**Standard Operating Procedure (SOP)**

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| **SOP Title** | Nuffield Health heart rate monitor induction (WP4) |
| **Version Number** | 1.0 |
| **Approval Date** |  |
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**1.0 Purpose**

This procedure is aimed at establishing safe and reliable practises when delivering heart rate monitor induction sessions to men in the STAMINA Lifestyle Intervention (SLI).

**2.0 Scope**

This SOP is relevant to Nuffield Health staff that have been trained to deliver the SLI.

**3.0 Background**

* Up to 24 Nuffield Health sites will be recruited and paired with an NHS site for the delivery of work package 4 and 5 of the STAMINA programme.
* Patients will have provided informed consent, undergone a health screening check and a baseline assessment with the SHU research team in conjunction with the NHS.
* Some patients will be randomly allocated a heart rate monitor to record exercise sessions for the duration of the 12-month SLI.

**4.0 Responsibilities**

* The SHU research team have responsibility of ensuring data is stored and communicated to NHS teams and with Nuffield Health sites accurately and securely.
* The Nuffield Health team have responsibility of recording and storing all data from the STAMINA study accurately and securely.
* The Nuffield Health team have responsibility for following the research protocol and making sure that all transfer of research data to the SHU research team is done from @nuffieldhealth.com to @nhs.net.
* The NHS site PI has overall responsibility for patient safety.

**5.0 Procedure**

A second induction session should be scheduled with men who are randomly allocated a heart rate monitor to wear for the duration of the SLI. The session should be booked in advance on the booking bug system and take place within 1-2 weeks of the patient induction session. The CES will be expected to follow the below steps:

1. Explain to men why they have a heart rate monitor
2. Explain to men how to wear the chest strap
3. Support men syncing the watch to the chest strap
4. Demonstrate how to record a session on the watch
5. Explain to men how to sync their watch to Garmin Connect/ Express
6. Signpost to resources

**Step 1: Explain to men why they have a heart rate monitor**

Explain to men that they have been randomly allocated to receive a heart rate monitor for research purposes. The research team are collecting data to monitor the intensity people in the SLI are working at during STAMINA exercise sessions. Therefore, inform the selected men that they should wear the heart rate monitor and chest strap during every exercise session and then upload the data to Garmin® for the research team to access.

**Step 2: Explain to men how to wear the chest strap**

Provide verbal instruction and a demonstration of how to wear the chest strap and then encourage the patient to have a go at putting it on independently. Inform men that the chest strap will detect their heartbeat.

Instruct men that the module should be attached to the chest strap with both Garmin ® logos facing the front. Inform men that the heart rate monitor should be worn directly on the skin, just below the chest muscles. Then tell the men to wrap the strap around the chest and connect the strap hook to the loop, adjusting the strap until it feels snug enough to stay in place during activity, but not too tight that it is uncomfortable.

**Step 3: Support men syncing the watch to the chest strap**

Provide verbal instruction and a demonstration on how to sync the chest strap to the heart rate monitor and then encourage the patient to have a go independently.

Inform men they will need to connect their chest strap to the watch so that they can view and record their heart rate during exercise sessions. Once the connection is set up, the watch will automatically connect to the chest strap the next time they start an activity, and the chest strap is active and within range.

To sync the heart rate monitor, the following steps should be taken:

* First, instruct men to wear the chest strap and watch.
* Press the back button so that the Menu screen appears (See Appendix 1).
* Press the down button repeatedly until it highlights the Settings option, then press the runner button to select it.
* Press the down button again until it highlights the sensors option, then press the runner button to select it.
* The next screen will have one option: Add. Press the runner button to select this option.
* The screen will then say “Hold Device on Sensor” – hold the watch against the heart rate monitor module in the middle of the chest strap. Wait a few moments and the devices should connect. You will hear a beep and buzz from the watch and a message will appear on the screen saying, “HR Monitor Connected”.
* Next the screen will say “Move to next sensor select back when finished” and then “hold device on sensor”. Press the back button repeatedly until back at the normal watch screen.

The heart rate monitor and watch are now connected.

Top tip: Slightly wet the four patches on the inside of the chest strap with water to help with connectivity if you are having difficulties.

**Step 4: Demonstrate how to record a session on the watch**

Provide verbal instruction and a demonstration of how to record exercise on the heart rate monitor and then encourage the patient to have a go independently. Inform men that they should record every STAMINA exercise session they complete.

To record exercise, the following steps should be taken:

* First, instruct men to wear the chest strap and watch.
* Select the Runner symbol and press Down until an option called Cardio comes up.
* Bring the watch within 1 cm of the heart rate monitor module and wait while the device connects to the sensor.
* When the device detects the sensor, a message notification appears.
* Press the Runner button to start the session. A timer will start at the top of the screen showing the live duration of the session. Heart rate (number of beats per minute) will be displayed in the middle row of the screen.
* To pause a session, press the Runner button.
* To resume a session, press the Runner button again with the Resume option selected.
* To finish a session, press Runner then press Down once to select the Save option and then press Runner again. “Activity saved” will appear on the screen followed by a summary of the session.

Note: If you start recording accidently, pause the session, and select the Discard option to delete it.

**Step 5: Explain to men how to sync their watch to Garmin Connect/ Express**

Provide verbal instruction and a demonstration of how to sync the heart rate monitor to Garmin Express on a computer.

Inform men that they should aim to sync their watch at a minimum frequency of once every two weeks. Inform men that they can sync their device on site at Nuffield Health using the STAMINA laptop and their log in details, or they can download Garmin Express to their computer at home, or Garmin Connect if they are using a mobile device.

To sync to Garmin Express, follow the steps below:

* Clip the charging cable to the Garmin watch and plug the USB into the laptop. (A box will pop up; you can close this).
* Next, open the Garmin Express short cut that will have appeared as an icon on your desktop. (Your device will sync automatically).
* Once complete you will see a green tick at the top right of your watch image.
* If the watch does not sync automatically, then click on the image of the watch then press sync.

To sync to Garmin Connect, follow the steps below:

* Turn Bluetooth on, on the mobile device and have the watch close by.
* Next, open Garmin Connect on the mobile device.
* To sync the watch, tap the blue circular arrows in the top right hand of the screen (Appendix 2).
* Once the arrows turn white the sync has begun.
* Wait until the circle next to it has a full white outer layer.
* The sync is now complete, and you can close the APP.

**Step 6: Signpost to resources**

Provide men with the heart rate monitor, chest strap and information booklet. This provides step-by-step instruction on how to use the heart rate monitor and download/ sync to Garmin. Signpost men to the STAMINA website, members area, where they can access short tutorial videos. Men will have received log in details to the members area. If men need further support or have misplaced their log in details, instruct them to contact the STAMINA research team via telephone (0114 225 3586) or email ([sth.stamina@nhs.net](mailto:sth.stamina@nhs.net)).

**6.0 References, Related SOPs, Web links**

**Appendix 1:**

The **sun** button is used to temporarily light up the screen and allows you to turn the watch on/off when held down for several seconds.

The **runner** button is used to select options.

The **down** button is used to move between options.

The **back** button is used to return to the previous screen.

A picture containing text, watch

Description automatically generated

**Appendix 2**

Garmin connect – buttons to press to sync the watch

A screenshot of a video game

Description automatically generated with medium confidence