

## 7. Checking and changing Default Sleeping Heart Rates

### Checking SHR has been set

- Open the database through Access and double click on the 'UserInfo' table to make the following table appear:

ID	UserID	Height	DOB	Sex	Fitness	Medical	Firstused	Lastused	RestHR	RestingIBI
26	99915	1.61	10/07/1962	Female	Average	None	17/02/2004 13:54:05	02/06/2004 09:08:31	55	0.36
66	99914	1.79	22/09/1978	Male	Average	None	03/03/2004 16:23:08	03/06/2004 13:56:48	59	0.16
68	99939	1.68	30/04/1977	Female	Average	None	08/03/2004 10:35:56	22/10/2004 13:26:47	56	0.43
73	99912	1.74	15/03/1971	Male	Average	None	16/03/2004 16:47:00	21/10/2004 13:52:27	47	0.33
74	99904	1.7	07/06/1973	Male	Average	None	19/03/2004 11:25:18	17/08/2004 13:40:13	39	0.25
75	99905	1.84	28/03/1960	Male	Average	None	19/03/2004 14:35:24	19/08/2004 09:53:04	45	0.09
88	99901	1.7	15/06/1979	Female	Average	None	23/04/2004 14:17:40	02/09/2004 09:08:09	54	0.15
97	99940	1.62	31/01/1961	Female	Average	None	07/05/2004 13:09:14	22/10/2004 13:26:48	55	0.17
101	99944	1.81	05/12/1963	Male	Average	None	21/05/2004 14:14:00	13/08/2004 15:29:07	53	0.19
103	99934	1.67	19/04/1965	Female	Average	None	25/05/2004 14:04:44	11/11/2004 15:24:54	45	0.28
104	99949	1.79	19/03/1962	Male	Average	None	28/05/2004 16:49:44	11/08/2004 15:48:57	45	0.00
107	Apnea	1.96	06/08/1965	Male	Fair	None	08/03/2004 13:29:32	14/10/2004 17:02:10	65	
108	IBledit	1.88	08/08/1950	Male	Fair	none	17/11/2004 00:56:40	26/11/2004 12:01:57	70	
109	Apnea1	1.7	19/05/1953	Male	Average	None	27/08/2003 16:31:02	14/10/2004 17:01:47	65	
110	Stressed	1.84	21/09/1967	Male	Average	None	27/04/2004 14:26:40	21/05/2004 17:03:02	55	
111	sleep2	1.8	09/01/1972	Male	Average	None	17/11/2005 21:56:49	17/11/2005 22:20:55	70	
112	sleep1	1.8	28/05/1977	Male	Average	None	21/11/2005 22:30:53	21/11/2005 22:33:44	70	
*	(AutoNumber)	0			Average	None				0

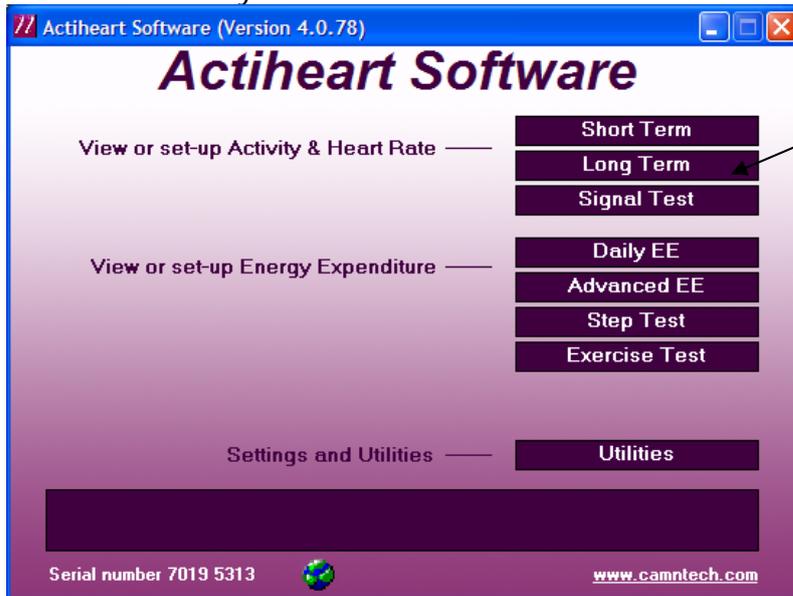
- The areas of interest at this stage are the columns named RestHR (Note: this is actually Sleeping HR) and RestingIBI. This shows what has been set through the software as the sleeping heart rate (SHR) for each participant.
- When a Free-living trace has not had a SHR set through the software, the software automatically puts in a default value of 70. The way to tell from this table if SHR has not been set for a participant, is to look for any who have '70' in the RestHR column **AND** where the RestingIBI is blank. (NB: Having a 0.00 also means that SHR has been set). This combination means that no SHR has been set via the processing of a free-living trace (if 70 appears in the RestHR column but there is a number in the IBI column then this has been set, it just happens to be 70)

RestHR	RestingIBI	El
54		
58	0.00	
63	0.00	
59	0.00	
40	0.00	
48	0.00	
49	0.00	
70		
53	0.19	
56	0.00	
53	0.00	
66	0.00	
65	0.00	
57	0.00	
60	0.20	
53	0.24	
48	0.31	
48	0.31	
62	0.00	
59	0.24	
41	0.20	
70		

- Once you have located these, reading along to the left under UserID will tell you which participant has not been set an SHR.
- For those participants who have not had their SHR set, go back into the software to check these traces and change where necessary (read "Changing SHR" section below). (Note: You cannot open a database through the software if it is open in Access so you need to close the database before attempting to open it through the software).
- If there are two identical User information entries (ID number [is case sensitive!] height, weight, sex, DOB) for a participant except for one having a SHR value and one having a default SHR, a short term or waveform file may actually still be linked to the one that has the default number. Therefore, delete the line of user information which is not required. Having done this, confirm that the files for that participant are reading the correct user info by highlighting the files of interest in the software, clicking info and checking that all the user information is being read correctly (Note, if this was not done you may end up with a calibration file with one SHR and a free-living file with a differing value for the same person).

## Changing SHR

Once in the software, go through the Long term recording screen to look at the trace and see why it has no SHR set.

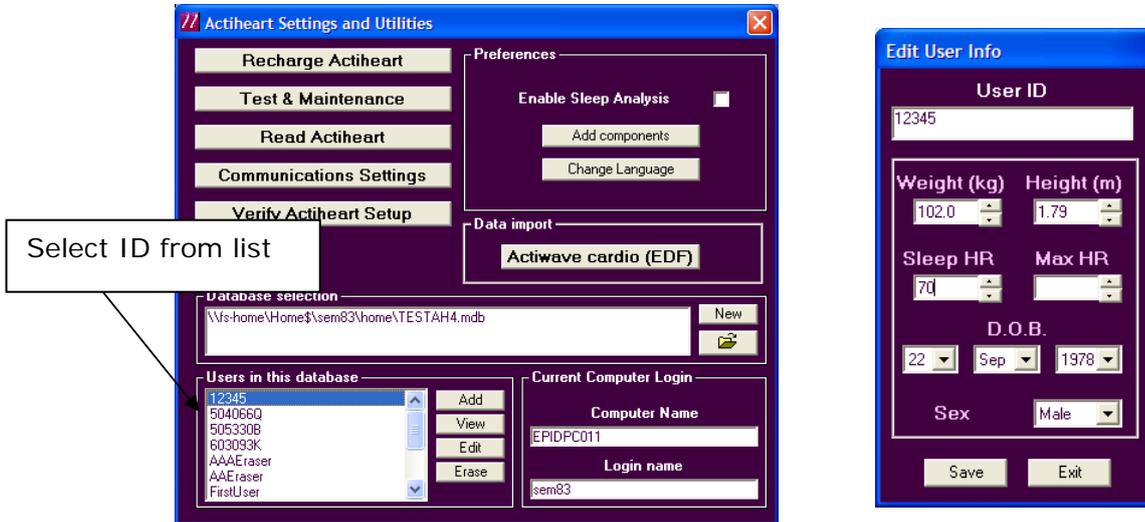


Once you have selected the trace to view, and double clicked to open it, it then may become apparent why there is no SHR set, i.e. no data in file. If you have any lab data for that participant, you still need to set SHR for that individual as this is used in equations to calculate fitness. If you only have a non-usable free-living file, it is ok to be left as default as obviously no data will be processed anyway for this participant. If the data is missing from when they are sleeping and the rest of the data looks okay and will be analysed then we must provide an appropriate SHR. How this is derived will depend on other measures during the study e.g. Pulse Rate (from BP), ECG Resting Heart Rate and should be kept consistent throughout the study.

**MRC:** SHR can be calculated using the Lab data for the participant. This should be calculated as  $RHR - 10$ . Other studies may have study-specific rules based on the relationship between RHR and SHR within that population.

If this needs to be done it can be changed through the software:

- Click on the Utilities tab. Select the persons ID number from the list and click Edit.



- Edit the field entitled Sleep HR to the appropriate number and click save. It will ask you again if you wish to save the data and, after you have clicked yes, it will tell you that it has saved changes. You can then click exit from this screen.
- Repeat this process for all the IDs that need to be corrected and also log on a spreadsheet that this is how that participants ID has been derived.
- If an ID has more than one Long term file associated with it (i.e. Rewear) be sure to set the SHR only on the trace which is going to be used for further processing as this is the one which is the most likely representation of their real sleeping heart rate.