Mallya G
USER MANUAL

Intended use

Indication for use
The Mallya® for pen injector is indicated for the capture and wireless transmission of dosing information of compatible reusable and disposable pen injectors.

Device features
Mallya^G is able to :
• be assembled with Novo Nordisk® pen injector designed for growth-disorder treatment,
• record the amount of dose increments injected by the pen,
• record the timestamp (date & time) of each injection,
• transmit information relating to dose, time, and date of each injection to a mobile app on a smartphone, when the device is connected to it, using Bluetooth® technology.

Clinical environment
The Mallya^G device for pen injector is intended to be used by patients in the same use environment as their compatible pen injector. There are no known contraindications to the use of Mallya^G for these patients.

NOTE: A list of all compatible injection pens is available in the legal manufacturer device technical documentation and on the website at: https://my-mallya.com/sau/growth-disorder.

Package contents
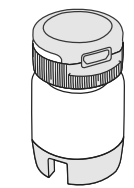
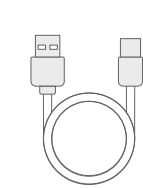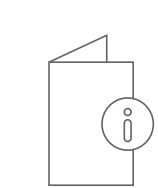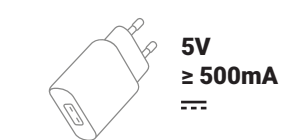| Mallya^G x1	USB cable x1	User instructions x1	NOTE: the USB charger is not included. Use a Class II USB wall charger, with output 5V and at least 500mA (Figure B).
PN : 0274519	PN : 0373707		

Figure A

Figure B

**5V
≥ 500mA**

Getting to know Mallya^G and the pen

Light signal
Notch
Dose dialing button
Micro-USB port (charging)
Body
Injection button
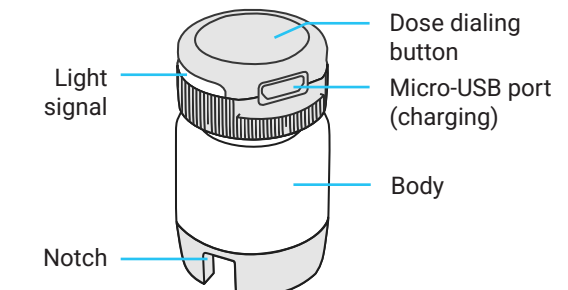Dose selector
Dose pointer
Dose counter

Figure C

Figure D

Mallya^G
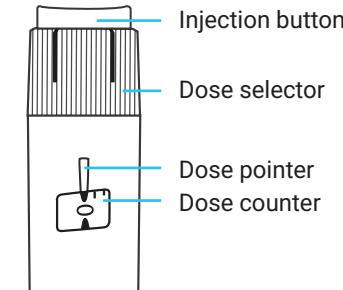All exterior plastic parts to the device constitutes its applied part

**Novo Nordisk®
pen injector**

How to setup your Mallya^G

1 Wake up and charge Mallya^G

Mallya^G is turned off when it is shipped. You will need to wake it up and make sure it is charged enough before use.

NOTE: You will also need to wake up Mallya^G after it has been reset, because resetting Mallya^G will turn it off.

1.1. Connect Mallya^G to the supplied USB cable and connect the cable to a powered USB wall charger (*Figure E*). This will wake up the device.

1.2. Let the device charge for at least 10 minutes before use (*Figure F*).

1.3. Unplug Mallya^G from the USB cable (*Figure G*) and then unplug the wall charger. When you are done, Mallya^G signal light will turn *blue* indicating that the device is in pairing mode but not yet paired.
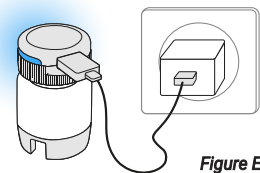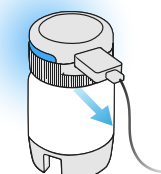
Figure E

✓ 10 min
Figure F

Figure G

2 Attach Mallya^G to your pen

Mallya^G attaches over the dose selector and injection button of your pen. To attach, carefully follow these steps.

2.1. Hold the pen with one hand, keeping the dose button accessible, and protect the needle with the pen cap (if already mounted).

2.2. With your other hand, hold Mallya^G by the body so your fingers only touch the sides of the device, being careful to not depress the button.

2.3. Insert Mallya^G on the pen dose button, aligning the notch of Mallya^G with the pen dose counter (*Figure H*).

2.4. Push Mallya^G fully over the pen, pressing the button with the palm of your hand. It must be inserted all the way onto the dose selector (*Figure I*).

2.5. Check that Mallya^G is pushed all the way down on the pen as shown on the picture (Figure J).
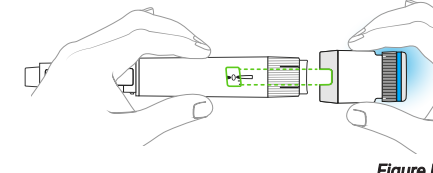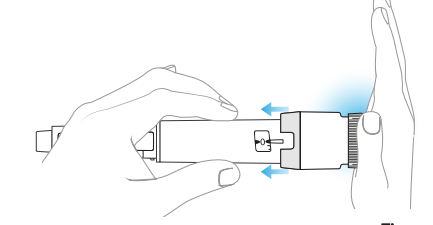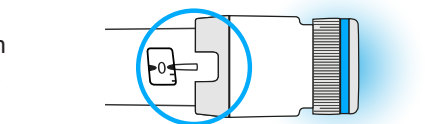
Figure H

Figure I

Figure J

3

Before you can use your Mallya^G, you will need to pair it with a mobile application on your smartphone.

3.1. Please refer to Mallya^G internet website *https://my-mallya.com/sau/growth-disorder*, or by scanning this QR Code (*Figure K*).

3.2. Download the application from Google Play™ (Android) or the App Store® (Apple) (*Figure L*).

3.3. Pair Mallya^G by following the guidance in the App to :
- Turn on your smartphone's Bluetooth® (if not already on).
- Pair the Mallya^G with the App

NOTE: you must keep Mallya^G within 10 centimeters of the smartphone during pairing (*Figure M*).

At the end of the pairing step, you may notice the signal light turn *green* and then turn off (Figure N). Once paired your Mallya^G will enter standby mode and the light will turn off.

3.4. After pairing, follow the guidance in the application.
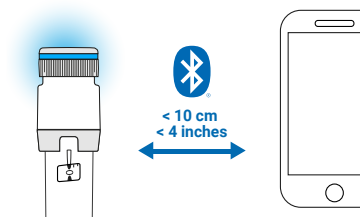
Figure K

**GET IT ON
Google Play**   **Download on the
App Store**
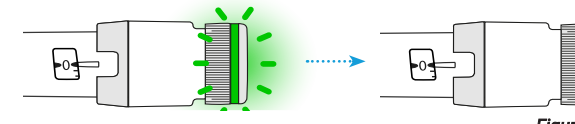*Figure L*

< 10 cm
< 4 inches
Figure M

Figure N

4 Put Mallya^G into active mode

To activate Mallya^G on the pen:
4.1. Firmly press and hold the Mallya^G's button down for at least 5 seconds until the light turns *purple* (*Figure O*).

NOTE: If the light does not turn *purple* make sure Mallya^G is pushed all the way down (see Figure I in step 2.4).

4.2. Then, lift your finger from the button. The light will then turn *green* showing the device is now in active mode (*Figure P*).

Mallya^G is now *ready for use*.

NOTE: Green light will remain on throughout the injection. If *green* ight does not come on, the injection will not be recorded. Make sure Mallya^G is sufficiently inserted on your pen. Repeat step 2.4 to push Mallya^G onto your pen to fully insert it. Then proceed to activate it, following the instructions in step 4.1.
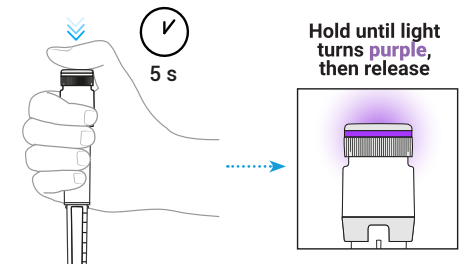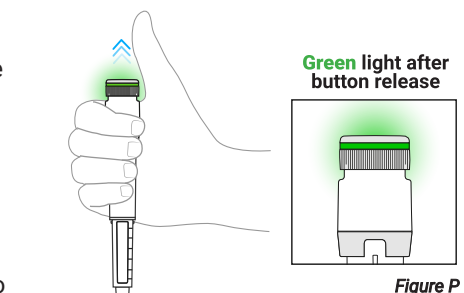
IMPORTANT: Follow the **"Injecting a dose with Mallya^G attached to your pen"** section below when you give an injection

✓ 5 s
Hold until light turns purple, then release
Figure O

Green light after button release
Figure P

Injecting a dose with Mallya^G attached to your pen

Refer to the Instructions for Use of your pen for the flow check and the injection instructions.

NOTE: Safety tests performed to check the flow (priming), will also be automatically detected, and recorded by Mallya^G. Perform the safety test to check the flow as described in the Instructions for Use of your pen injector.

1. Before you start selecting the dose, make sure the pen dose counter shows the number 0. The number 0 should line up in front of the pen dose pointer.

2. Use the Mallya^G device *black* dose dialing button to select the dose (*Figure Q*).

3. Turn Mallya^G's button to select the dose you need. The selected dose should line up in front of the pen dose pointer. During a dose selection, Mallya^G's light is *green* (*Figure Q*).
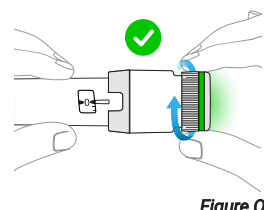
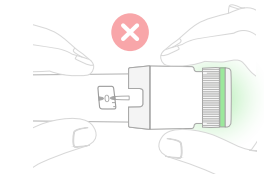*NOTE:* Do not use the transparent body of Mallya^G to select your dose (*Figure R*).

Figure Q

Figure R

IMPORTANT: If the light does not turn *green*, Mallya^G is not ready and will not record the injection. It needs to be put on active mode before performing an injection. Follow the step 4 in the *"How to setup your Mallya^G"* section above to put the device into active mode.

4. Perform the injection as described in the Instructions for Use of your pen injector.
Press and hold down Mallya^G dose dialing button. Watch as the dose counter returns to 0. The 0 must line up with the pen dose pointer.
During a dose injection, Mallya^G's light is *green* (*Figure S*).

NOTE: Do not pause during the injection, you may experience harm due to miscalculation of doses.

5. At the end of injection, keep the pressure on the button and the needle in your skin until the *green rapid flashing* turns off (6 seconds) (*Figure T*).
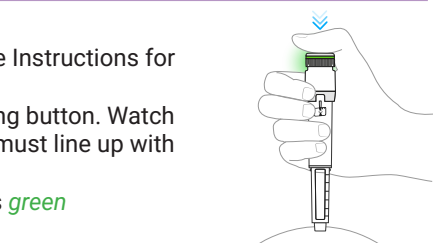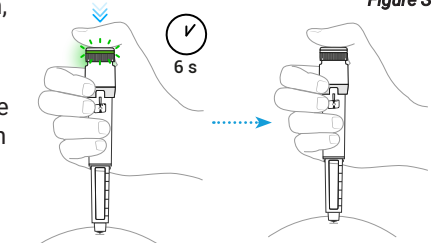
Figure S
✓ 6 s
Figure T

IMPORTANT: Green light will remain on throughout the injection if *green* light does not come on and is not flashing at the end of injection, the injection will not be recorded.

Troubleshooting
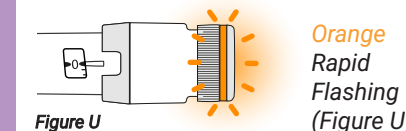
Unsure if the dose is delivered

If you are not certain that you injected your treatment, *do not* repeat your injection.
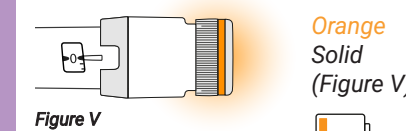Monitor your treatment as instructed by your healthcare provider.

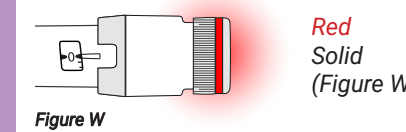|	
Figure U — Orange Rapid Flashing (Figure U)	The pen dose counter must be set at 0. When the pen dose pointer is aligned with the number 0, press the dose button for 2 seconds until Mallya^G's light turns *green*.
Figure V — Orange Solid (Figure V)	Mallya^G's battery is low. Charge your Mallya^G following the instructions in the "**Charging Mallya^G**" section. Charge the battery for at least 2 hours for a full charge. Do not give an injection with Mallya^G while it is charging. Mallya^G's light is *orange* during injections if the battery is low.
Figure W — Red Solid (Figure W)	*Error*: the solid *red* light will come on when Mallya^G is in an error state and needs to be reset. In this state, Mallya^G is not ready to record injections. Follow the instructions in the "**Resetting Mallya^G**" section on the back side of these instructions to reset Mallya^G. If the problem persists, contact the Support service. The red signal is not an alarm at meaning of IEC 60601-1-8.

Charging Mallya^G

After a full charge, if you use Mallya^G every day, it will only need recharging once every 2 weeks. If you use it once a week, it will only need recharging once a month. When the battery is low, the *orange* light will show (*Figure X*).

Charge Mallya^G by connecting it to a powered USB wall charger (not supplied) using the supplied USB cable (*Figure Y*).

Do not use any other cable.

Please connect the supplied USB cable to the USB port of a power adapter (IEC / UL 60950-1 or IEC / UL 62368-1 certified with CE or UL marking) suitable for your region (*Figure Y*).

The signal light will *slowly flash green* when Mallya^G is charging.

Do not give an injection with Mallya^G when it is charging.

NOTE: Let the device charge for at least 2 hours for a full charge (*Figure Z*).

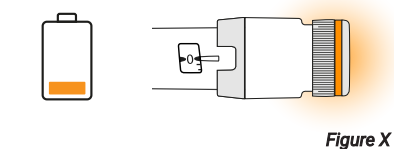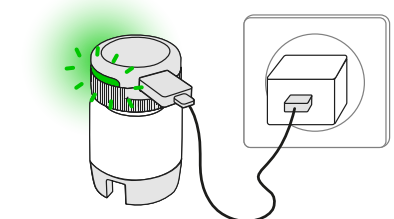The *green flashing* light will disappear when fully charged.

Figure X

Figure Y

**2h
>**
Figure Z

TURN OVER:
• Transfer
• Reset
• Indicator Lights
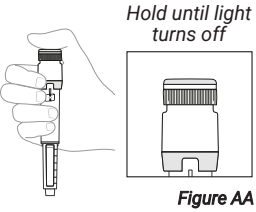• Cleaning

Transferring Mallya^G to another pen

1 Put Mallya^G into standby mode

Before transferring Mallya^G to another pen, you must first put it into standby mode so that transferring the device won't cause false doses to be logged in the application.

1.1. Firmly press and hold the Mallya^G button for at least 5 seconds, until its *green* light turns *purple* and then turns off. *(Figure AA)*.
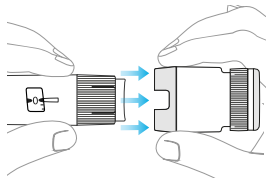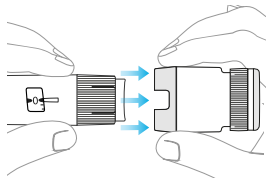
Hold until light turns off

Figure AA

1.2. Then, lift your finger. Mallya^G is deactivated.

2 Remove Mallya^G from the pen

2.1. Hold Mallya^G by the body so your fingers only touch the sides of the device, being careful to not depress the button *(Figure AB)*.

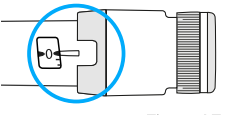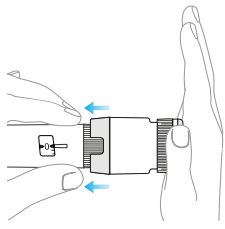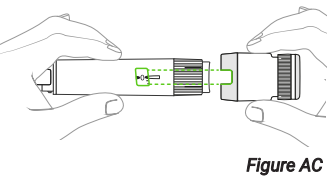*2.2.* Pull Mallya^G straight off the pen *(Figure AB)*.

2.3. Set Mallya^G down upright onto a clean flat surface with the button up.
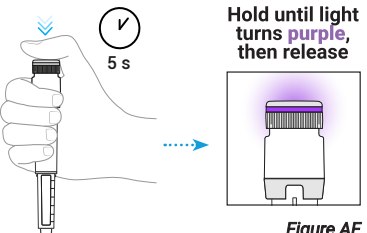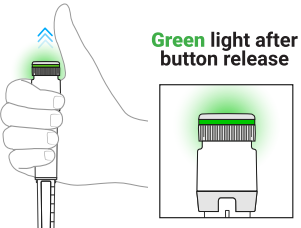

Figure AB

3 Attach Mallya^G to the new pen

3.1. Hold the Mallya^G by the body so your fingers only touch the sides on the device, being careful to not depress the button *(Figure AC)*.
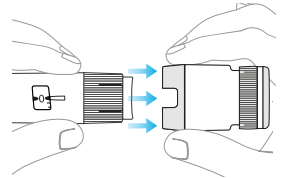
3.2. Push Mallya^G fully over the pen, pressing the button with the palm of your hand. It must be inserted all the way onto the dose selector *(Figure AD)*.
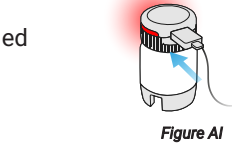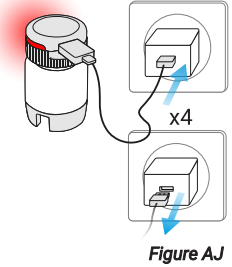
3.3. Make sure Mallya^G is properly mounted on the pen as shown on the picture *(Figure AE)*.

Figure AC

Figure AD

Figure AE

4 Put Mallya^G into active mode

To activate Mallya^G on the pen:

4.1. Firmly press and hold the Mallya^G button down for at least 5 seconds, until its light turns *purple* *(Figure AF)*.

4.2. Then, lift your finger from the button. The light should then turn *green*, showing that Mallya^G is now in active mode *(Figure AG)*.

Mallya^G is now *ready for use* on your new pen.

NOTE: Green light will remain on throughout the injection. If *green* light does not come on, the injection will not be recorded. Make sure Mallya^G is sufficiently inserted on your pen. Repeat step 3.2 to push Mallya^G onto your pen to fully insert it. Then proceed to activate it, following the instructions in step 4.1.

Hold until light turns purple, then release
✓ 5 s

Figure AF

Green light after button release

Figure AG

Resetting Mallya^G
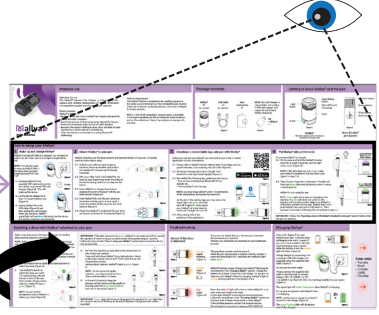
If the following has occured, Mallya^G may need to be reset :

• the Mallya^G signal light is solid red.

• you need to unpair your Mallya^G from your phone and pair with a new phone.

• you want to delete your personal health data from Mallya^G.

1 Remove Mallya^G from the pen

1.1. Hold Mallya^G by the body so your fingers only touch the sides on the device, being careful to not depress the button *(Figure AH)*.

1.2. Pull Mallya^G straight off the pen *(Figure AH)*.

1.3. Set Mallya^G down upright onto a clean flat surface with the button up.

Figure AH

2 Reset Mallya^G

2.1. Connect Mallya^G to the supplied USB cable *(Figure AI)*.

2.2. Plug-in the USB cable in a powered USB wall charger, then quickly unplug it from the charger *(Figure AJ)*.

2.3. Repeat the plug-in/unplug process at least 4 times until Mallya^G flashes *red* and then turns off *(Figure AJ)*.

Plug in and unplug 4 times.

2.4. Disconnect Mallya^G from the USB cable.

2.5. Allow Mallya^G to sit on a clean flat surface with the button up for 30 seconds.

Mallya^G is now reset.

After reset, Mallya^G is powered off and must be setup again.

Continue to the next step.

Figure AI

x4

Figure AJ

3 What is next?

Please refer to the section *"How to setup your Mallya^G"* section on the front page of these instructions, starting with step 1 *(Figure AK)*, to restart your Mallya^G device.

IMPORTANT: You must complete all steps in the *"How to setup your Mallya^G"* section to restart your Mallya^G device.

Figure AK

Light signals and meaning

Blue
Solid
(Figure AL)

Figure AL

During setup and when charging, a *blue* light will turn on when Mallya^G is ready to be paired or is not paired.

During the selection of the dose and injection, if a *blue* light turns on, Mallya^G is not paired with your phone and is not recording injection information.

Purple
Solid
(Figure AM)

Figure AM

*When changing Mallya^G modes,* a *purple* light will turn on after Mallya^G is put into standby mode.

Then a *purple* light will turn on and off followed by a *green* light to show that active mode is turned on (see the *"Transferring Mallya^G to another pen"* section and the *"How to setup your Mallya^G"* section).

Green
Solid
(Figure AN)

Figure AN

During setup, a *green* solid light means that the Mallya^G is properly installed and paired.

During the selection of the dose and the injection, a *green* solid light will turn on.

Green
Rapid Flashing
(Figure AO)

Figure AO

During an injection, a rapidly flashing *green* light will turn on when Mallya^G is sensing the end of an injection. Keep your finger on the button until the light is done flashing to ensure the full dose is delivered.

Green
Slow Flashing
(Figure AP)

Figure AP

Mallya^G is charging and paired.

The *green* slow flashing light will turn off when the battery is fully charged.

Charge the battery for at least 2 hours for a full charge.

Do not give an injection with Mallya^G when it is charging.

Orange
Solid
(Figure AQ)

Figure AQ

The battery is low. The *orange* solid light will come on if the battery is low. Charge Mallya^G following the instructions in the *"Charging Mallya^G"* section.

Charge the battery for at least 2 hours for a full charge.

Mallya^G light is orange during injections if the battery is low.

Orange
Rapid Flashing
(Figure AR)

Figure AR

The pen dose counter must be set at 0.

When the pen dose pointer is aligned with the number 0, press the dose button for 2 seconds until Mallya^G light turns *green*.

Red
Solid
(Figure AS)

Figure AS

Error: the *red* solid light will come on when Mallya^G is in an error state and needs to be reset. Follow the instructions in the *"Resetting Mallya^G"* section to reset Mallya^G. If the problem persists, contact the Support service. The red signal is not an alarm at meaning of IEC 60601-1-8.

IMPORTANT: In case of injection, if the device lights red, the dose will not be recorded.

No signal
(Figure AT)

Figure AT

The light automatically turns off after 10 seconds of inactivity. To check the status of Mallya^G, press lightly on the button to wake it up.

If the light does not turn on, press firmly on the button for several seconds to remove it from standby mode and put it into active mode (see step 4 of the *"How to Setup Your Mallya^G"* section).

If the light still does not turn on despite a long and firm press, the battery may be empty. Charge Mallya^G following the instructions in the *"Charging Mallya^G"* section. Charge the battery for 2 hours for a full charge. The *green* slowly flashing light will turn off when charged.

IMPORTANT: If there is no light, the device is off, and injections will not be recorded.

Cleaning

Mallya^G is not sterile and can be reused for a single patient only.

Mallya^G can be cleaned if necessary.

To clean Mallya^G:

1. Make sure Mallya^G is unplugged and not connected to the USB charging cable.

2. Wipe the external surfaces with a soft lint-free cloth, slightly damped with a small amount of neutral detergent if needed, being careful not to get the micro-USB port wet.

3. Dry the surfaces with a soft cloth.

IMPORTANT: Mallya^G is not waterproof, never wet the micro-USB port.

Technical safety information

In case of side effects or incident, please contact the manufacturer and the competent Health Authority.

Improper operation may result in serious injury or death

• If you are not certain that you injected your medication, do not start, or repeat your injection. Monitor your treatment as instructed by your healthcare provider.
• Do not leave Mallya^G or its accessories within the reach of children (injury, choking and strangulation hazard). Do not attach or tighten cable to or around the head or neck.
• Do not expose the device to a temperature above 40°C (104°F) or flames. If Mallya^G is used at high temperatures exceeding our recommendations, the surface of the device may reach a maximum temperature of 43°C. In this case, the duration of use should be limited to 10 minutes to avoid any risk of burning.
• Mallya^G contains a magnet. To guarantee optimal results, avoid contact with metallic parts during use, and avoid using Mallya^G near PACEMAKERS, DEFIBRILLATORS and BODY WORN INFUSION PUMPS or MAGNETIC RESONANCE IMAGING (MRI) ENVIRONMENT.
• Do not operate the device in a hazardous environment: presenting a risk of explosion, or containing volatile solvents (alcohol, etc.) or flammable substances (anesthetics, oxygen-rich environment, etc.).
• Mallya^G can only be used by patients already familiar with the pen injectors. Contact your healthcare provider, or a BIOCORP PRODUCTION authorized dealer to check your usual pen compatibility.

Improper use may result in bodily injury or property damage

• Do not expose the device to moisture. Do not immerse the device in liquids.
• Leave the device in a room at room temperature for 30 minutes before unpacking it to avoid possible malfunctions due to condensation.
• Do not disassemble, modify, or repair the device by yourself: it may cause fire, electrical shock, bodily injury, or device malfunction. Your device's warranty will be void. Periodic maintenance of Mallya^G is not required.
• If there is any abnormal smell, sound, heat, or smoke when using the device, stop using Mallya^G.
• If the device experiences an external mechanical impact (knocking, bumping, dropping, etc.) or excessive stress (inappropriate storage/transport/use conditions), this may cause malfunctioning of the device. In case of malfunctioning, do not use the device and continue your injection pen treatment. Please contact the BIOCORP PRODUCTION authorized dealer as identified on the outside of the packaging for technical support.
• In case of visible damage, do not use Mallya^G and contact BIOCORP PRODUCTION or its authorized dealer for technical support.
• Do not leave your Mallya^G and its accessories next to animals/insects or dust/plush. After use, your device must be put away in its packaging.
• Only use your Mallya^G with Novo Nordisk® pen injector. Never use Mallya^G with any other pen.
• This device is not recommended for use by the blind or visually impaired without the help of someone trained to use the device.
• During handling operations, protect the needle with the pen cap, if it is assembled on the pen.
• Separate collection for waste electric and electronic equipment (WEEE) is required.

Wireless communication safety issues

• Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Mallya^G device, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
• Electrical medical devices and systems are subject to special measures concerning electromagnetic compatibility (EMC) and must be installed in accordance with the EMC instructions contained in the technical note available online at https://my-mallya.com/sau/growth-disorder.
• Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
• Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
• Protect your personal healthcare data with a password on your smartphone.
• Protect your smartphone by installing antivirus software.
• Never install a mobile application from unofficial stores on your phone.
• Contact Biocorp Production for list of approved compatible apps & verified phones to be used with Mallya^G.
• In case of Bluetooth® transmission disturbance or loss, the Mallya^G device will continue to track and record the history of all your injections. More information is available on the technical note available online at https://my-mallya.com/sau/growth-disorder.
• In case of use in a noisy environment (in terms of electromagnetic signal near 2.4Ghz), the Bluetooth® communication is no more possible, and the connection is closed. However, the device continues to track injection. Where perturbing electromagnetic signals disappear, communication is possible.
• The Cybersecurity nomenclature corresponding to the embedded software version is available on request. Please contact a BIOCORP PRODUCTION authorized dealer if you wish to consult it.
• You are responsible for properly securing and managing your phone. If you suspect an adverse cybersecurity event related to the Mallya^G device or related App, contact Customer Service.
• Make sure that your phone and Mallya^G device are kept in a safe place, under your control. This is important to help prevent anyone from accessing or tampering with the System.
• The App used with Mallya^G device is not intended for use on a phone that has been altered or customized to remove, replace or circumvent the manufacturer's approved configuration or use restriction, or that otherwise violates the manufacturer's warranty.
• The App used with Mallya^G device requires that your phone has the correct date and time for recording your health information. Your phone's date and time should be set to update automatically. You can check this in your phone settings.
• When you travel across time zones, save your infusion data and check your smartphone time. In case of local time management malfunction, do not start or repeat your injection, monitor your treatment as instructed by your healthcare provider and use the device reset function to retrieve your Mallya^G factory settings.
• When using the App used with Mallya^G device, you should keep your phone well charged.
• Keep your phone well charged and turned on.
• Disable your phone's automatic operating system updates. After an operating system update, open your App and check your device settings to make sure it's working properly.
• Before disposing of Mallya^G: reset the device to delete all your personal health data.

Technical specifications

Intended Patients	Patients using a Novo Nordisk® pen injector designed for growth disorder treatment
Intended Users	Users aged from 13 to 80 years old
Intended Environment	Home use
Accuracy of recorded doses	99% ±1 increment on test bench
Charge and autonomy	Charge by USB connector. Full charge in 2h, 2 weeks-autonomy for daily injection / 4 weeks-autonomy for weekly injection. USB AC adaptor (not provided): IEC/UL 60950-1 or IEC/UL 62368-1 certified with CE or UL marking, external module with automatic adaptation of the voltage, 90-264V input voltage range.
Electrical consumption	5V DC, ≥ 500mA
Battery	Li-ion 3.6V 25mAh
Storage of recorded doses	The last 100 recorded increments are stored in the device's internal memory (including flow checks)
Communication	Bluetooth® Low Energy v4.2 operating in the frequency band of 2400 MHz to 2483.5 MHz. 40 channels, 2MHz spacing channel, 1 MHz channel bandwidth, 4dBm (2.5119 mW) max transmission power, <0dBm max EIRP (Equivalent Isotropic Radiated Power).
Model	EFA2
Software version	Firmware 1.2.x
Dimensions	40,1 mm (h) x Ø 25,8 mm / 1,58 in (h) x Ø 1,01 in
Weight	11 g / 0,39 oz
Operating conditions	Temperature 35°C 95°F / 2°C 36°F Humidity 90% 15% Pressure 1060hPa 700hPa Do not freeze the device between injections (36°F <T° or 2°C < T°C)
Lifetime	2 years

Further information is included in the Technical Note, available online at https://my-mallya.com/sau/growth-disorder.

Symbol description

SYMBOL	DESCRIPTION
	Refer to the instruction manual / booklet. Follow instructions for use
	Manufacturer
SN	Serial Number
	Country and date of manufacture
LOT	Batch number
UDI	Unique Device Identification
#	Model number
	Distributor
REF	Product reference
	Distributor reference
	Use by date
MD	Medical Device
	Type BF applied part (according to IEC 60601-1 continuous mode)
IP 22	Ingress Protection index IP22 (IEC 60529)
	Direct current
	For indoor use only
	Keep away from humidity
	Do not use if the packaging is damaged or opened
	WEEE; waste electrical and electronic equipment
	Single patient multiple use
	CE mark

Radio-communication statement

The undersigned BIOCORP PRODUCTION declares that the radio equipment of the Mallya type complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address https://my-mallya.com/.

Contact information

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CE

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District/Street name: Al Misfat
Mustafa bin Abdullah Merdad

In case of questions, problems or assistance, please contact BIOCORP PRODUCTION authorized dealer for technical support as identified on the outside of the packaging.