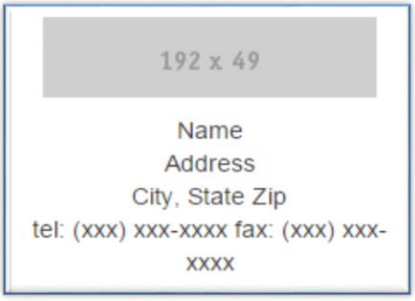
Information inserted into the General Tab will appear on the Site Information Block in the upper left corner of the Report Workspace.



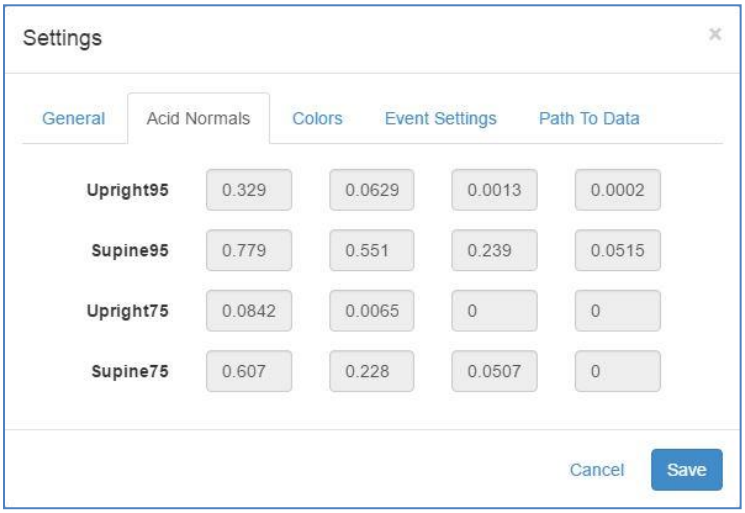
Once a user has uploaded an image and edited Site Information in Settings, the changes will be saved in DataView until the software is uninstalled. The user may edit and overwrite Site Information by returning to the General Tab.

11.1.2 Normal Acid Exposure

Click on the 'Settings' submenu item to open the Settings dialog box. The second tab displays Acid Normals. These are the pharyngeal pH values for normal patients at the 95th and 75th percentile in upright and supine.

The values are extracted from the publication “A New Technique for Measurement of Pharyngeal pH: Normal Values and Discriminating pH Threshold” by Ayazi, et al, available in the DataView Help menu link “DeMeester RYAN Score article.”

The columns in the Acid Normals tab represent pH values < 6.5, < 6.0, < 5.5, and < 5.0 as displayed in the Event Calculations Table. These values cannot be edited by the user.



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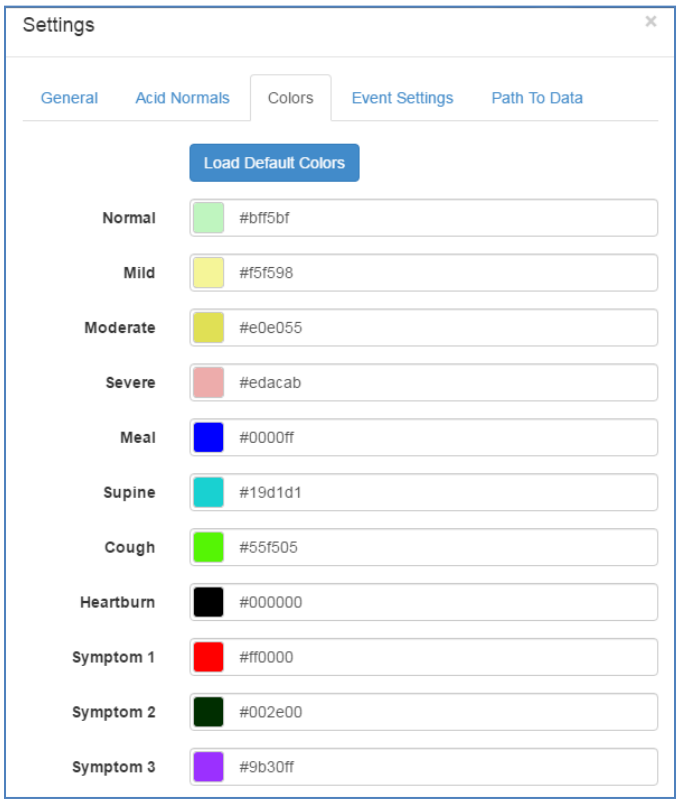
11.1.3 Colors Tab

Click on the 'Settings' submenu item to open the Settings dialog box. The third tab displays “Colors” input fields.

These values may be edited by the user by clicking in the desired field and typing in new values.

Once the Colors have been edited, the changes will be saved on DataView until the software is uninstalled. The user may edit and overwrite the Colors by returning to the Colors Tab. Return to the default colors by selecting Load Default Colors.



These Colors represent the pH Graph, event markers, and symptom markers on both the Graph Workspace and the Report Workspace.

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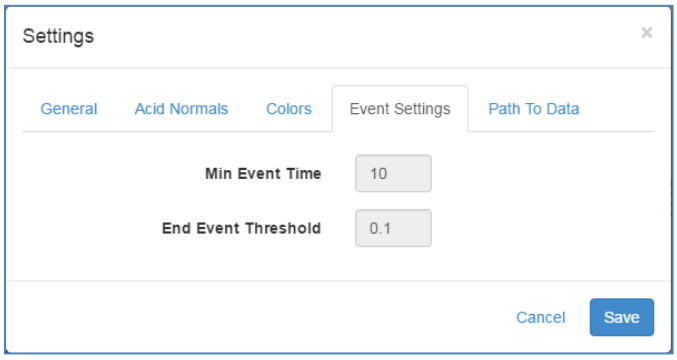
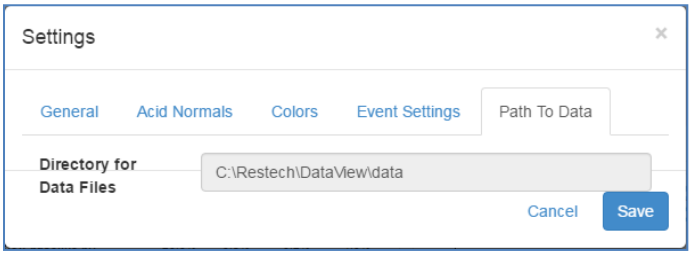
11.1.4 Event Settings

The fourth tab in the 'Settings' submenu displays Event Settings. When a pH event is above a baseline pH value by 0.1 pH an event timer called the minimum event time “Min Event Time” counts for 10 seconds before ending the pH event. The values cannot be changed by the user.



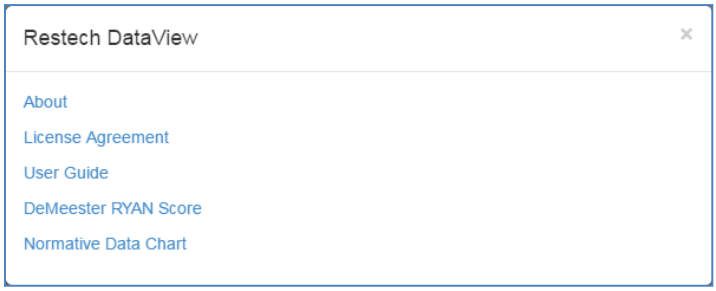
11.1.5 Path to Data

The fifth tab in the 'Settings' submenu displays Path to Data. This is the location where DataView saves the pH studies retrieved from data cards. The location cannot be edited by the user. Contact Restech Technical Support to modify the Path to Data.



11.2 Help

The 'Help' submenu item displays the DataView About, License Agreement, User Guide, DeMeester RYAN Score article, and Normative Data Chart.



Click anywhere outside of the menu field to exit the 'Help' submenu.

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12. Uninstalling DataView v4 Software

The DataView software may be uninstalled to remove DataView from the computer. Uninstall will remove the DataView program files and registry entries.

1	Navigate to Control Panel from the Start Menu and open Programs and Features.
2	Scroll down to find and select the Restech DataView program. Click Uninstall and the Restech DataView software will be uninstalled from the computer.
3	If any DataView shortcuts were pinned to the taskbar or remain after removing DataView, right click on the shortcut icon and click Unpin or Delete to remove it.

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For technical support, please call 800-352-1512 (US Customers) or +1 (858) 673-3700 (International Customers) and ask to speak with a Restech technical support specialist.