

CARELINK<sup>™</sup> PERSONAL ACTIONABLE INSIGHTS FOR BETTER DIABETES MANAGEMENT

## CARELINK REPORTS GUIDE



## CARELINK<sup>™</sup> PERSONAL ACTIONABLE INSIGHTS FOR BETTER DIABETES MANAGEMENT

As part of your diabetes therapy you have access to a lot of data and information.

The CareLink<sup>™</sup> Personal Software helps you visualise your diabetes information with charts, statistics and events that can help you identify and understand patterns and trends. The reports can highlight the most relevant insight from your Insulin Pump, Continuous Glucose Monitoring (CGM) and Blood Glucose Meter (BG) and pull these together to help guide you in making informed and timely therapy decisions with your diabetes team who can assess and support you to refine your individual treatment plan.

This guide contains all the information to help you select the reports according to your needs and learn how to interpret the data they provide.



## CARELINK<sup>™</sup> PERSONAL SETTING UP YOUR ACCOUNT REGISTER AT CARELINK.MINIMED.EU

- 1) Visit the CareLink<sup>™</sup> website and select "sign up now".
- 2) Select your country of residence and language.
- 3) Read and accept the terms of use.
- 4) Confirm you are over 18 years old or a legal guardian if providing consent for someone below this age.
- 5) Consent to the collection and use of personal data (including health data).
- 6) Provide optional consents for use of data (including how Medtronic contacts you).
- 7) Complete your details (including your login credentials and personal details).

## TABLE OF CONTENTS

1. Preparation and individual settings	
2. Uploading the data from your devices	7
3. Selecting the reports to review	
4. Reviewing CareLink Personal Reports	
Therapy Management Dashboard	10
Adherence Report	12
Sensor and Meter Overview	14
Logbook Report	20
Device Setting Snapshot	22
Daily Detail Report	24
5. Summary and key takeaway	26



It is important to check the default settings in the CareLink® Personal Software and to adjust them to your individual situation and goals so that the evaluations are relevant to you.

Please speak with your diabetes care team about your individual target range. The settings shown in this report guide are only used as an example.

You can always adjust the settings to your individual needs in the Additional Settings under Preferences.





- If you are a pump user you can upload the data from MiniMed<sup>™</sup> 640G insulin pump with the black CareLink USB or the Contour<sup>®</sup> Next Link 2.4 meter.
- Previous pump models data can still be uploaded with the white CareLink USB or with the Contour Next Link meter.
- If you are using Guardian<sup>™</sup> Connect system, automatic uploads will be performed to CareLink Personal if you have activated the synchronisation to CareLink Personal on your Guardian<sup>™</sup> Connect App. (Click on the App Menu then 'Sync to CareLink')

#### MINIMED 640G & PARADIGM INSULIN PUMPS

#### **GUARDIAN<sup>™</sup> CONNECT**





### AN EFFECTIVE COMMUNICATION TOOL WITH YOUR DIABETES CARE TEAM

You are also encouraged to enable automatic data transmission to your diabetes care team for either a remote consultation and /or in preparation for your next appointment.

Please discuss with your diabetes care team about providing access to CareLink Personal Account. They will access this through software specific to them (CareLink Pro) which will allow them to access your uploads and data trends for discussion at your next appointment.

# 3 SELECTING THE REPORTS TO REVIEW

Bundles of reports are now available to guide you in selecting valuable reports for your specific needs. The below provides an overview of the reports dashboard.

## 1

#### **REPORTING PERIOD**

You may select a relative reporting period starting from the current day and going back to the desired duration. You may also select Custom and specify a specific start and end date.

2
2

#### SUGGESTED REPORT BUNDLES FOR DIFFERENT USE CASES

Report bundles are now available to provide you the most suitable reports for your specific needs.



#### **SINGLE REPORTS**

In addition to the package of reports advised for your needs, you are also able to select specific single reports



#### **ORIGINAL REPORTS**

To access the original CareLink Personal reports<sup>\*</sup>, you may click on the hyperlink at the bottom of the Reports Page

\* Reports that were previously available in CareLink Personal.



## GET THE MOST OF CARELINK PERSONAL INSIGHTS

Based on your needs, the following reports will be provided to you.

		Dashboard & Episode summary	Adherence	Sensor & Meter overview	Logbook	Device settings snapshot	Daily detail	
Bundle	Bundle used when:		43. 201 時間: - 201 時間: - 201 時間: - 201 日前前: - 201		1000 0.60 300 50.8 2.80	<b>TRE UNV</b> 646 220 1756 230	- 1	
How can l view my progress and trends?	l would like to know how I am doing overall I would like to know my glucose trends	$\checkmark$		$\checkmark$				
How does mealtime affect my glucose levels?	l would like to know how much insulin to take for food and exercise I would like to know how much food I am eating	$\checkmark$		$\checkmark$	$\checkmark$			
What causes my highs and lows throughout the day?	l would like to know if there are patterns before highs and lows I would like to know how my actions impact highs and lows	$\checkmark$		$\checkmark$				
What if I only wear the pump and no sensor?	l only have a pump without continuous glucose monitoring		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
What are my pump settings?	I would like to save my settings before changing I would like to keep track of my current settings					$\checkmark$		

More information about each individual reports is provided in the next section of this guide.

Note: The information provided in the reports is based on whether you are uploading data from an insulin pump, blood glucose meter, and/or continuous glucose monitor.

### REVIEWING CARELINK PERSONAL REPORTS THERAPY MANAGEMENT DASHBOARD

One of the first challenges to identify is hypoglycaemic patterns, also known as low glucose patterns. In this example, a low glucose is identified as a value less than 3.9mmol/L.

These shaded red areas represent the moments when you have been in this glucose range.

The darker the area, the more often you have spent time below 3.9mmol/L. Repeated occurrence of hypoglycaemia might highlight a pattern to be discussed with your diabetes care team.

The next pattern to identify is hyperglycaemic patterns, according to your individual settings (above 7.8mmol/L in this example). Notice in this report how some areas are darker than others. The darker the area, the more often you have experienced time in hyperglycaemia (> 7.8mmol/L) at that time of the day.

Take a look at your report: do you notice any patterns that stand out to you? If you're unsure, use the dotted black line as a place to focus your attention. This dotted black CGM line is your average of all your sensor glucose readings.

Use these overnight and meal 'buckets' to see patterns surrounding bedtime, wake up, and meal times. The information above each graph contains average SG values before (pre-meal) and after (post-meal) a bolus. You will also be able to see on average how many carbohydrates are eaten per meal.

Remember, not all hyperglycaemic excursions are 'bad' especially after eating, however your glucose values should return to pre-meal range within 3-4 hours after a meal<sup>1</sup>

1. Freckmann G, et al. J Diabetes Sci Technol. 2007;1(5):695-703



Action Plan

3

1

This report is intended to provide a comprehensive summary to help you determine the level and quality of glucose control you have achieved during the selected period. It provides detailed information of glycaemic patterns throughout the day and data related to meals and basal/bolus insulin delivery. At least 5 days of CGM data in the selected period are needed to generate the report.

4



Reviewed By
Date Time

7

Use these Statistics to quickly glance at your progress. Did your average BG improve from the last time you looked at your CareLink report?

How many BG readings are you performing per day? How many carbs should you eat?

Everyone is different, so check with your diabetes care team for the appropriate recommendations.

Use this table for Hypoglycaemic and Hyperglycaemic Patterns to confirm the times that sensor glucose consistently goes above or below your target for an extended period of time.

This table shows you the distribution of your insulin usage. First, take a look at your Insulin Total Daily Dose (TDD). How much insulin do you use on average per day? This is helpful to calculate how many vials of insulin you need every month.

Second, take a look at your Basal/Bolus Ratio. Please discuss with your healthcare provider on possible needs to adjust some of your settings.

Third, review your Manual Boluses and Bolus Wizard® usage. Using the Bolus Wizard is the recommended method of taking insulin for meals and correction. If you currently rely on manual boluses to take insulin, speak to your diabetes care team about how to use the Bolus Wizard feature.

Take a look at your Sensor Use. Does your average SG appear to be in the range of your glucose control goals? In addition to that, the Standard Deviation of average sensor glucose (SG±SD) will indicate the variability of your glucose values. The larger the Standard Deviation, the larger the variability.

Do you see more SG alarms than you can manage? Please discuss with your diabetes care team when your average SG is higher than your glucose control goals or if your sensor settings need to be changed.

## REVIEWING CARELINK PERSONAL REPORTS ADHERENCE REPORT

Medtronic

1



How often are you checking your glucose each day?

2

3

If you are wearing a Continuous Glucose Monitor (CGM), knowing your sensor duration is beneficial in managing tight glucose control.

It has been proven that higher usage is linked to better outcomes $^2$ .

Take a look at your Manual Boluses (giving a set amount of insulin) vs Bolus Wizard Events.

It is recommended you use the Bolus Wizard when taking insulin for food and correcting high blood glucose readings<sup>3</sup>.

When using insulin pump therapy with the MiniMed<sup>TM</sup> 640G system, the Bolus Wizard feature will track the amount of insulin, which is still 'active' in your body.

2. Bergenstal et al., N Engl J Med. 2010 22;363(4):311-20 3. Ramotowska et al., Diabetes Metab Res Rev. 2014;30(2):146-53

1	Glucose Meas	Sensor	Bolus Events	Bolus			
	BG Readings	Duration (h:mm)	Boluses	Events	Food	With Correction	Overrid
<ul> <li>Tuesday 11/18/2014</li> </ul>	9	10:20		7	4	7	2
Wednesday 11/19/2014	12	24:00		10	5	10	
Thursday 11/20/2014	8	24:00		5	5	3	
Friday 11/21/2014	8	24:00		5	5	2	
Saturday 11/22/2014	9	24:00		5	5	5	
Sunday 11/23/2014	10	21:30		7	5	4	
Monday 11/24/2014	7	17:35		5	5	4	
Tuesday 11/25/2014	8	24:00		7	4	7	1
Wednesday 11/26/2014	10	24:00		6	4	4	1
Thursday 11/27/2014	12	24:00		4	3	4	
<ul> <li>Friday 11/28/2014</li> </ul>	3	12:00		2	2	1	
Summary	9.3/day	9d 13h 25m	0.0/day	6.0/day	74.6%	81.0%	6.3%

Adherence (1 of 1)

11/18/2014 - 11/28/2014

Partial day T Suspend

TSuspend On Low Suspend Before Low

Note: Partial days will not be

The Adherence Report presents data from your insulin pump, blood glucose meter, and glucose sensor (if used). It can provide insight into your therapy management behavior according to the indices of glucose measurements, bolus events and insulin pump activities.

	Fill Events					4
verridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)	Suspend Duration (h:mm)
2	3	4	2	2	12.5645	0:22
		3	1.5			1:34
	1	4	2	3	10.1199	2.24
		3	1.5			2:39
		2	1			2:59
	5	1	0.5		7.7859	2:25
1	1	2	1	1	8.4963	0:04
1	1	2	1	1	5.0461	2:31
		3	1.5			6:01
						0:35
6.3%	7	24	0.5U /fill	6	7.3U/fill	21h 34m

not be included in summary averages. Days on which a time change occurred are considered to be partial days.

4

5

If you notice your pump suspended for several hours and you have a suspend symbol (Suspend On Low or Suspend Before Low), then this indicates that there was a time when your SG levels were low and your pump had to suspend your insulin delivery.

If there is significant duration of suspend events, be sure to discuss it with your diabetes care team.

Note how many times you Rewind your pump and how often. Remember you should be changing your reservoir and infusion set every 2-3 days<sup>4,5</sup> for optimal clinical outcomes, so you should see a Rewind event occur every 2-3 days.

4. Schmid et al. J Diabetes Sci Technol 2010;4(4):976-82 5. Thethi, TK. et al. J Diabetes Complication. 2010;24(2):73-78

### REVIEWING CARELINK PERSONAL REPORTS SENSOR AND METER OVERVIEW (1 OF 3)

1

First, look at your overnight period. This is the timeframe from when you go to sleep to the time you wake up.

One of the first problems to identify is low glucose patterns or hypoglycaemic patterns. Can you identify some period where you are frequently going below your target glucose range?

The shaded red areas represent the moments when you have been in low glucose range according to your glucose targets.

Then look at your bedtime hours and determine if your overnight pattern appears to have more highs, represented by the yellow peaks which get darker.

If you identify hyperglycaemic patterns during bedtime hours, you can try to determine some possible causes:

- Did you go to sleep high or have a bedtime snack?

- Was dinner a larger meal than usual and perhaps a correction bolus was needed to correct a high BG afterwards?

These are all great discussion points to ask your diabetes care team. You are able to fine tune your settings and recognise behaviors that will get you closer to your goals. A Medtronic

#### Sensor & Meter Overview (1 of 3) 11/18/2014 - 11/28/2014



The Sensor and Meter Overview Report presents data from your insulin pump, glucose meter, and glucose sensor. Report 1 of 3 focuses on sensor data, highlighting areas of interest for further investigation.



### REVIEWING CARELINK PERSONAL REPORTS SENSOR AND METER OVERVIEW (2 OF 3)

1

Look at the overnight period (bedtime to wake-up). Every line represents a day in the reporting period and a faded dot represents the time a BG was recorded.

Do you see a pattern of more than 3 occasions when your BG was below or above set limits. Consider talking to your diabetes care team about adjusting your overnight basal. You can also determine your Average BG by looking at the placement of the diamonds and if they fall outside the pre-set glucose target range (diamonds with dots).

Look at the period before meals. These meal buckets provide an average BG one hour before the meal. Do you see an average of lows or highs before the meal? Consider talking to your diabetes care team about it, as it might be linked to several reasons.

In this example, lunch and dinner times appear to have an average BG before meal above target range and could possibly require an adjustment.

3

2

Look at the period after meals and determine if you see a pattern of severe lows after eating, or a consistency of high BGs.

Perhaps an adjustment in your Insulin Carb Ratio or insulin sensitivity can help improve your post meal BG. Use this report to start a discussion with your diabetes care team.

#### Medtronic

11/18/2014 - 11/28/2014

Sensor & Meter Overview (2 of 3)



The Sensor and Meter Overview Report presents data from your insulin pump, glucose meter, and glucose sensor. This report focuses on meter data and can be used if you use a pump without CGM, to have an overview of your glycaemic control.



Avg Carbs: 40g Avg Insulin: 2.4U Avg CarbsInsulin: 17.8g/U 14 10 0 8.8 7.5 10.7 3 5 0 5 0 7.8 0.0 7.8

+3:00 +5:0

4

5

Use these Statistics to quickly glance at your progress. Did your average BG improve from the last time you looked at your CareLink report?

The statistics will also give you information about your carb intake.

This table shows you the distribution of your insulin usage in Total Daily Dose (TDD).

Take a look at your Basal/Bolus Ratio. Please discuss with your diabetes care team on possible needs to adjust some of your settings.

## REVIEWING CARELINK PERSONAL REPORTS SENSOR AND METER OVERVIEW (3 OF 3)

nol/L

- 12 10

B

Review consistency of SG readings and on trends in this report. Are they always high, or are they frequently low? This report can also help you to identify day(s) when a specific event might have happened (exercise, travel, illness).

2

3

1

Take a look at the times a bolus was given. Does it have a meal or snack and BG paired with the bolus each time?

This is called a correction bolus, when there are no carbs entered with a BG event. Insulin was given for a high BG and you can see the effect of that bolus by looking at the next BG.

Sensor & Meter Overview (3 of 3) A Medtronic 11/18/2014 - 11/28/2014 BO. Lunch Dir 133.2 11.210,4 10 97 48 32 45

Breakfa Lu



This report summarises meter glucose, sensor glucose, carbohydrate, and insulin information. It provides an overview of your glycaemic control (daily, overnight, and at meal times). From a day to day comparison, this report displays changes in your blood glucose fluctuations and allows you to identify patterns.



### REVIEWING CARELINK PERSONAL REPORTS LOGBOOK REPORT

Each row is a different day of this reporting period.

Refer to your Daily Totals to see Average Glucose compared to other days

Each bolus event can contain up to 3 numbers. All 3 numbers do not have to be present to be recorded. Any number can be displayed by itself or all at the same time.

- The top number is your BG reading. In this example, the BG is 5.7 mmol/L.

- The middle number in the black bar is your carb entry. In this example, 67 grams of carbs were consumed at this time.

- The bottom number is the insulin dose given. In this example, 4.40 units were given for this bolus event.

Do you see a trend in BG values above target (yellow) or below target (red)?

Did you forget to enter a meal or perhaps you were fasting on a particular day?

These squiggles indicate a skipped meal.



2

3

The Logbook Report presents two weeks of data from your insulin pump and blood glucose meter in a tabular format.



A

В

Note: These meal labels are used to indicate the times when a certain meal is eaten. Use these meal buckets to organise the approximate time you eat each meal.

You can set these times in the preferences section of the CareLink website.

Note: This is a bolus with no carbs entered and a correction bolus was given.

Exercise

Partial day

① Time change

## REVIEWING CARELINK PERSONAL REPORTS DEVICE SETTING SNAPSHOT

Take a look at your Standard pattern on your device settings report.

These basal rates are your Basal Settings. The Basal 1 pattern is your regular basal pattern. You may have a single set or several basal rates set.

The (active) indicates what basal pattern is currently active at the time of your upload.

These are the 4 settings that make up your **Bolus Wizard Settings:** 

- Carbohydrate Ratio
- Insulin Sensitivity
- Blood Glucose (BG) Target
- Active Insulin Time

Review your settings with your physician in accordance with your findings in your report. You may only have one number for Insulin Carb Ratio and Insulin Sensitivity or you may need several.

This report page will record all changes to your pump settings. It is recommended to record these and hold onto your Bolus Wizard settings.

More information about device settings can be found in the second device settings page

	🕀 Med	tronic	De Fri	vice Se iday 11/2	ttings Sn 28/2014 1	apshot 2:01 PM	2			
	Basal						Bolu	8		
	Maximu	ım Basal Ra	0.500 U/H	r			E	olus Wizard	On	
			D 0#					Units	g, mmol/L	
	Basal 1 (a	active)	Day Off		Workda	iy	Active	Insulin Time	3:00	
	24-Hour Total	5.638 U	24-Hour Total	5.038 U	24-Ho Tot	al -	Max	(n:mm)	7.0 U	┉┦╴
	Time	U/Hr	Time	U/Hr	Time	U/Hr	Carbot	wdrate Rati	o Insulir	Sensi
	0:00	0.300	0:00	0.275		-	(g/U)	yorate Rat	(mmol	VL per
	4:00	0.350	4:00	0.325			Time	Datio	Time	Consil
	7:00	0.200	7:00	0.175			0.00	50.0	0.00	Sensit
	12:00	0.150	12:00	0.125			5:30	15.0	0.00	
	15:30	0.175	15:30	0.150			9:00	27.0		-
	19:00	0.250	19:00	0.225			12:00	17.0		_
							15:00	20.0		-
							18:00	17.0		_
										_
										_
1							Pres	et Bolus		
							1	0.1	Name	Normal
					1		1	Break	JS 1	
							1	Dir	mer	
							1	Lu	nch	
								Sr	ack	
								Bol	15 2	
								Bol	us 3	
								Bol	us 4	
							Pres	et Temp		
							-	Name Rate	Duration	
							High Ac	tivity		Те
							Mode	erate tivity		Те
			<b>—</b>				Low Ac	tivity		Te
					_					

Device Settings Snapshot

1

The Device Settings Snapshot report presents the customised settings of your diabetes management devices on the date and time when your device was uploaded.



### REVIEWING CARELINK PERSONAL REPORTS DAILY DETAIL REPORT

This table will list all Bolus Events up to ten.

Statistics for each bolus event is listed under the designated number.

You can historically view a bolus amount given by the pump and see how the bolus was calculated.

You can view a suspend event. A blue suspend was a Suspend Below Low event that occurred from a sensor glucose (SG) predicted to reach a pre-set low limit. The bells above the suspend indicate the beginning and end of that suspend event.

Take a look at your own CareLink report. Do you notice plenty of suspend events throughout the day and are they reoccurring everyday?

Speak to your diabetes care team about the potential need to adjust your settings.

Medironic Daily Detail (5 of 11) Saturday 11/22/2014



2

The Daily Detail Report presents data from your insulin pump, blood glucose meter, and glucose sensor (if used). This report focuses on one specific day. You can take a closer look at the events that occurred for that day and review pump use and activities such as Bolus Events.

3

4



This bolus activity is numbered and referenced in the table labelled Bolus Events.

You are able to view your BG reading from your meter, paired with your sensor tracing. If a bolus was given, you are able to see the bolus amount in green, paired with the carbohydrate entry in black.

During the day, you may use a temporary basal, which is shown by the dotted green line. A temporary basal is used if you need more or less basal insulin than what is already set in your pump for a temporary period of time (e.g. before and during physical activity or illness).

Here are your daily statistics similar to the Therapy Management Dashboard or Sensor & Meter Overview reports.

Compare your average BG with the average of the reporting period. Was this day out of the ordinary or within average of your glucose control?

Did you check your BG about 4 times a day as recommended? Were your readings mostly above your target range or below?

Take a look at your insulin distribution and carbohydrates eaten. Compare it to your reporting period average.

## 5 CARELINK REPORTS GUIDE SUMMARY AND KEY TAKEAWAY





**TIP:** First try to address the glucose values below your defined target range (hypoglycaemia), followed by values above your target range (hyperglycaemia)

	1	
		e,

**DISCUSS** your individual glucose target range with your diabetes care team and enter them in the preference section of CareLink Personal.

2

**IDENTIFY** the topic you want to analyse and select the corresponding bundle or single report.



When looking at a report, try to **IDENTIFY THE PATTERNS AND TRENDS** and think about the action (meals, activity) that can be related to each of the patterns identified.

4

**ADDRESS** any findings with your diabetes care team and discuss any potential adjustment to your treatment.

## WHEN QUESTIONS COME UP WE WON'T LET YOU DOWN WAYS **BY YOUR SIDE**



For more information on Medtronic please visit the following websites:

United Kingdom: medtronic-diabetes.co.uk Republic of Ireland: medtronic-diabetes.ie

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Medtronic Further, Together

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