NORMATIVE VALUES OF SENSORY THRESHOLD AND PAIN THRESHOLD IN LOWER LIMBS OF HEALTHY YOUNG ADULTS

Abstract

Aims and Objectives:

1. To record sensory and pain threshold for sural and superficial peroneal nerve.
2. To compare the variations of sensory and pain threshold in BMI and gender in normal young adults.

Method: Measurement of sensory and pain threshold was assessed according to the cutaneous supply of the nerve (sural and superficial peroneal nerve) i.e posteroinferior aspect of lateral malleolus and dorsum of foot proximal to 4 digits. A therapeutic current (IG) was used of pulse width 1ms, frequency of 3 Hz and 50 Hz to obtain sensory and pain threshold in volts. Three readings were taken and their mean was considered the final reading. Subject were instructed to report when he/she will start to feel the current, this reading will determine the sensory threshold. When the subject would start feeling pain sensation, it would determine the pain threshold.

Result: The normative range of sensory threshold of sural nerve at 3Hz is 45.69 with a SD of
19.25 and at 50 Hz it is 41.53 with a SD of 18.09. The sensory threshold of superficialperoneal nerve at 3Hz is 52.82 with SD of 20.13 and at 50 Hz it is 47.78 with a SD of 18.32. The normative range of pain threshold of sural nerve at 3Hz is 82.10 with a SD of 27.67 and at 50 Hz it is 66.36 with a SD of 23.18. The pain threshold of superficial peroneal nerve at 3Hz is 84.52 with a SD of 27.69 and at 50Hz it is 67.20 with a SD of 23.18.

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Conclusion: Males have higher sensory and pain threshold for both the nerves, i.e. sural and superficial peroneal nerves at a frequency of 3Hz and 50Hz. Threshold does not vary significantly according to BMI.

Keywords: Sensory threshold, pain threshold

I. INRODUCTION

Awareness of changes in sensory and pain perception is important in normal individuals to determine a value that can be used as a diagnostic or a prognostic tool in field of physiotherapy. Neuropathies involve large as well as small nerve fibres. Detection of large fibres neuropathies is easier as compared to small nerve fibres due to their physiological characteristics. Small neuropathies are difficult to diagnose with electrophysiological tests like EMG (electromyography) and NCV (Nerve Conduction Velocity) and hence quantitative testing is done.

Quantitative sensory testing involves activation of various sensory nerve fibres like Aβ, Aδ and C fibres that convey fine sensation, vibration, pain and temperature related sensations respectively. Threshold for sensory detection and pain are tested by applying different modes of stimuli example mechanical, thermal and electrical. The variables of sensory and pain threshold are useful in early diagnosis and prevention in conditions with sensory impairments (eg diabetic polyneuropathy[36,37,45,48], multiple sclerosis, peripheral nerve injuries, Guillian barre syndrome, alcoholic polyneuropathy, Hansens's disease and radiculopathies).

Sensory threshold is the point at which a stimulus triggers the start of an afferent nerve impulse.Pain threshold is the lowest intensity of stimulation at which pain is experienced. There are different types of tools that are currently used to target these nerve fibres such as neurothesiometer (Aδ fibres), biothesiometer, vibrometer, dolorimeter (Aaδand C fibres).The most widely used instrument is the neurotron which stimulates all the three fibres namely Aβ, Aδ and C fibres. For our study we have used microcontroller biotech stimulator which is affordable and easy to use with a frequency of 3Hz and 50Hz to stimulate C fibres and Aδ and Aβ respectively and pulse width of 1ms. In rural communities, it can be used widely to detect the early sensory deficits especially in diabetic polyneuropathies.

Research studies have been conducted in various countries to establish normative ranges of senory and pain threshold however there are no literature available in India pertaining to an estimation of a normative range of sensory and pain threshold and hence the study was undertaken.

Sensory threshold is the point at which a stimulus triggers the start of an afferent nerve impulse and Pain threshold is the lowest intensity of stimulation at which pain is perceived. The event of reaching the perceived threshold is generally dependent on the excitability of peripheral receptors or afferent nerves.[29]

The interpretation of pain data are complex as the experience of pain is subjective and not uniformly or proportionally related to the extent of stimulation.[14] Therefore the relationship between the rated sensation inresponse to increasing intensity of electrocutaneous stimulation could be regarded as non linear but the data will have an ordered structure.[20]Hence, in this study we will apply a statistical approach that is suitable for all types of data having an ordered structure.[40-43]

II. AIMS ANDOBJECTIVES

1. To record various measurements of sensory threshold and pain threshold of sural and superficial peroneal nerve.
2. To compare the variation in sensory and pain threshold in BMI and gender in normal healthy young adults.

III. REVIEW OF LITERATURE

1 Liou JT, et alZhonghua Yi Xue Za Zhi (Taipei)..1999 .Normative data of thermal and vibratory threshold,Chinese medical journal,july 1999jul,vol62(7):pg no431-7, studied the effect of gender and body mass index on the threshold. Their study Concluded that female subjects were more sensitive to thermal stimulation in hands as compared to the male counterparts.27

2 Nicola.A.Maffiuletti, et al.2011,Effect of gender and obesity on electric current threshold, Muscle Nerve. 2011 Aug;vol44(2):pg no:202investigated the influence of gender and obesity on electrical current thresholds in an attempt to optimize the application of skeletal muscle electrical stimulation (ES) in clinical practice, in which they concluded that sensory threshold was lowerin women than in men, obese and non obese and that sensory and motor thresholdwere higher in obese subjects.34

3 Dr. Unnati Pandit et al,2011,Distal to proximal current perception threshold: a diagnostic tool to distinguish between small fibre axonopathy in high risk diabetic foot. Indian journal of physiotherapy and occupational therapy-an international journal,2011; vol5, issue3:pg nos 42-45,aimed to explore the distal toproximal ratio of sensory & pain threshold[RST & RPT respectively] and Ankle brachial index[ABI] as diagnostic tools by comparing these values between controls & high risk diabetic footthrough which they concluded that ankle brachial index, ratio of sensory threshold and ratio of pain threshold can serve as an effective diagnostic tool in high risk diabetic foot patients.16

4 Clifford et al,2000.Sensory thresholds in normal human feet. 2000 Jun;vol21(6):pg no:501-4, investigated the effect of different thicknesss of Semmes –Weinstein monofilaments in which they concluded that a significant difference was seen on change in monofilament thickness and also significant changes were seen in values of different subjects and between right and left foot.13

5 Elsy Eek et al.2012,Adult norms of perceptual threshold of touch in hands and feet in relation to gender ,age and dominance using TENS;

6 Physiotherapy theory pract, 2012 Jul;vol28(5):pg no:373-83, assessed the perceptual threshold of touch by using high frequency TENS in which they concluded that the threshold increased with age and also an increase was found with gender, threshold being more in males than in females and also difference was seen in threshold values of the right and left side, right having a higher threshold than the left.19

Study Design
STUDY TYPE: Quantitative Study.
SAMPLING TECHNIQUE:Purposive Sampling.
STUDY SETTING: MGM University of Health Sciences, Navi Mumbai.
TARGET POPULATION : Young adults.
SAMPLE POPULATION: College students of age group: 18-25 years.
SAMPLE SIZE: n=400

Inclusion Criteria

- 1.Healthy young adults of age group 18 to 25 years.
- Males and females

Exclusion Criteria

- Open wounds.
- Skin conditions like dermatitis, eczema, Hansen's disease etc.
- Multiple sclerosis.
- Polyneuropathy (alcoholic, guillain barre syndrome, diabetic)
- Peripheral nerve injury.

Materials Used

- Biotech striker stimulator.
- Silver surface electrodes.
- Gel, straps, pencil, pens, paper.

IV. METHODOLOGY

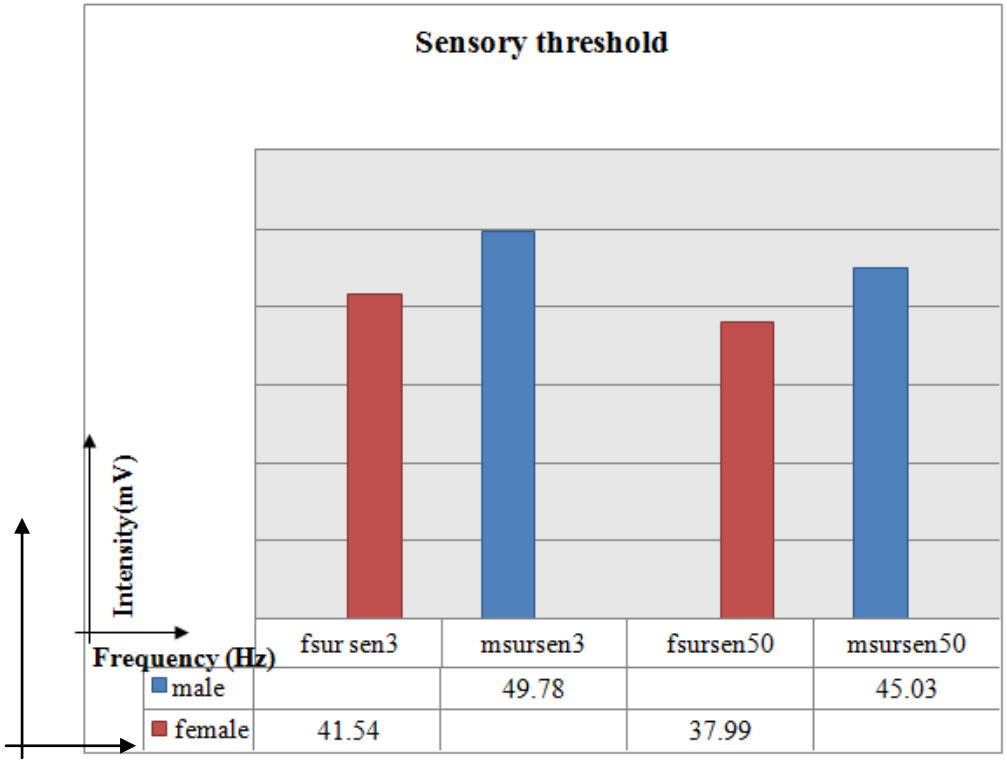
Subjects (n= 400) were informed the purpose and nature of the study.

Written consent was sought from the participants. Measurement of sensory and pain threshold was assessed according to the cutaneous supplyof the nerve (sural and superficial peroneal nerve)i.e posteroinferior aspect of lateral malleolus and dorsum of foot proximal to 4 digits. A therapeutic current (IG) was used of pulse width 1ms, frequency of 3 Hz and 50hz to obtain sensory and pain threshold in volts.

Three readings were taken and their mean was considered the final reading. Subject were instructed to report when he/she will start to feel the current, this reading will determine the sensory threshold. When the subject would start feeling pain sensation, it would determine the pain threshold.

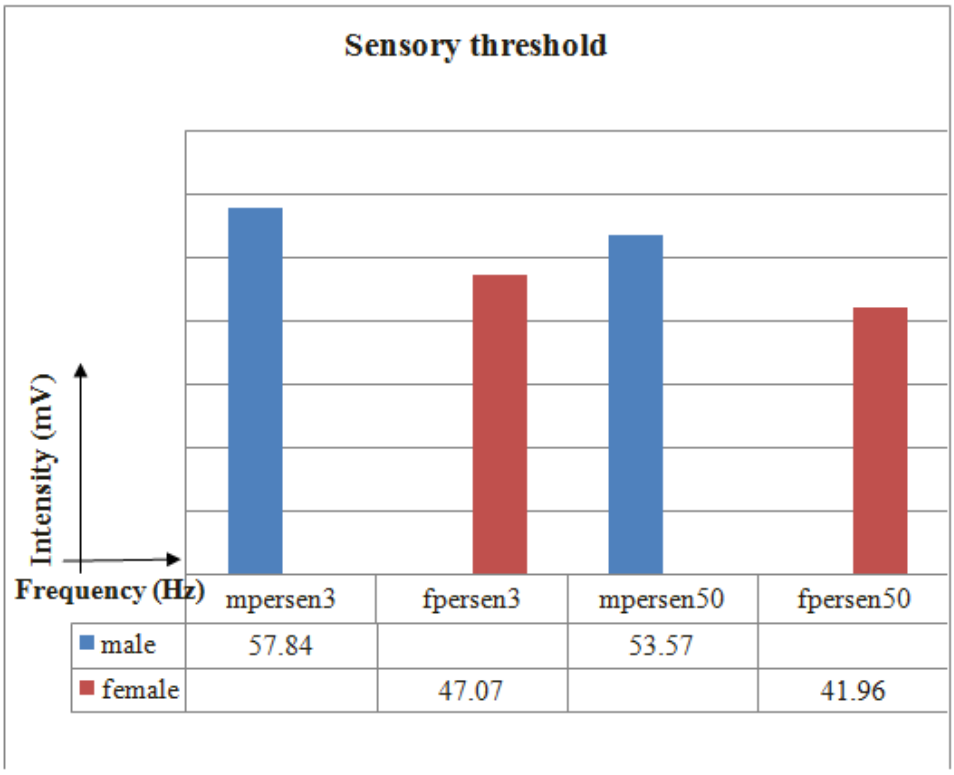
V. STATISTICAL ANALYSIS

1. Sensory threshold of sural nerve in males and females



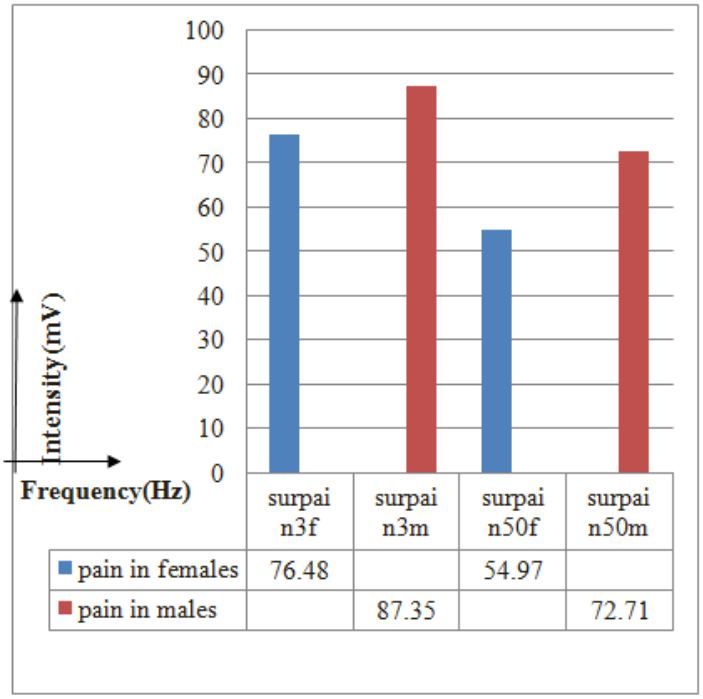
	fsur sen3	msursen3	fsursen50	msursen50
male		49.78		45.03
female	41.54		37.99	

2. Sensory threshold of superficial peroneal nervein males and females

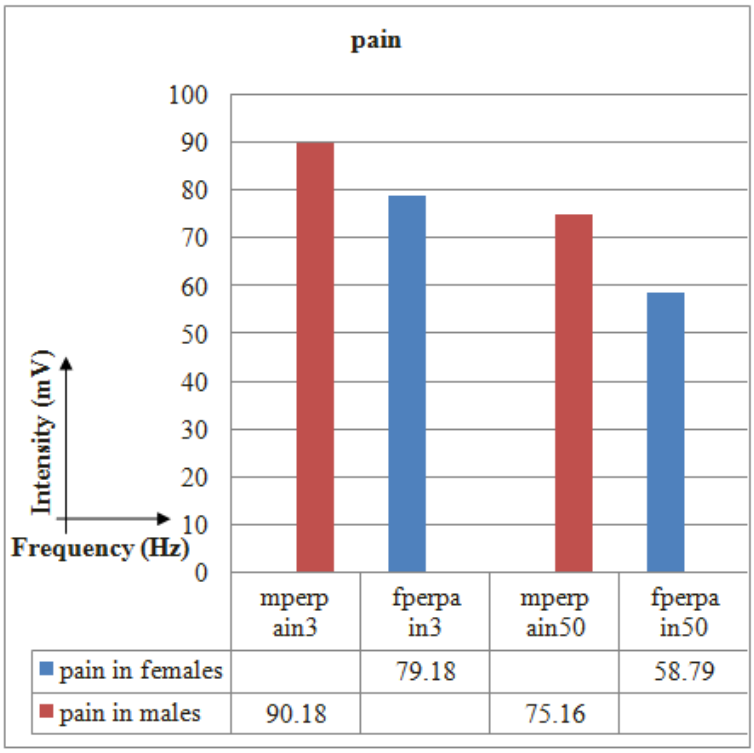


	mpersen3	fpersen3	mpersen50	fpersen50
male	57.84		53.57	
female		47.07		41.96

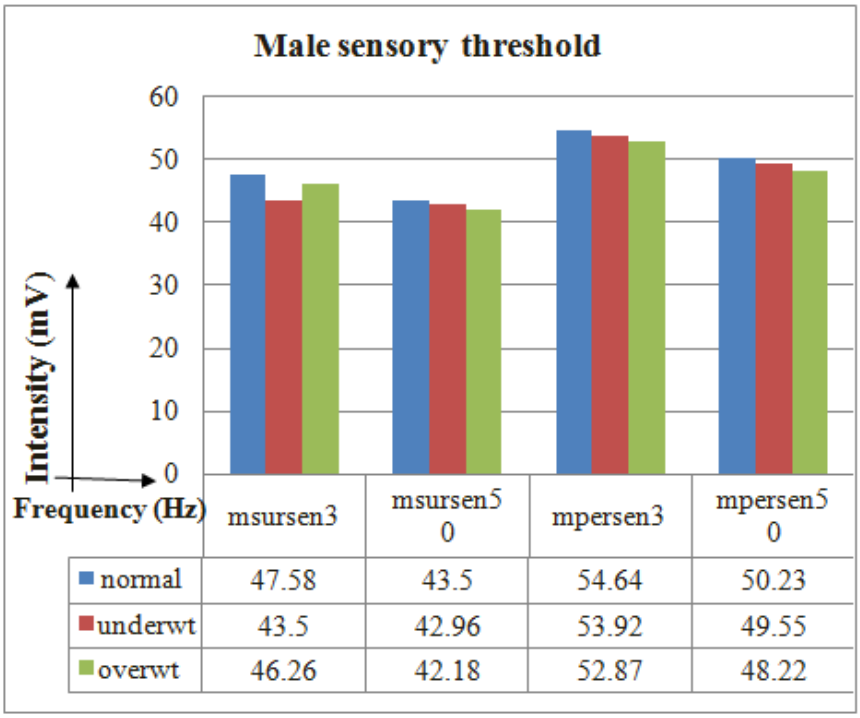
3. Pain threshold of Sural nerve in males and females



4. Pain threshold of Superficial peroneal nerve in males and females

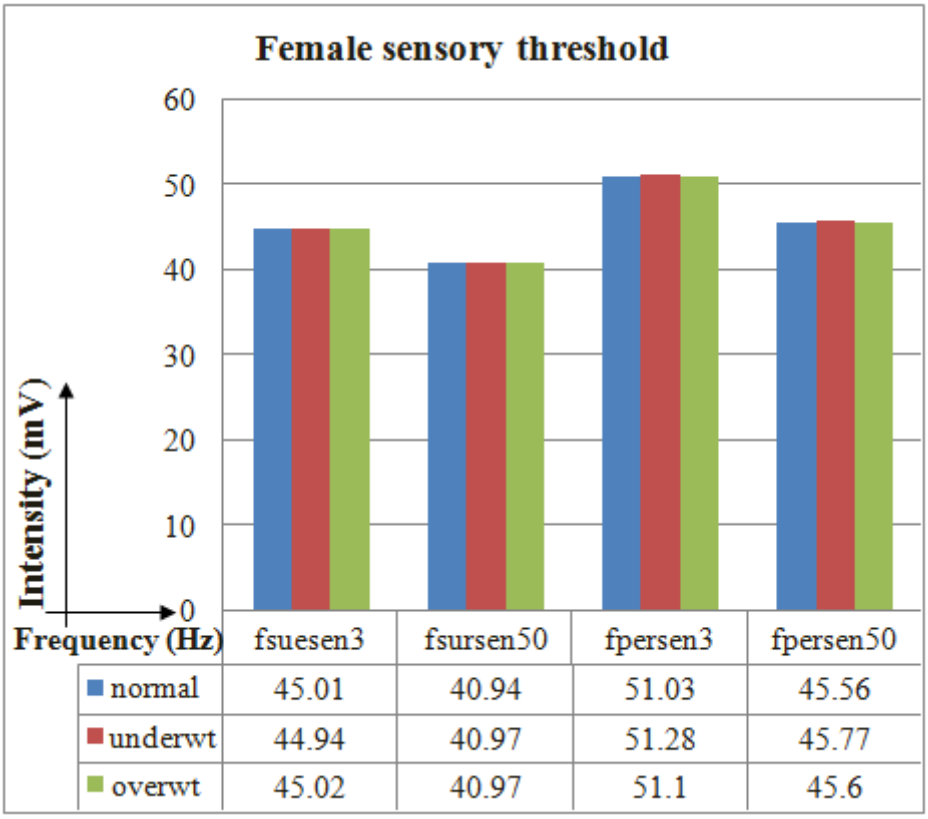


5. Sensory threshold in males according to BMI.



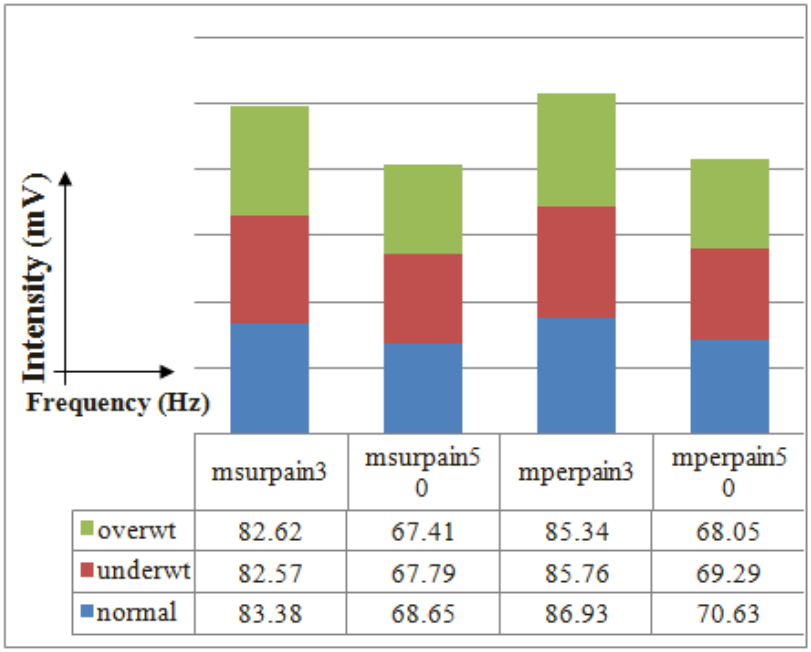
	msursen3	msursen50	mpersen3	mpersen50
normal	47.58	43.5	54.64	50.23
underwt	43.5	42.96	53.92	49.55
overwt	46.26	42.18	52.87	48.22

6. Sensory threshold in females according to BMI.



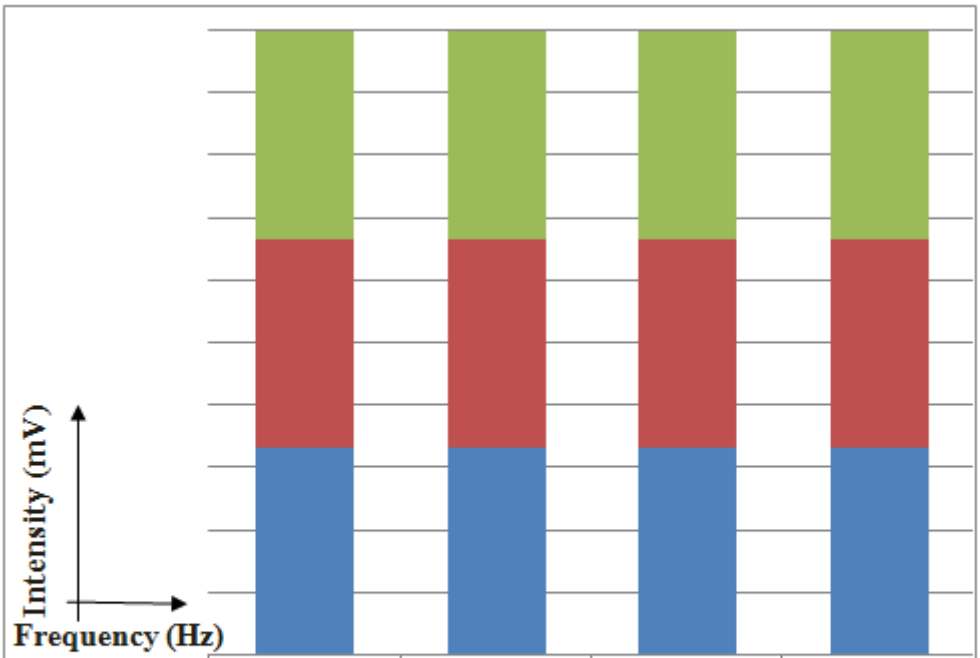
	fsuesen3	fsursen50	fpersen3	fpersen50
normal	45.01	40.94	51.03	45.56
underwt	44.94	40.97	51.28	45.77
overwt	45.02	40.97	51.1	45.6

7. Pain threshold in males according to BMI.



	msurpain3	msurpain50	mperpain3	mperpain50
overwt	82.62	67.41	85.34	68.05
underwt	82.57	67.79	85.76	69.29
normal	83.38	68.65	86.93	70.63

8. Pain threshold in females according to BMI.



	fsurpain3	fsurpain50	fperpain3	fperpain50
overwt	81.19	64.71	82.43	63.64
nderwt	81.11	64.56	82.53	63.84
normal	81.41	64.7	82.42	63.63

VI. RESULT

Sural nerve normal ranges:

	sensory				**Pain**			
	3		50		3		50	
	male	female	Male	female	male	female	Male	female
Entire data	29.3-70.26	24.57-58.51	26.51-63.55	21.05-54.93	61.2-113.5	48.3-104.66	49.62-95.8	33.51-76.43
Normal BMI	27.95-67.21	26.39-63.63	24.83-62.17	23.1-58.78	56.21-110.5	53.16-109.66	45.37-91.93	41.91-87.49
Underweight	27.85-65.65	26.16-63.72	24.69-61.23	22.92-59.02	55.09-110.05	52.76-109.46	44.78-90.8	41.9-87.22
Overweight	27.02-65.5	26.38-63.66	23.84-60.52	23.01-58.93	55.68-109.9	52.73-109.65	45.56-90.26	42.03-87.43

Superficial peroneal nerve normal ranges

	sensory				**Pain**			
	3		50		3		50	
	male	female	male	female	male	female	male	female

Entire data	36.81-78.87	29.72-64.42	34.63-72.51	26.31-57.61	65.67-114.69	49.72-108.64	52.11-98.21	38.7-78.88
Normal	23.96-75.52	31.72-70.61	31.15-69.31	26.25-64.87	58.74-115.12	53.89-110.96	36.80-94.06	41.98-85.28
Underweight	33.45-74.39	31.84-70.72	30.97-68.13	28.52-63.02	57.16-114.36	53.91-111.15	45.66-92.82	42.16-85.52
overweight	32.56-73.18	31.79-70.41	27.91-58.53	26.29-64.91	57.50-113.18	53.91-110.95	43.57-91.53	51.99-85.29

VII. DISCUSSION

Our study on sensory and pain threshold which was conducted on 400 individuals(200 females and 200males) concludes that there was variation of sensory and pain thresholdaccording to gender. Males have higher sensory and pain threshold for both the nerves, i.e.sural and superficial peroneal nerves at a frequency of 3Hz and 50Hz. This variation in thresholds can be due to number and or sensitivity of cutaneous and subcutaneoussomatic sensory receptors which are greater in women than in men. Also there is a difference in hormonal status in men and women causing a variation in thresholds. Inour study we also found out that the threshold does not vary significantly according to BMI,where as a similar study was done which stated that thresholds vary according to BMI.[34]

Limitations: As the biotech striker is confined to a limited intensity of 160V, which was not a sufficient intensity to obtain the pain threshold in 29 individuals, hence the biotech machine posed to be a shortcoming in our study.Future Recommendations: Faradic current or TENS can be used in future to conduct a similar research. Also different equipments can be used at different frequencies with different nerves.

VIII. CONCLUSION

The normative range of sensory threshold of sural nerve at 3Hz is 45.69 with a SD of 19.25 and at 50 Hz it is 41.53 with a SD of 18.09.The sensory threshold of superficial

peroneal nerve at 3Hz is 52.82 with SD of 20.13 and at 50 Hz it is 47.78 with a SD of 18.32.Thenormative range of pain threshold of sural nerve at 3Hz is 82.10 with a SD of 27.67 and at 50 Hz it is 66.36 with a SD of 23.18.The pain threshold of superficial peroneal nerve at 3Hz is 84.52 with a SD of 27.69 and at 50Hz it is 67.20 with a SD of 23.18.

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APPENDIX:I
Consent Form

The advantages and disadvantages of the research in which I am expected toparticipate, for which I will be administered therapeutic current through a machine has been explained to me.

I willingly, under no pressure from the researcher-

(i) Agree to take part in this research, and agree to participate in all investigations which will help acquire knowledge for the benefit of the mankind,
(ii) Agree to administration on direct current on my skin.

My consent is explicitly not for disclosing any personal information. For disclosing any such personal information obtained from the investigations conducted on my samples, further consent should be obtained.

I have been informed the researchers will take my prior consent before they draw benefits from research based on my readings.

Signatures

APPENDIX :II

SENSORY AND PAIN THRESHOLD ASSESSMENT SHEET

NAME :
GENDER :
AGE :
HEIGHT : WEIGHT :
BMI :

1. Sensory Threshold

NERVE	FREQUENCY	1	2	3	AVG
SURAL	3Hz				
	50Hz				
SUP.PERONEAL	3Hz				
	50Hz				

2. Pain Threshold

NERVE	FREQUENCY	1	2	3	AVG
SURAL	3Hz				
	50Hz				
SUP.PERONEAL	3Hz				
	50Hz				

MASTERCHART
SURAL NERVE – FEMALES

r	nme	age		ht	wt	BMI	sensory								Pain							
0							3hz				50hz				3hz				50hz			
							TR1	TR2	TR3	MEAN	TR1	TR2	T3	MEAN	TR1	TR2	TR3	MEAN	TR1	TR2	TR3	MEAN
1	MG	19		147	55	25.5	39	38	40	39	27	30	28	28.3	50	51	52	51	47	46	45	46
2	GJ	18		152	55	23.8	24	28	25	25.7	24	25	24	24.3	99	100	100	99.67	70	71	70	70.3
3	MM	18		159	54	21.4	73	72	75	73.3	60	62	60	60.7	107	111	106	108	81	83	80	81.3
4	PS	19		153	53	22.6	48	45	45	46	38	36	36	36.7	92	91	91	91.33	62	62	61	61.7
5	PS	18		160	52	20.3	41	39	37	39	33	32	31	32	88	100	102	96.67	50	50	50	50
6	AS	19		162	47	18.4	49	50	51	50	50	51	52	51	103	102	103	102.7	66	67	69	67.3
7	SM	18		146	43	19.7	24	18	21	21	22	22	22	22	34	25	33	30.67	28	28	28	28
8	RB	20		158	55	22.1	49	49	47	48.3	43	44	43	43.3	.	.	.	.	122	125	121	123
9	SC	18		148	50	22.8	35	35	35	35	35	34	35	34.7	68	68	68	68	54	52	53	53
10	KM	18		150	47	20.9	63	61	63	62.3	65	63	65	64.3	120	.	.	.	88	76	74	79.3
11	SS	19		163	68	25.7	66	67	62	65	50	53	49	50.7	101	106	108	105	67	64	62	64.3
12	AK	18		163	50	19.2	54	54	52	53.3	42	42	38	40.7	112	110	112	111.3	60	59	60	59.7
13	DK	18		151	45	19.7	47	46	47	46.7	27	19	22	22.7	51	51	50	50.67	34	29	31	31.3
14	PM	18		150	36	16	35	34	36	35	38	39	40	39	154	154	154	154	95	98	97	96.7
15	MP	18		160	60	23.4	21	19	20	20	37	32	39	36	.	.	.	.	96	99	95	96.7
16	AS	18		153	53	22.6	28	28	28	28	32	35	34	33.7	100	100	103	101	78	79	78	78.3
17	NB	18		163	59	22.3	11	11	12	11.3	10	11	11	10.7	49	50	50	49.67	39	40	41	40
18	RG	18		160	48	18.8	23	25	25	24.3	22	21	21	21.3	42	34	30	35.33	30	26	30	28.7
19	SP	20		163	58	22.7	31	32	31	31.3	38	39	38	38.3	100	101	102	101	58	59	58	58.3
20	SN	20		153	60	26.1	23	30	27	26.7	27	21	27	25	34	35	30	33	31	31	30	30.7
21	SS	21		154	50	21.7	31	33	28	30.7	31	24	25	26.7	50	57	51	52.67	50	47	40	45.7

22	SP	18		162	56	21.4	26	27	30	27.7	37	39	40	38.7					96	100	99	98.3
23	MK	19		171	56	19.3	45	47	46	46	37	34	35	35.3	106	110	103	106.3	59	61	60	60
24	BN	19		154	68	28.7	40	40	38	39.3	37	37	37	37	55	54	54	54.33	43	40	43	42
25	MM	20		165	50	18.4	48	50	50	49.3	34	33	33	33.3	71	71	72	71.33	48	50	51	49.7
26	SP	20		152	45	19.5	44	41	44	43	39	40	40	39.7	120	119	117	118.7	53	52	53	52.7
27	PV	21		160	70	26.9	23	25	25	24.3	22	22	19	21	33	30	30	31	32	27	28	29
28	RP	21		153	54	23.4	13	13	12	12.7	11	11	10	10.7	27	27	26	26.67	20	19	19	19.3
29	DS	20		163	56	21.5	13	11	13	12.3	10	13	10	11	40	40	42	40.67	21	25	20	22
30	PJ	21		160	73	29.2	48	48	48	48	36	36	36	36					52	63	63	59.3
31	VG	21		163	63	24.2	29	27	29	28.3	21	21	20	20.7	44	44	44	44	37	33	33	34.3
32	KP	20		165	75	27.7	66	66	53	61.7	25	27	27	26.3	84	83	69	78.67	48	50	58	52
33	JS	21		152	54	23.4	40	40	38	39.3	31	31	31	31	60	57	57	58	37	38	38	37.7
34	BQ	20		148	49	23.3	66	66	63	65	57	57	57	57	73	73	73	73	77	78	77	77.3
35	KS	21		155	65	27.1	20	18	16	18	16	16	15	15.7	50	49	50	49.67	40	41	40	40.3
36	MS	20		164	79	30.3	69	67	57	64.3	56	52	54	54	82	91	89	87.33	70	71	71	70.7
37	RS	20		164	60	23.1	42	39	39	40	34	33	33	33.3	59	53	55	55.67	49	48	48	48.3
38	SR	21		161	47	18.1	36	36	38	36.7	34	35	35	34.7	110	112	114	112	54	55	55	54.7
39	SJ	19		167	65	23.3	36	32	35	34.3	35	33	35	34.3	65	67	66	66	55	51	51	52.3
40	KJ	19		164	60	25	28	22	23	24.3	42	43	47	44	63	64	63	63.33	79	70	70	73
41	RG	21		149	43	19.5	47	42	44	44.3	47	44	50	47	56	38	36	43.33	35	35	30	33.3
42	KS	19		156	45	18.5	37	38	37	37.3	32	31	32	31.7	54	53	52	53	43	42	43	42.7
43	PZ	21		152	59	25.5	41	44	45	43.3	35	36	36	35.7	74	75	78	75.67	55	52	52	53
44	SD	18		162	65	24.8	89	99	99	95.7	75	75	75	75	112	111	112	111.7	77	77	77	77
45	RC	19		162	104	39	89	89	92	90	60	61	60	60.3					97	108	108	104
46	VV	20		158	58	23.2	34	36	35	35	27	26	25	26	62	64	67	64.33	47	46	49	47.3
47	DB	21		150	45	20	20	23	23	22	23	25	23	23.7	83	82	80	81.67	40	41	43	41.3

48	NB	20		150	42	18.6	18	18	20	18.7	15	15	15	15	128	128	129	128.3	51	50	50	50.3
49	PD	21		150	66	26.6	38	38	36	37.3	31	31	31	31	86	86	86	86	87	90	87	88
50	SA	20		157	53	21.5	43	48	36	42.3	35	34	33	34	107	100	107	104.7	57	83	65	68.3
51	SK	19		162	54	20.6	63	82	71	72	80	92	89	87	133	127	140	133.3	112	122	128	121
52	NJ	22		157	46	18.7	19	19	19	19	17	17	18	17.3	79	79	79	79	27	28	27	27.3
53	ZD	19		155	48	20	27	27	31	28.3	33	33	33	33	63	63	63	63	59	60	60	59.7
54	KD	19		155	47	19.6	30	27	34	30.3	34	25	34	31	57	52	57	55.33	50	50	47	49
55	ND	18		170	60	20.8	27	27	29	27.7	15	16	17	16	84	79	78	80.33	55	44	50	49.7
56	DS	21		157	56	22.8	49	50	52	50.3	45	45	42	44	124	124	123	123.7	81	81	79	80.3
57	JV	19		146	46	21.6	31	28	30	29.7	44	40	42	42	124	120	124	122.7	84	82	84	83.3
58	AP	19		152	50	21.4	13	16	15	14.7	18	19	19	18.7	63	69	71	67.67	58	57	59	58
59	AS	19		161	55	22	40	38	37	38.3	30	31	29	30	89	92	96	92.33	47	46	48	47
60	BT	20		165	65	23.8	32	33	36	33.7	19	21	20	20	46	46	47	46.33	50	50	48	49.3
61	SK	20		167	52	18.7	52	52	50	51.3	49	49	49	49	91	93	94	92.67	70	70	70	70
62	KP	18		160	49	19.6	44	45	44	44.3	38	37	37	37.3	138	138	138	138	102	104	103	103
63	DS	18		154	56	23.6	37	38	37	37.3	35	36	37	36	64	63	63	63.33	52	51	52	51.7
64	RS	18		152	42	18.2	27	28	27	27.3	26	25	25	25.3	58	59	60	59	43	43	43	43
65	PG	18		164	45	16.7	42	40	42	41.3	35	32	34	33.7	80	81	80	80.33	70	72	71	71
66	RB	19		154	49	20.6	33	32	33	32.7	29	28	28	28.3	138	139	138	138.3	75	74	75	74.7
67	PS	18		158	56	22.4	35	36	35	35.3	32	30	30	30.7	121	120	120	120.3	96	77	96	89.7
68	SP	17		161	45	18	27	27	27	27	31	32	33	32	81	85	85	83.67	54	55	55	54.7
69	PJ	19		159	39	15.6	39	47	45	43.7	39	27	26	30.7	78	68	75	73.67	61	56	59	58.7
70	HB	18		170	51	18.2	45	46	43	44.7	41	43	43	42.3	84	84	75	81	57	57	57	57
71	PG	20		158	53	22	63	69	69	67	69	68	69	68.7	89	87	90	88.67	93	90	93	92
72	CB	18		160	59	23	24	29	26	26.3	29	24	24	25.7	60	70	64	64.67	46	48	52	48.7
73	JK	21		162	64	24.4	31	29	32	30.7	33	31	32	32	95	94	94	94.33	50	51	53	51.3

74	UP	21		160	64	25	26	26	24	25.3	23	21	22	22	96	97	98	97	75	75	74	74.7
75	SC	23		156	50	20.8	75	71	68	71.3	58	53	52	54.3	83	89	83	85	70	70	70	70
76	SA	21		152	68	29.6	33	38	37	36	50	41	40	43.7	138	142	134	138	97	108	105	103
77	BJ	21		160	52	20.8	28	29	29	28.7	34	34	35	34.3	85	83	83	83.67	68	68	75	70.3
78	CK	21		150	64	25.6	37	32	33	34	15	15	15	15	99	99	106	101.3	65	64	71	66.7
79	PK	21		165	46	17	38	38	38	38	33	36	36	35	44	42	44	43.33	44	44	47	45
80	PC	20		170	64	22.8	43	38	30	37	28	26	25	26.3	57	56	52	55	30	31	31	30.7
81	SB	23		158	54	22.5	50	50	53	51	55	60	59	58	57	57	63	59	56	60	56	57.3
82	TS	19		153	49	20.9	27	30	32	29.7	30	32	34	32	48	52	61	53.67	53	54	56	54.3
83	GG	19		165	72	26.5	57	60	63	60	55	56	57	56	77	78	80	78.33	64	66	67	65.7
84	PT	18		155	48	20.2	36	30	26	31	31	31	30	30.7	60	59	50	56.33	50	51	50	50.3
85	NK	19		160	50	20	29	29	28	28.7	20	21	20	20.3	73	72	72	72.33	48	49	47	48
86	IM	18		162	66	25.3	49	47	46	47.3	27	24	25	25.3	56	57	55	56	39	42	43	41.3
87	SS	19		155	54	22.5	83	87	87	85.7	62	57	63	60.7	111	108	110	109.7	77	83	83	81
88	KK	21		167	68	25.1	46	48	52	48.7	42	44	46	44	86	88	90	88	66	65	66	65.7
89	SD	20		160	52	20.3	29	29	30	29.3	26	26	27	26.3	93	94	94	93.67	56	58	59	57.7
90	KS	19		162	60	22.9	24	24	25	24.3	22	22	23	22.3	86	88	90	88	54	52	53	53
91	DS	19		148	53	25	45	47	46	46	37	34	35	35.3	109	104	103	105.3	59	61	60	60
92	SC	20		159	51	20.4	27	30	29	28.7	30	35	28	31	40	40	40	40	35	35	35	35
93	SC	20		154	52	22.6	44	36	40	40	43	37	41	40.3	69	61	59	63	50	54	51	51.7
94	TT	19		170	70	24.2	71	73	75	73	73	74	75	74	114	114	117	115	97	96	96	96.3
95	FI	21		159	53	21	69	70	71	70	57	60	61	59.3					86	86	88	86.7
96	MN	19		169	63	22.1	32	27	33	30.7	31	31	32	31.3	55	54	48	52.33	41	41	41	41
97	SK	21		160	68	26.6	22	19	22	21	20	19	19	19.3	30	33	33	32	34	38	31	34.3
98	SM	20		164	50	19.3	34	34	34	34	29	27	28	28	43	38	38	39.67	33	30	32	31.7
99	PB	23		155	50	20.8	70	71	71	70.7	68	66	67	67	95	96	97	96	90	92	95	92.3

100	KB	18		170	53	18.9	29	27	27	27.7	21	20	24	21.7	58	61	63	60.67	46	44	50	46.7
101	SB	25		164	65	25	89	90	91	90	79	78	79	78.7	104	105	106	105	83	83	82	82.7
102	BB	18		158	50	20.8	41	40	42	41	39	40	38	39	53	52	51	52	60	59	62	60.3
103	SM	19		159	46	18.4	37	36	36	36.3	41	42	40	41	61	62	64	62.33	70	71	72	71
104	AM	19		164	41	15.3	35	35	36	35.3	33	34	34	33.7	.	.	.	.	83	83	84	83.3
105	KP	19		161	50	19.3	58	58	58	58	53	55	52	53.3	89	90	91	90	65	66	69	66.7
106	AP	20		161	50	19.3	33	33	35	33.7	37	39	41	39	88	91	88	89	56	55	56	55.7
107	MP	20		163	42	15.8	21	19	20	20	22	23	24	23	88	86	85	86.33	38	39	40	39
108	TB	25		164	49	18.3	79	76	78	77.7	67	68	69	68	92	96	97	95	72	73	79	74.7
109	MM	21		161	53	20.5	66	70	72	69.3	73	73	72	72.7	.	.	.	.	117	120	125	121
110	JK	21		162	64	24.4	31	29	32	30.7	33	31	32	32	95	94	94	94.33	50	51	53	51.3
111	UP	21		160	64	25	26	26	24	25.3	23	21	22	22	96	97	98	97	75	75	74	74.7
112	SS	20		160	55	21.5	23	23	25	23.7	17	19	19	18.3	52	47	47	48.67	47	43	41	43.7
113	RS	19		162	49	18.8	57	67	67	63.7	57	50	59	55.3	79	77	92	82.67	60	58	57	58.3
114	SM	19		157	49	20.4	43	47	44	44.7	36	37	40	37.7	66	58	58	60.67	47	45	45	45.7
115	SJ	18		168	94	33.5	80	81	82	81	43	34	49	42	93	95	94	94	49	50	51	50
116	EJ	21		162	56	17.3	28	31	33	30.7	37	39	37	37.7	53	51	59	54.33	57	57	59	57.7
117	SS	22		164	61	23.4	39	40	42	40.3	34	36	34	34.7	52	40	30	40.67	37	41	51	43
118	PP	21		154	62	26.9	49	44	42	45	42	41	44	42.3	71	72	82	75	62	64	65	63.7
119	RD	20		152	41	17.8	58	62	63	61	58	55	46	53	75	78	82	78.33	66	67	67	66.7
120	VM	21		160	51	20.4	27	28	30	28.3	58	53	55	55.3	70	71	73	71.33	73	74	75	74
121	JJ	20		157	52	21.6	32	34	37	34.3	31	32	32	31.7	44	44	37	41.67	34	32	32	32.7
122	JM	20		151	48	21.8	45	45	43	44.3	25	25	25	25	68	68	67	67.67	59	59	61	59.7
123	NM	22		155	67	27.9	37	36	37	36.7	34	31	33	32.7	85	81	86	84	48	45	49	47.3
124	NP	21		155	45	18.7	41	39	43	41	37	38	39	38	50	50	50	50	37	43	45	41.7
125	RN	22		175	52	16.9	31	30	32	31	26	24	25	25	55	56	57	56	36	38	39	37.7

126	SK	21		163	65	25	58	58	58	58	50	46	50	48.7	133	128	147	136	90	96	95	93.7
127	BB	21		163	50	18	58	51	55	54.7	50	53	49	50.7	73	70	71	71.33	55	66	59	60
128	SC	21		167	52	19.2	19	20	22	20.3	20	21	21	20.7	104	104	106	104.7	57	56	54	55.7
129	DS	20		159	65	26	67	67	68	67.3	50	52	52	51.3	104	102	103	103	83	84	83	83.3
130	SG	20		161	55	22	24	24	27	25	12	13	13	12.7	64	64	64	64	37	36	42	38.3
131	NB	21		152	40	17.3	70	69	66	68.3	53	51	53	52.3	81	82	89	84	91	89	91	90.3
132	KS	19		146	46	21.9	20	20	20	20	27	29	25	27	34	33	34	33.67	33	32	32	32.3
133	SN	22		155	80	33.3	40	42	41	41	38	36	34	36	76	72	69	72.33	50	54	50	51.3
134	UB	20		159	43	17.2	13	12	12	12.3	14	16	15	15	80	82	81	81	54	53	52	53
135	AS	18		155	50	20.8	64	62	62	62.7	66	63	62	63.7	135	135	134	134.7	114	120	120	118
136	HK	19		156	65	27	43	43	41	42.3	41	41	41	41	59	52	51	54	55	55	51	53.7
137	PS	21		156	42	17.5	25	24	24	24.3	20	19	20	19.7	47	47	46	46.67	44	45	46	45
138	MP	21		157	56	22.8	47	46	47	46.7	38	38	36	37.3	115	113	113	113.7	79	80	81	80
139	NB	19		161	61	23.6	37	37	37	37	30	29	30	29.7	103	105	99	102.3	63	59	61	61
140	SC	21		168	74	26.2	41	41	45	42.3	42	41	42	41.7	70	67	58	65	43	38	37	39.3
141	RB	20		160	61	23.8	25	22	21	22.7	21	22	21	21.3	57	59	61	59	44	43	46	44.3
142	LK	19		150	49	21.8	19	20	23	20.7	9	9	13	10.3	66	73	76	71.67	34	29	30	31
143	PN	19		154	62	27	65	64	49	59.3	65	59	61	61.7	69	66	79	71.33	77	73	73	74.3
144	DN	21		158	50	20.8	19	20	22	20.3	16	16	17	16.3	54	52	52	52.67	45	45	46	45.3
145	AG	21		157	55	22.9	42	43	48	44.3	31	29	29	29.7	89	78	70	79	43	43	42	42.7
146	PY	21		162	60	23	40	42	40	40.7	47	43	47	45.7	50	52	51	51	64	67	67	66
147	SS	20		165	50	18.4	35	35	35	35	35	35	35	35	83	83	80	82	70	70	71	70.3
148	AJ	18		165	57	21.1	27	33	30	30	21	23	23	22.3	61	63	61	61.67	59	55	54	56
149	NA	18		162	61	23.4	60	65	77	67.3	66	68	60	64.7	152	138	147	145.7	98	105	112	105
150	TP	19		163	49	18.4	29	25	26	26.7	20	19	18	19	39	37	34	36.67	27	27	26	26.7
151	TP	23		160	63	24.6	52	46	46	48	64	70	74	69.3	100	103	101	101.3	75	79	74	76

152	RB	18		159	46	18.4	62	65	63	63.3	64	66	64	64.7	98	97	99	98	67	70	67	68
153	RK	18		156	46	19.1	43	43	43	43	38	38	37	37.7	59	53	54	55.33	52	55	53	53.3
154	RS	20		151	47	21.3	77	78	78	77.7	80	76	75	77	99	98	100	99	84	83	83	83.3
155	KM	20		161	74	30.8	47	47	49	47.7	41	40	42	41	67	64	67	66	65	63	62	63.3
156	DP	20		159	62	24.8	23	22	24	23	21	22	23	22	49	46	43	46	31	30	30	30.3
157	RD	19		172	69	23.7	35	37	39	55	54	52	140	139	138	75	76	96.33	84	85	84	84.3
158	PS	18		151	58	25.4	37	33	35	35	33	37	34	35	53	55	47	51.67	49	40	43	44
159	TM	23		157	42	17.1	34	34	34	34	36	36	35	35	42	42	41	41.67	39	39	38	38.7
160	AA	18		151	43	21.1	25	25	22	24	21	19	19	19.7	49	45	43	45.67	36	35	34	35
161	RM	18		160	46	18.4	42	43	44	43	35	36	28	33	48	51	53	50.67	51	49	48	49.3
162	AS	18		159	57	22.8	35	36	36	35.7	33	32	32	32.3	112	111	111	111.3	112	112	112	112
163	ST	20		159	67	26.6	41	43	46	43.3	50	54	56	53.3	28	32	30	30	50	53	52	51.7
164	MS	20		146	41	19.2	39	38	38	38.3	35	37	38	36.7	52	54	55	53.67	45	47	45	45.7
165	PJ	20		150	47	18.8	66	58	55	59.7	50	52	54	52	90	88	90	89.33	68	69	70	69
166	AM	19		154	40	16.9	19	22	23	21.3	21	21	21	21	67	67	62	65.33	42	43	44	43
167	JB	22		166	60	21.8	37	37	38	37.3	33	35	36	34.7	100	102	103	101.7	52	57	56	55
168	SK	19		160	62	24.2	51	52	53	52	40	41	42	41	63	64	65	64	68	69	70	69
169	RD	19		160	69	26.9	35	36	33	34.7	31	31	31	31	46	48	48	47.33	48	43	41	44
170	SS	19		151	37	16.2	47	40	41	42.7	43	43	42	42.7	54	54	53	53.67	53	49	49	50.3
171	NI	19		166	65	23.6	38	40	42	40	33	35	37	35	64	66	68	66	72	72	73	72.3
172	RK	19		155	47	19.6	25	29	37	30.3	36	38	37	37	41	43	43	42.33	42	40	42	41.3
173	DD	21		156	81	33.8	63	63	65	63.7	41	42	43	42	70	70	70	70	61	60	62	61
174	SM	21		165	51	18.8	15	26	19	20	15	16	15	15.3	30	27	30	29	24	25	24	24.3
175	PS	19		166	58	21	56	57	57	56.7	54	53	54	53.7	87	89	82	86	61	62	63	62
176	VR	19		164	51	19	42	35	36	37.7	31	26	23	26.7	44	43	44	43.67	31	31	30	30.7
177	DK	19		169	56	19.6	54	54	54	54	52	52	52	52	148	148	148	148	71	72	72	71.7

178	VN	20		163	53	20	56	63	57	58.7	58	55	56	56.3	63	65	65	64.33	65	65	65	65
179	MP	21		153	47	20.1	46	47	47	46.7	37	37	36	36.7	149	149	149	149	112	112	111	112
180	SS	20		153	53	22.5	51	51	51	51	50	47	38	45	83	73	75	77	61	58	60	59.7
181	RA	20		161	55	21.2	30	31	32	31	15	16	17	16	43	42	43	42.67	29	30	31	30
182	KG	22		164	43	16.5	30	32	32	31.3	32	32	32	32	121	121	121	121	56	56	54	55.3
183	BR	18		163	74	28.4	28	31	32	30.3	31	32	31	31.3	63	65	65	64.33	50	55	50	51.7
184	ML	23		158	53	22	27	27	23	25.7	59	65	62	62	40	42	44	42	100	97	98	98.3
185	AJ	19		164	66	25.4	49	47	47	47.7	38	41	42	40.3	73	77	76	75.33	57	54	56	55.7
186	NY	19		165	55	20.2	77	76	77	76.7	65	67	66	66	85	86	87	86	90	91	90	90.3
187	NT	19		163	71	26.7	31	32	31	31.3	54	56	55	55	125	127	126	126	99	100	100	99.7
188	JJ	22		157	55	22.4	35	34	35	34.7	24	27	25	25.3	101	104	102	102.3	64	66	64	64.7
189	SM	21		166	49	20.2	62	64	65	63.7	58	59	58	58.3	84	83	83	83.33	69	69	68	68.7
190	DC	21		160	77	30.1	51	55	54	53.3	33	37	34	34.7	99	87	80	88.67	95	100	98	97.7
191	AB	21		153	67	29.1	35	33	38	35.3	33	32	31	32	48	42	44	44.67	38	41	43	40.7
192	MS	18		152	44	19	30	30	31	30.3	25	27	26	26	30	31	30	30.33	37	35	37	36.3
193	AV	21		180	73	22.5	58	57	58	57.7	49	45	54	49.3	75	76	74	75	64	64	62	63.3
194	DS	23		144	52	25.1	83	84	82	83	72	74	73	73	88	82	89	86.33	82	85	82	83
195	HK	21		164	55	21.1	40	40	41	40.3	34	34	34	34	79	80	81	80	44	45	45	44.7
196	AK	21		155	52	21.6	31	32	32	31.7	27	26	27	26.7	90	91	92	91	42	46	44	44
197	SM	21		151	53	24	72	73	73	72.7	50	51	53	51.3	92	91	93	92	65	64	65	64.7
198	PK	19		157	41	16.6	32	31	33	32	31	29	32	30.7	60	61	61	60.67	37	36	36	36.3
199	ST	21		159	55	22	40	40	43	41	43	41	41	41.7	87	81	89	85.67	60	68	63	63.7
200	FM	20		157	40	16.2	34	37	37	36	33	30	33	32	97	99	100	98.67	48	50	55	51

Superficial Peroneal Nerve – Females

	age	gdr	bmi	sensory								Pain							
				3hz				50hz				3hz				50hz			
				TR1	TR2	TR3	MEAN	TR1	TR2	TR3	MEAN	TR1	TR2	TR3	MEAN	TR1	TR2	TR3	MEAN
1	19	F	25.5	59	60	61	60	56	49	51	52	69	70	67	68.67	61	60	61	60.67
2	18	F	23.8	21	22	22	21.7	24	23	23	23.33	65	66	65	65.33	44	46	45	45
3	18	F	21.4	63	63	61	62.3	50	49	50	49.67	86	88	88	87.33	67	69	70	68.67
4	19	F	22.6	28	28	29	28.3	29	26	26	27	72	70	69	70.33	37	37	31	35
5	18	F	20.3	61	65	61	62.3	57	60	60	59	82	83	85	83.33	66	66	66	66
6	19	F	18.4	37	37	37	37	58	57	57	57.33	123	120	119	120.7	79	80	80	79.67
7	18	F	19.7	27	25	24	25.3	22	23	28	24.33	31	30	30	30.33	25	24	25	24.67
8	20	F	22.1	44	44	43	43.7	33	33	35	33.67	105	105	105	105	96	97	97	96.67
9	18	F	22.8	59	59	58	58.7	46	47	46	46.33	84	84	82	83.33	63	64	65	64
10	18	F	20.9	71	70	72	71	58	54	58	56.67	120	117	89	108.7	76	77	79	77.33
11	19	F	25.7	60	52	56	56	54	54	55	54.33	115	118	118	117	76	75	78	76.33
12	18	F	19.2	48	48	46	47.3	30	32	32	31.33	50	52	52	51.33	42	41	41	41.33
13	18	F	19.7	42	37	40	39.7	27	22	30	26.33	50	52	53	51.67	34	36	38	36
14	18	F	16	40	42	40	40.7	44	43	42	43	138	135	137	136.7	98	99	98	98.33
15	18	F	23.4	51	51	53	51.7	44	46	49	46.33					66	66	67	66.33
16	18	F	22.6	44	43	44	43.7	47	45	46	46	101	103	101	101.7	68	69	69	68.67
17	18	F	22.3	9	10	8	9	8	7	9	8	37	40	39	38.67	40	41	41	40.67
18	18	F	18.8	25	24	20	23	30	32	31	31	68	70	76	71.33	62	60	61	61
19	20	F	22.7	28	29	29	28.7	32	30	30	30.67	100	98	98	98.67	67	68	68	67.67
20	20	F	26.1	29	3	30	20.7	27	30	23	26.67	35	43	41	39.67	32	31	31	31.33
21	21	F	21.7	25	25	24	24.7	25	25	25	25	43	49	51	47.67	34	30	25	29.67
22	18	F	21.4	51	50	52	51	52	52	52	52					78	80	81	79.67

23	19	F	19.3	55	55	56	55.3	59	58	57	58	82	82	83	82.33	69	70	69	69.33
24	19	F	28.7	42	42	45	43	47	45	46	46	55	59	59	57.67	55	57	57	56.33
25	20	F	18.4	54	54	55	54.3	46	43	44	44.33	89	90	88	89	59	58	56	57.67
26	20	F	19.5	63	63	63	63	44	45	49	46	99	100	101	100	59	59	58	58.67
27	21	F	26.9	35	38	38	37	40	40	40	40	45	45	44	44.67	45	45	44	44.67
28	21	F	23.4	40	40	39	39.7	39	38	38	38.33	48	50	50	49.33	43	43	43	43
29	20	F	21.5	13	13	13	13	13	13	11	12.33	17	17	16	16.67	15	16	17	16
30	21	F	29.2	50	50	50	50	48	49	48	48.33	107	108	106	107	65	67	67	66.33
31	21	F	24.2	23	23	23	23	19	19	19	19	41	43	42	42	41	41	41	41
32	20	F	27.7	60	59	60	59.7	53	57	53	54.33	64	64	64	64	59	61	63	61
33	21	F	23.4	50	46	50	48.7	31	31	31	31	64	64	65	64.33	47	43	45	45
34	20	F	23.3	53	53	53	53	39	39	39	39	64	60	59	61	45	45	45	45
35	21	F	27.1	20	20	23	21	18	17	18	17.67	96	95	94	95	50	51	49	50
36	20	F	30.3	67	67	65	66.3	66	66	61	64.33	84	79	76	79.67	68	68	69	68.33
37	20	F	23.1	55	55	55	55	42	42	41	41.67	61	69	65	65	53	53	52	52.67
38	21	F	18.1	60	62	62	61.3	67	65	66	66	112	111	111	111.3	78	77	77	77.33
39	19	F	23.3	32	36	35	34.3	35	35	34	34.67	67	62	66	65	54	54	55	54.33
40	19	F	25	67	56	48	57	53	53	55	53.67	91	89	88	89.33	68	63	68	66.33
41	21	F	19.5	56	55	55	55.3	59	58	57	58	42	42	39	41	38	38	36	37.33
42	19	F	18.5	54	52	52	52.7	43	44	45	44	70	71	69	70	52	54	52	52.67
43	21	F	25.5	61	64	64	63	54	53	54	53.67	109	110	112	110.3	76	77	78	77
44	18	F	24.8	95	95	95	95	74	74	75	74.33	72	73	72	72.33	92	92	92	92
45	19	F	39	50	55	57	54	48	48	48	48	100	10	99	69.67	78	79	77	78
46	20	F	23.2	44	46	48	46	32	32	31	31.67	74	75	76	75	49	47	50	48.67
47	21	F	20	55	56	63	58	47	44	43	44.67	83	82	80	81.67	40	41	43	41.33
48	20	F	18.6	38	38	39	38.3	35	35	35	35	107	107	106	106.7	47	47	46	46.67

49	21	F	26.6	28	28	28	28	25	25	25	25	53	53	53	53	29	29	29	29
50	20	F	21.5	29	31	28	29.3	29	27	25	27	92	90	91	91	50	48	49	49
51	19	F	20.6	75	79	68	74	59	68	63	63.33	114	117	114	115	94	97	95	95.33
52	22	F	18.7	27	26	25	26	24	22	22	22.67	84	84	82	83.33	45	47	47	46.33
53	19	F	20	73	72	70	71.7	53	51	51	51.67	96	97	97	96.67	74	72	72	72.67
54	19	F	19.6	56	56	56	56	56	51	55	54	69	65	62	65.33	59	57	57	57.67
55	18	F	20.8	52	51	52	51.7	23	24	23	23.33	58	62	59	59.67	31	29	31	30.33
56	21	F	22.8	49	49	48	48.7	39	39	40	39.33	84	82	83	83	52	53	53	52.67
57	19	F	21.6	47	51	48	48.7	32	34	33	33	120	124	124	122.7	68	67	68	67.67
58	19	F	21.4	31	32	34	32.3	30	32	31	31	42	41	43	42	52	53	54	53
59	19	F	22	36	38	37	37	39	39	40	39.33	83	93	96	90.67	51	50	52	51
60	20	F	23.8	49	49	49	49	45	45	41	43.67	65	69	69	67.67	61	62	64	62.33
61	20	F	18.7	46	47	49	47.3	43	45	48	45.33	102	101	102	101.7	67	63	61	63.67
62	18	F	19.6	52	54	53	53	48	49	49	48.67	140	140	138	139.3	135	134	132	133.7
63	18	F	23.6	52	51	53	52	49	48	48	48.33	87	88	88	87.67	73	74	73	73.33
64	18	F	18.2	32	30	31	31	27	28	27	27.33	78	79	77	78	35	34	35	34.67
65	18	F	16.7	38	39	39	38.7	36	35	34	35	78	78	77	77.67	63	62	63	62.67
66	19	F	20.6	44	45	43	44	38	37	36	37	110	111	110	110.3	76	75	75	75.33
67	18	F	22.4	34	33	33	33.3	18	19	18	18.33	65	63	62	63.33	45	44	44	44.33
68	17	F	18	41	41	41	41	27	30	32	29.67	3	62	65	43.33	65	68	69	67.33
69	19	F	15.6	33	34	34	33.7	36	28	29	31	54	57	54	55	43	44	39	42
70	18	F	18.2	37	38	37	37.3	43	43	43	43	74	72	64	70	62	56	54	57.33
71	20	F	22	46	52	48	48.7	43	43	43	43	73	72	61	68.67	48	48	48	48
72	18	F	23	26	27	27	26.7	13	15	14	14	31	33	32	32	26	25	27	26
73	21	F	24.4	43	44	45	44	40	39	38	39	103	101	102	102	69	70	71	70
74	21	F	25	31	31	33	31.7	21	23	22	22	97	98	97	97.33	45	44	47	45.33

75	23	F	20.8	58	58	58	58	54	54	59	55.67	63	63	63	63	58	55	57	56.67
76	21	F	29.6	77	73	71	73.7	77	73	70	73.33	127	124	129	126.7	93	96	95	94.67
77	21	F	20.8	56	55	55	55.3	33	36	35	34.67	91	91	91	91	44	45	49	46
78	21	F	25.6	28	21	24	24.3	19	20	21	20	89	89	87	88.33	60	57	54	57
79	21	F	17	53	53	53	53	49	47	48	48	62	61	59	60.67	52	50	50	50.67
80	20	F	22.8	42	41	44	42.3	35	34	34	34.33	58	57	58	57.67	39	40	40	39.67
81	23	F	22.5	76	71	67	71.3	55	56	54	55	68	64	65	65.67	61	58	63	60.67
82	19	F	20.9	37	40	41	39.3	37	37	37	37	78	73	85	78.67	39	39	40	39.33
83	19	F	26.5	77	76	72	75	57	62	63	60.67	91	95	93	93	77	75	72	74.67
84	18	F	20.2	37	36	37	36.7	35	34	37	35.33	48	50	50	49.33	43	48	47	46
85	19	F	20	35	34	34	34.3	39	39	38	38.67	88	87	88	87.67	75	74	74	74.33
86	18	F	25.3	70	68	70	69.3	54	55	55	54.67	79	76	75	76.67	63	59	56	59.33
87	19	F	22.5	69	70	73	70.7	59	60	61	60	96	98	99	97.67	82	83	82	82.33
88	21	F	25.1	44	45	47	45.3	42	44	43	43	71	72	73	72	52	54	51	52.33
89	20	F	20.3	59	60	62	60.3	54	55	56	55	118	116	117	117	102	101	100	101
90	19	F	22.9	45	43	42	43.3	41	40	41	40.67	99	100	101	100	61	60	61	60.67
91	19	F	25	40	39	40	39.7	32	31	30	31	65	65	68	66	51	54	60	55
92	20	F	20.4	31	31	37	33	25	29	27	27	41	52	52	48.33	35	36	39	36.67
93	20	F	22.6	59	59	55	57.7	47	45	47	46.33	83	84	83	83.33	60	59	59	59.33
94	19	F	24.2	77	81	77	78.3	64	64	64	64	100	101	101	100.7	86	80	83	83
95	21	F	21	37	37	36	36.7	33	34	35	34	102	101	102	101.7	54	54	54	54
96	19	F	22.1	46	47	47	46.7	41	40	41	40.67	65	63	58	62	53	52	52	52.33
97	21	F	26.6	28	34	35	32.3	22	28	27	25.67	39	41	43	41	33	35	37	35
98	20	F	19.3	26	25	26	25.7	28	29	27	28	32	44	43	39.67	41	36	37	38
99	23	F	20.8	38	30	37	35	37	37	39	37.67	89	90	93	90.67	43	45	46	44.67
100	18	F	18.9	49	47	48	48	40	42	43	41.67	80	85	84	83	46	44	45	45

101	25	F	25	89	90	92	90.3	71	80	79	76.67	97	98	99	98	81	82	83	82
102	18	F	20.8	31	33	37	33.7	32	33	38	34.33	51	57	58	55.33	53	54	50	52.33
103	19	F	18.4	58	59	60	59	59	60	62	60.33	76	79	80	78.33	69	70	71	70
104	19	F	15.3	55	55	53	54.3	52	53	53	52.67	117	118	117	117.3	72	73	73	72.67
105	19	F	19.3	48	48	48	48	47	48	50	48.33	68	70	72	70	80	81	82	81
106	20	F	19.3	118	117	###	117	88	89	85	87.33	132	125	128	128.3	99	100	98	99
107	20	F	15.8	40	45	49	44.7	38	39	40	39	98	99	97	98	71	69	71	70.33
108	25	F	18.3	78	80	82	80	64	62	60	62	90	90	92	90.67	74	72	70	72
109	21	F	20.5	87	85	86	86	119	120	122	120.3	.	.	.	.	130	129	132	130.3
110	21	F	24.4	43	44	45	44	40	39	38	39	103	101	102	102	69	70	71	70
111	21	F	25	31	31	33	31.7	21	23	22	22	97	98	97	97.33	45	44	47	45.33
112	20	F	21.5	37	40	43	40	32	30	26	29.33	53	47	52	50.67	49	50	50	49.67
113	19	F	18.8	47	51	49	49	44	45	41	43.33	65	58	57	60	47	49	46	47.33
114	19	F	20.4	60	57	60	59	50	48	48	48.67	62	62	62	62	54	54	53	53.67
115	18	F	33.5	73	70	71	71.3	65	63	64	64	84	97	103	94.67	73	74	73	73.33
116	21	F	17.3	37	44	46	42.3	27	31	37	31.67	55	56	57	267.3	47	47	47	47
117	22	F	23.4	31	26	25	27.3	32	33	33	32.67	61	63	65	63	47	49	49	48.33
118	21	F	26.9	46	49	48	47.7	44	46	47	45.67	75	70	69	71.33	57	58	54	56.33
119	20	F	17.8	50	56	56	54	57	59	59	58.33	82	81	78	80.33	71	72	75	72.67
120	21	F	20.4	58	59	62	59.7	48	46	50	48	96	93	102	97	69	71	72	70.67
121	20	F	21.6	32	31	33	32	31	30	28	29.67	33	33	34	33.33	25	25	26	25.33
122	20	F	21.8	41	38	37	38.7	40	42	42	41.33	100	101	101	100.7	72	72	72	72
123	22	F	27.9	49	44	53	48.7	37	37	37	37	57	54	61	57.33	45	43	47	45
124	21	F	18.7	41	42	45	42.7	37	36	37	36.67	57	62	52	57	45	46	50	47
125	22	F	16.9	48	47	48	47.7	45	43	44	44	55	53	53	53.67	50	49	51	50
126	21	F	25	83	78	85	82	64	57	57	59.33	119	124	120	121	80	78	100	86

127	21	F	18	30	31	30	30.3	29	30	31	30	74	76	75	75	40	41	42	41
128	21	F	19.2	30	30	30	30	29	30	31	30	74	76	75	75	40	40	41	40.33
129	20	F	26	74	75	75	74.7	57	59	58	58	94	94	93	93.67	77	75	75	75.67
130	20	F	22	66	54	60	60	59	59	58	58.67	89	101	102	97.33	65	62	62	63
131	21	F	17.3	39	40	41	40	43	37	38	39.33	67	60	62	63	53	55	56	54.67
132	19	F	21.9	27	28	29	28	20	21	20	20.33	43	43	45	43.67	28	32	33	31
133	22	F	33.3	44	49	50	47.7	41	41	41	41	70	68	67	68.33	47	45	43	45
134	20	F	17.2	25	26	25	25.3	31	30	31	30.67	60	62	62	61.33	39	37	38	38
135	18	F	20.8	65	64	68	65.7	55	54	53	54	136	136	136	136	96	98	97	97
136	19	F	27	43	43	45	43.7	38	38	35	37	84	84	86	84.67	74	79	79	77.33
137	21	F	17.5	48	43	43	44.7	40	39	41	40	68	63	61	64	54	53	53	53.33
138	21	F	22.8	36	36	32	34.7	29	27	27	27.67	81	81	81	81	46	47	48	47
139	19	F	23.6	42	40	39	40.3	30	30	30	30	65	66	65	65.33	47	46	46	46.33
140	21	F	26.2	41	41	42	41.3	33	32	33	32.67	39	39	39	39	35	35	33	34.33
141	20	F	23.8	41	42	40	41	43	41	41	41.67	65	64	66	65	56	56	54	55.33
142	19	F	21.8	14	14	14	14	8	8	9	8.333	51	51	51	51	18	18	15	17
143	19	F	27	67	67	67	67	55	57	57	56.33	88	88	88	88	77	70	77	74.67
144	21	F	20.8	36	35	35	35.3	33	31	30	31.33	47	45	45	45.67	39	38	37	38
145	21	F	22.9	57	57	58	57.3	51	49	43	47.67	103	100	102	101.7	66	70	73	69.67
146	21	F	23	33	30	30	31	27	27	27	27	81	84	91	85.33	44	39	38	40.33
147	20	F	18.4	48	49	49	48.7	48	47	48	47.67	77	77	77	77	53	53	54	53.33
148	18	F	21.1	35	36	36	35.7	19	19	19	19	71	71	72	71.33	61	61	64	62
149	18	F	23.4	57	59	63	59.7	59	61	62	60.67	139	144	141	141.3	90	95	96	93.67
150	19	F	18.4	30	29	26	28.3	21	22	22	21.67	66	67	68	67	40	41	40	40.33
151	23	F	24.6	27	26	24	25.7	36	34	36	35.33	91	91	89	90.33	74	76	78	76
152	18	F	18.4	66	66	66	66	54	52	48	51.33	73	75	76	74.67	67	70	73	70

153	18	F	19.1	32	31	33	32	43	43	43	43	59	60	60	59.67	53	53	52	52.67
154	20	F	21.3	65	63	64	64	54	54	54	54	77	79	78	78	70	70	72	70.67
155	20	F	30.8	59	60	61	60	65	58	61	61.33	82	81	83	82	79	75	75	76.33
156	20	F	24.8	36	35	37	36	37	33	35	35	48	45	44	45.67	46	45	44	45
157	19	F	23.7	72	71	70	71	84	85	84	84.33	143	140	142	141.7	115	116	116	115.7
158	18	F	25.4	33	27	37	32.3	34	33	37	34.67	40	43	43	42	40	40	43	41
159	23	F	17.1	44	45	46	45	43	43	43	43	64	65	65	64.67	55	54	53	54
160	18	F	21.1	43	41	40	41.3	32	34	31	32.33	50	50	51	50.33	43	44	43	43.33
161	18	F	18.4	23	22	23	22.7	29	31	28	29.33	50	52	52	51.33	47	48	47	47.33
162	18	F	22.8	75	74	75	74.7	67	67	67	67	118	114	114	115.3	115	117	117	116.3
163	20	F	26.6	26	28	27	27	22	25	26	24.33	30	32	35	32.33	57	56	57	56.67
164	20	F	19.2	39	42	41	40.7	34	37	37	36	56	58	59	57.67	43	48	50	47
165	20	F	18.8	74	79	77	76.7	57	59	58	58	90	91	92	91	67	68	70	68.33
166	19	F	16.9	43	44	44	43.7	35	36	35	35.33	93	93	92	92.67	58	54	55	55.67
167	22	F	21.8	45	44	44	44.3	37	33	36	35.33	75	74	79	76	58	53	55	55.33
168	19	F	24.2	36	36	35	35.7	57	55	55	55.67	115	113	115	114.3	73	77	72	74
169	19	F	26.9	99	96	99	98	87	89	88	88	150	150	150	150	101	103	103	102.3
170	19	F	16.2	44	45	43	44	37	39	37	37.67	50	55	48	51	47	45	47	46.33
171	19	F	23.6	63	63	64	63.3	66	63	64	64.33	83	83	84	83.33	70	69	68	69
172	19	F	19.6	22	21	21	21.3	20	20	20	20	32	33	32	32.33	27	27	27	27
173	21	F	33.8	61	62	62	61.7	44	43	44	43.67	114	118	108	113.3	68	67	67	67.33
174	21	F	18.8	34	31	29	31.3	31	32	32	31.67	41	44	49	44.67	40	43	45	42.67
175	19	F	21	33	34	33	33.3	45	45	44	44.67	121	122	122	121.7	96	99	97	97.33
176	19	F	19	21	23	24	22.7	16	21	23	20	37	35	34	35.33	29	29	28	28.67
177	19	F	19.6	88	88	88	88	66	67	66	66.33	123	123	123	123	71	70	71	70.67
178	20	F	20	37	36	38	37	28	32	37	32.33	62	52	55	56.33	40	42	47	43

179	21	F	20.1	50	50	50	50	39	40	38	39	138	140	140	139.3	102	101	102	101.7
180	20	F	22.5	44	46	45	45	36	40	38	38	64	64	62	63.33	51	50	51	50.67
181	20	F	21.2	9	10	9	9.33	20	21	23	21.33	38	39	40	39	28	29	30	29
182	22	F	16.5	45	44	43	44	47	47	45	46.33	104	104	104	104	92	92	90	91.33
183	18	F	28.4	47	45	43	45	47	45	44	45.33	68	67	65	66.67	52	51	54	52.33
184	23	F	22	35	38	38	37	29	27	27	27.67	90	87	78	85	50	45	45	46.67
185	19	F	25.4	41	43	42	42	36	32	36	34.67	81	77	82	80	51	49	48	49.33
186	19	F	20.2	34	35	36	35	30	31	32	31	65	62	64	63.67	40	41	42	41
187	19	F	26.7	54	55	55	54.7	45	45	46	45.33	100	101	100	100.3	66	66	67	66.33
188	22	F	22.4	51	49	50	50	44	46	45	45	99	100	101	100	59	59	60	59.33
189	21	F	20.2	45	42	44	43.7	37	38	39	38	60	61	60	60.33	45	45	46	45.33
190	21	F	30.1	50	54	58	54	42	43	48	44.33	64	63	67	64.67	48	49	51	49.33
191	21	F	29.1	38	38	45	40.3	39	35	39	37.67	55	47	56	52.67	44	42	43	43
192	18	F	19	52	54	53	53	45	44	46	45	71	73	71	71.67	54	53	52	53
193	21	F	22.5	80	80	82	80.7	71	71	71	71	83	83	84	83.33	73	78	75	75.33
194	23	F	25.1	80	81	79	80	77	75	73	75	86	88	87	87	84	83	84	83.67
195	21	F	21.1	37	38	38	37.7	40	40	41	40.33	67	68	67	67.33	57	57	58	57.33
196	21	F	21.6	32	35	34	33.7	30	31	32	31	99	98	98	98.33	47	48	48	47.67
197	21	F	24	41	42	43	42	40	43	41	41.33	59	60	62	60.33	47	46	46	46.33
198	19	F	16.6	39	34	36	36.3	18	19	21	19.33	51	55	55	53.67	34	40	48	40.67
199	21	F	22	58	64	64	62	37	37	38	37.33	112	114	127	117.7	73	74	72	73
200	20	F	16.2	46	46	46	46	40	43	40	41	100	103	100	101	49	49	50	49.33

Sural Nerve- Males

sr	age	bmi	sensory								Pain							
			3hz				50hz				3hz				50hz			
			TR1	TR2	TR3	MEAN	TR1	TR2	T3	MEAN	TR1	TR2	TR3	MEAN	TR1	TR2	TR3	MEAN
1	19	18.7	37	37	37	37	36	35	35	35.3	43	39	41	41	41	40	40	40.3
2	24	25.9	77	76	77	76.7	75	74	75	74.7	97	99	98	98	88	88	86	87.3
3	23	34	66	67	67	66.7	62	64	64	63.3	.	.	.		105	92	112	103
4	20	19.7	33	32	30	31.7	34	35	37	35.3	105	107	102	104.7	54	57	54	55
5	19	24	85	89	87	87	62	55	64	60.3	92	94	93	93	70	78	77	75
6	19	21.8	44	44	44	44	46	46	46	46	124	124	124	124	96	96	96	96
7	19	19.9	37	39	37	37.7	32	31	32	31.7	70	74	74	72.67	62	64	63	63
8	19	26.5	70	73	78	73.7	87	90	91	89.3	.	.	.		.	.	.	.
9	20	18.2	43	42	42	42.3	41	43	43	42.3	77	77	78	77.33	53	56	56	55
10	19	18.6	70	70	70	70	44	44	44	44	122	116	116	118	84	84	84	84
11	19	19	72	73	73	72.7	47	48	48	47.7	102	105	105	104	103	105	105	104
12	19	20.1	22	21	22	21.7	25	24	26	25	128	128	128	128	107	111	114	111
13	21	18.3	54	55	54	54.3	43	44	42	43	109	109	110	109.3	92	90	94	92
14	19	19	58	53	51	54	42	40	41	41	59	62	64	61.67	45	48	52	48.3
15	20	22.3	50	51	52	51	37	32	34	34.3	63	59	60	60.67	47	49	50	48.7
16	19	19	87	87	87	87	74	74	74	74	102	101	100	101	96	96	96	96
17	19	25.4	115	115	115	115	103	103	103	103	.	.	.		139	139	130	136
18	19	17	90	90	90	90	52	52	52	52	110	110	110	110	60	65	66	63.7
19	18	17.4	54	54	54	54	46	46	46	46	63	64	64	63.67	51	51	51	51
20	19	22.7	47	47	47	47	33	32	31	32	50	52	55	52.33	38	40	42	40
21	21	24.7	69	77	70	72	70	63	61	64.7	73	79	75	75.67	79	79	79	79
22	20	16.2	34	37	37	36	33	30	33	32	97	99	100	98.67	48	50	55	51

23	21	25.3	57	53	53	54.3	57	55	53	55	75	75	71	73.67	66	66	65	65.7
24	19	16.5	50	51	52	51	47	47	46	46.7	58	57	56	57	54	52	53	53
25	19	18	43	44	43	43.3	45	46	46	45.7	145	146	144	145	97	95	96	96
26	21	22.1	40	38	40	39.3	54	52	53	53	64	65	66	65	50	49	52	50.3
27	18	22	54	60	60	58	56	64	69	63	82	90	97	89.67	85	87	89	87
28	19	24.9	56	68	66	63.3	73	73	77	74.3	130	130	127	129	98	95	94	95.7
29	19	17.2	18	20	20	19.3	12	13	12	12.3	45	47	47	46.33	56	55	54	55
30	18	23.2	35	35	35	35	30	30	30	30	105	106	106	105.7	75	75	75	75
31	19	18.6	22	22	24	22.7	28	28	28	28	46	47	48	47	47	44	44	45
32	19	26.4	90	91	91	90.7	80	90	90	86.7	95	104	204	134.3	102	102	102	102
33	23	21.7	23	23	24	23.3	14	15	17	15.3	102	102	102	102	45	45	45	45
34	18	16.1	60	62	61	61	48	49	49	48.7	.	.	.		87	88	87	87.3
35	18	29.9	68	62	62	64	68	63	63	64.7	101	101	101	101	96	97	96	96.3
36	20	16.4	23	22	22	22.3	25	27	26	26	60	61	61	60.67	64	63	62	63
37	18	29.8	65	89	87	80.3	88	93	87	89.3	117	117	115	116.3	98	100	101	99.7
38	19	16	64	61	62	62.3	55	51	50	52	89	81	81	83.67	89	57	57	67.7
39	22	19.5	43	43	44	43.3	43	42	41	42	49	49	49	49	48	48	48	48
40	20	20.8	56	60	56	57.3	63	63	63	63	96	95	90	93.67	65	70	71	68.7
41	21	16.8	42	40	41	41	35	36	35	35.3	111	109	110	110	70	74	72	72
42	20	17.6	67	68	69	68	58	57	58	57.7	84	85	87	85.33	77	78	78	77.7
43	20	20	51	65	61	59	56	55	57	56	78	81	77	78.67	63	71	71	68.3
44	20	26.5	30	32	31	31	24	27	26	25.7	93	90	89	90.67	91	88	89	89.3
45	20	30	101	103	104	103	80	75	78	77.7	128	130	126	128	93	90	92	91.7
46	21	20.8	53	53	55	53.7	50	51	49	50	.	.	.		89	90	91	90
47	20	24.2	25	25	25	25	22	22	22	22	70	74	74	72.67	49	50	46	48.3
48	21	18.8	43	41	41	41.7	41	39	41	40.3	.	.	.		86	94	94	91.3

49	21	17.1	65	65	67	65.7	89	60	61	70	93	92	92	92.33	80	82	81	81
50	21	19.1	27	27	26	26.7	24	25	24	24.3	79	78	77	78	44	43	44	43.7
51	21	33.1	64	65	65	64.7	73	74	70	72.3	.	.	.		100	104	100	101
52	19	26.7	37	37	37	37	39	39	39	39	73	73	73	73	67	68	68	67.7
53	20	18.4	47	45	42	44.7	37	39	40	38.7	127	120	99	115.3	72	77	79	76
54	19	20.3	27	28	28	27.7	40	39	40	39.7	.	.	.		102	101	102	102
55	20	21.8	39	43	39	40.3	39	36	37	37.3	70	75	77	74	62	65	64	63.7
56	20	25.2	64	62	63	63	64	63	60	62.3	72	96	95	87.67	67	72	74	71
57	19	17.3	65	65	65	65	57	58	59	58	75	75	75	75	77	77	77	77
58	21	23.3	44	45	45	44.7	41	41	40	40.7	.	.	.		55	55	55	55
59	19	20.9	30	32	32	31.3	27	27	30	28	45	49	48	47.33	40	40	40	40
60	19	19.5	26	26	26	26	30	30	30	30	49	45	49	47.67	42	40	41	41
61	18	17.6	52	52	52	52	56	52	54	54	67	68	69	68	72	71	71	71.3
62	21	24.4	58	57	58	57.7	53	52	52	52.3	77	75	77	76.33	68	67	67	67.3
63	18	21.9	51	52	53	52	45	47	43	45	89	90	91	90	55	56	57	56
64	25	29.3	51	50	49	50	40	40	41	40.3	88	94	92	91.33	78	80	80	79.3
65	19	19.6	49	49	48	48.7	24	25	26	25	108	110	110	109.3	56	55	54	55
66	18	27.2	55	57	56	56	44	44	44	44	118	117	117	117.3	91	91	92	91.3
67	18	22.4	68	63	71	67.3	60	64	64	62.7	66	63	64	64.33	69	69	68	68.7
68	20	28.1	52	54	54	53.3	45	44	43	44	100	110	105	105	69	70	73	70.7
69	19	18.2	49	49	50	49.3	42	43	42	42.3	97	99	100	98.67	69	69	70	69.3
70	19	29.7	38	36	41	38.3	29	30	31	30	61	70	71	67.33	66	67	65	66
71	21	23.5	41	40	41	40.7	37	40	41	39.3	67	65	70	67.33	57	59	50	55.3
72	21	22.4	85	85	85	85	86	87	88	87	130	127	126	127.7	136	135	136	136
73	19	18.7	20	20	19	19.7	17	19	20	18.7	35	37	37	36.33	29	30	31	30
74	19	29.3	72	73	75	73.3	44	47	47	46	.	.	.		103	107	111	107

75	20	28.4	23	24	29	25.3	29	30	30	29.7	42	42	45	43	60	61	59	60
76	20	26.3	47	48	48	47.7	39	40	38	39	73	70	73	72	45	45	47	45.7
77	21	20.9	31	40	34	35	33	40	44	39	58	65	60	61	53	55	57	55
78	22	21.6	66	65	68	66.3	64	64	61	63	83	83	89	85	82	81	82	81.7
79	18	20.7	69	73	74	72	54	66	61	60.3	131	107	105	114.3	96	94	96	95.3
80	21	24.8	54	66	71	63.7	60	62	61	61	93	94	90	92.33	61	65	69	65
81	18	17.3	42	44	43	43	32	31	31	31.3	139	138	138	138.3	112	108	107	109
82	18	18.2	30	30	30	30	26	26	26	26	114	114	114	114	46	49	49	48
83	21	23.1	40	39	40	39.7	37	35	36	36	78	78	78	78	54	55	54	54.3
84	19	21.5	46	48	48	47.3	43	45	44	44	120	123	125	122.7	68	67	65	66.7
85	23	22.4	60	57	56	57.7	52	51	50	51	93	89	98	93.33	62	62	63	62.3
86	19	21	65	59	57	60.3	57	53	53	54.3	108	99	107	104.7	70	76	80	75.3
87	19	16.9	26	25	26	25.7	21	22	22	21.7	86	87	86	86.33	72	70	71	71
88	19	28	36	34	34	34.7	32	31	30	31	111	112	111	111.3	98	97	95	96.7
89	19	22.5	28	27	26	27	23	23	23	23	124	125	125	124.7	123	122	122	122
90	19	15.1	35	36	34	35	36	37	36	36.3	123	122	120	121.7	68	67	64	66.3
91	19	23.8	32	30	31	31	28	28	27	27.7	102	100	101	101	98	97	99	98
92	18	19.8	77	76	74	75.7	62	63	61	62	122	120	122	121.3	106	108	110	108
93	19	23.5	44	38	42	41.3	40	35	30	35	68	68	68	68	58	58	58	58
94	22	22.8	58	59	60	59	54	55	56	55	147	148	150	148.3	88	89	91	89.3
95	19	19	20	19	19	19.3	19	18	19	18.7	73	72	69	71.33	43	41	42	42
96	20	19.3	37	40	62	46.3	50	64	65	59.7	72	82	80	78	55	62	66	61
97	22	16.9	68	62	63	64.3	53	51	50	51.3	90	91	92	91	74	75	76	75
98	19	24.8	65	70	65	66.7	69	69	69	69	.	.	.		77	75	75	75.7
99	19	23.4	78	80	79	79	70	72	73	71.7	113	114	110	112.3	104	103	103	103
100	21	20.9	43	44	44	43.7	40	39	41	40	65	66	68	66.33	58	56	57	57

101	23	20.3	17	20	20	19	20	21	24	21.7	130	132	131	131	93	97	95	95
102	21	24.8	33	33	33	33	40	40	40	40	94	94	94	94	78	79	78	78.3
103	20	16.5	80	82	83	81.7	81	80	80	80.3	124	115	113	117.3	100	110	115	108
104	21	18.4	51	51	51	51	35	34	32	33.7	98	95	96	96.33	68	60	60	62.7
105	25	18.2	34	34	34	34	33	33	33	33	43	44	45	44	42	45	45	44
106	21	20.9	53	58	53	54.7	47	56	47	50	116	107	118	113.7	52	54	56	54
107	19	17.7	52	53	52	52.3	52	52	52	52	78	78	79	78.33	63	63	63	63
108	19	21	75	75	75	75	50	51	52	51	89	88	89	88.67	53	53	55	53.7
109	24	24.3	29	29	29	29	26	26	26	26	76	77	78	77	47	47	43	45.7
110	19	15.6	19	21	23	21	18	19	18	18.3	28	31	30	29.67	20	23	21	21.3
111	19	20	45	45	44	44.7	43	43	42	42.7	110	111	112	111	113	114	112	113
112	22	20	40	40	40	40	39	39	39	39	49	49	49	49	48	48	48	48
113	23	20	37	37	37	37	36	36	36	36	100	100	100	100	111	111	111	111
114	23	21	19	19	17	18.3	21	21	20	20.7	66	66	66	66	67	67	67	67
115	21	16.4	11	11	10	10.7	9	8	9	8.67	47	47	47	47	46	47	47	46.7
116	19	16.4	19	19	19	19	20	20	21	20.3	36	36	37	36.33	42	42	43	42.3
117	22	19.7	50	50	50	50	49	48	49	48.7	99	97	99	98.33	97	96	97	96.7
118	20	19.7	34	35	35	34.7	33	34	35	34	56	56	57	56.33	57	58	59	58
119	20	19.7	93	94	95	94	34	35	36	35	107	107	106	106.7	54	54	55	54.3
120	20	19.7	32	33	30	31.7	34	35	37	35.3	107	105	102	104.7	54	55	57	55.3
121	20	15.9	22	22	25	23	28	26	29	27.7	60	61	61	60.67	64	63	62	63
122	20	19.7	33	32	30	31.7	34	35	37	35.3	107	105	102	104.7	54	57	54	55
123	20	16.4	23	21	20	21.3	30	29	30	29.7	60	59	59	59.33	62	64	61	62.3
124	18	19.5	43	43	44	43.3	43	42	41	42	49	49	49	49	59	58	54	57
125	20	16.4	23	24	25	24	25	26	27	26	60	61	62	61	64	64	65	64.3
126	21	16.4	26	27	28	27	28	29	30	29	60	62	61	61	67	68	69	68

127	19	19.7	25	23	24	24	28	25	27	26.7	60	61	61	60.67	64	63	62	63
128	20	18.2	43	43	42	42.7	41	42	43	42	77	72	78	75.67	53	53	52	52.7
129	20	18.2	43	42	42	42.3	41	43	43	42.3	77	78	77	77.33	56	53	56	55
130	19	21.8	44	44	44	44	46	46	46	46	120	120	120	120	98	98	98	98
131	20	16.4	28	25	24	25.7	26	28	29	27.7	60	61	61	60.67	64	63	62	63
132	19	19	58	53	51	54	42	40	41	41	59	62	64	61.67	45	48	52	48.3
133	21	18.3	54	55	54	54.3	43	44	42	43	109	110	110	109.7	92	90	94	92
134	19	20.1	22	23	24	23	25	26	27	26	129	130	132	130.3	107	108	109	108
135	21	18.3	54	55	54	54.3	43	44	42	43	100	101	102	101	92	90	94	92
136	23	21.7	23	28	24	25	14	15	17	15.3	102	102	102	102	45	45	46	45.3
137	19	19.6	75	75	73	74.3	72	73	74	73	90	92	89	90.33	80	83	82	81.7
138	22	24.3	64	61	62	62.3	55	54	53	54	89	90	91	90	59	60	61	60
139	22	24.3	63	61	62	62	55	51	50	52	89	81	81	83.67	59	57	57	57.7
140	22	21.5	64	60	62	62	55	51	50	52	89	81	81	83.67	59	57	57	57.7
141	21	23.8	28	31	33	30.7	37	39	37	37.7	53	51	54	52.67	57	56	57	56.7
142	23	21.6	80	81	82	81	61	62	63	62	93	95	94	94	64	65	66	65
143	23	23.7	80	81	82	81	79	80	81	80	90	95	94	93	90	89	89	89.3
144	19	16	64	61	62	62.3	55	51	50	52	89	90	91	90	59	60	61	60
145	20	16	64	69	70	67.7	54	55	56	55	89	90	91	90	59	60	62	60.3
146	19	19.9	37	39	37	37.7	32	31	32	31.7	70	74	74	72.67	62	64	63	63
147	19	19.9	38	39	37	38	33	32	31	32	70	77	78	75	69	66	67	67.3
148	19	20.1	22	21	23	22	25	24	26	25	128	129	130	129	107	111	114	111
149	20	20.1	22	23	28	24.3	26	26	25	25.7	120	120	120	120	107	108	110	108
150	19	21.8	44	44	44	44	46	48	47	47	123	123	123	123	98	98	98	98
151	19	19.9	37	39	38	38	32	30	31	31	70	74	72	72	60	64	62	62
152	18	17.4	54	53	52	53	47	46	45	46	68	64	65	65.67	50	50	50	50

153	20	22.3	50	51	52	51	37	32	34	34.3	63	59	60	60.67	47	49	50	48.7
154	19	20.1	22	21	20	21	25	24	26	25	128	128	128	128	108	110	108	109
155	20	16.4	23	22	22	22.3	25	27	26	26	60	61	61	60.67	64	63	62	63
156	18	29.9	68	63	63	64.7	68	68	67	67.7	101	102	100	101	96	97	96	96.3
157	19	18.6	22	22	24	22.7	28	28	28	28	46	47	48	47	47	44	44	45
158	22	18.7	37	37	37	37	36	34	35	35	43	38	42	41	40	42	42	41.3
159	19	21.5	24	24	26	24.7	17	18	18	17.7	60	61	62	61	47	43	41	43.7
160	19	18.8	57	67	67	63.7	57	60	59	58.7	79	77	92	82.67	65	58	57	60
161	20	21.8	45	46	45	45.3	25	26	25	25.3	67	67	66	66.67	58	58	60	58.7
162	23	21.7	43	42	41	42	39	40	41	40	99	98	89	95.33	97	96	95	96
163	23	22.2	50	57	52	53	37	32	34	34.3	63	59	60	60.67	47	49	50	48.7
164	20	30.1	99	100	99	99.3	87	88	87	87.3	120	120	120	120	120	119	118	119
165	23	24.8	23	22	23	22.7	17	19	18	18	52	47	47	48.67	48	50	52	50
166	21	23.8	70	70	71	70.3	82	82	83	82.3	99	98	99	98.67	100	100	110	103
167	19	18.8	88	88	88	88	79	79	81	79.7	100	100	100	100	146	146	146	146
168	20	22.3	56	60	55	57	49	51	52	50.7	99	100	99	99.33	111	112	111	111
169	22	24.5	67	68	69	68	58	57	58	57.7	84	85	87	85.33	77	78	78	77.7
170	20	16.9	67	68	69	68	58	57	58	57.7	84	85	87	85.33	77	78	78	77.7
171	24	25.9	77	76	77	76.7	75	74	75	74.7	97	98	99	98	88	86	86	86.7
172	23	19.9	77	77	77	77	81	80	79	80	100	100	100	100	99	98	97	98
173	20	17.4	54	54	54	54	46	46	46	46	60	60	60	60	73	73	73	73
174	20	16.4	60	60	59	59.7	57	58	58	57.7	98	99	98	98.33	111	110	111	111
175	18	26.2	96	100	97	97.7	45	50	45	46.7	100	108	107	105	85	85	84	84.7
176	18	29.9	68	62	62	64	68	63	63	64.7	101	101	101	101	96	97	96	96.3
177	20	16.4	23	22	22	22.3	25	27	26	26	60	61	61	60.67	64	63	62	63
178	18	29.8	65	89	87	80.3	88	93	87	89.3	117	117	115	116.3	98	100	101	99.7

179	19	16	64	61	62	62.3	55	51	50	52	89	81	81	83.67	59	57	57	57.7
180	23	21.7	23	23	24	23.3	14	15	17	15.3	102	102	102	102	45	45	45	45
181	19	22.7	47	47	47	47	33	32	31	32	50	52	55	52.33	38	40	42	40
182	21	24.7	69	77	70	72	70	63	61	64.7	73	79	75	75.67	79	79	79	79
183	21	25.3	57	53	53	54.3	57	55	53	55	75	75	71	73.67	66	66	65	65.7
184	19	16.5	50	51	52	51	47	47	46	46.7	58	57	56	57	54	52	53	53
185	19	18	43	44	43	43.3	45	46	46	45.7	145	146	146	145.7	97	95	96	96
186	21	22.1	40	38	40	39.3	54	52	53	53	64	65	66	65	50	49	52	50.3
187	18	22	54	60	60	58	56	64	69	63	82	90	97	89.67	85	87	89	87
188	19	24.9	56	68	66	63.3	73	73	77	74.3	130	130	127	129	98	95	94	95.7
189	20	18.2	43	42	42	42.3	41	43	43	42.3	77	77	78	77.33	53	56	56	55
190	20	24.8	108	107	106	107	96	98	97	97	134	134	132	133.3	107	108	108	108
191	19	21.7	44	44	44	44	46	46	46	46	124	124	124	124	96	96	96	96
192	19	18.9	58	53	51	54	42	40	41	41	59	62	64	61.67	45	48	52	48.3
193	21	18.3	54	55	54	54.3	43	44	42	43	109	109	110	109.3	92	90	94	92
194	19	20.1	22	21	22	21.7	25	24	26	25	128	128	128	128	107	111	114	111
195	23	21.7	23	23	24	23.3	14	15	17	15.3	102	102	102	102	45	45	45	45
196	19	19.9	37	39	37	37.7	32	31	32	31.7	70	74	74	72.67	62	64	63	63
197	20	22.3	50	51	52	51	37	32	34	34.3	63	59	60	60.67	47	49	50	48.7
198	18	17.4	54	54	54	54	46	46	46	46	63	64	64	63.67	51	51	51	51
199	18	22.3	73	72	69	71.3	14	17	16	15.7	104	102	106	104	62	64	61	62.3
200	21	30.5	48	49	50	49	45	52	47	48	67	62	67	65.33	68	70	71	69.7

Superficial Peroneal Nerve – Males

SR				superficial peroneal nerve															
	age		bmi	Sensory								Pain							
				3hz				50hz				3hz				50hz			
				TR1	TR	T	ME	T	T	T	ME	T	T	T	ME	T	T	T	M
1	19		19	42	42	42	42	68	54	52	58	11	11	11	112	78	70	70	72.
2	24		26	80	82	81	81	63	62	61	62	13	12	13	128	90	91	92	91
3	23		34	74	84	92	83	91	91	90	90.6	12	12	12	123	10	10	10	10
4	20		20	20	22	21	21	18	19	17	18	12	12	12	129	70	75	75	73.
5	19		24	84	86	87	86	62	60	61	61	11	13	.	123	11	11	11	11
6	19		22	51	51	51	51	52	52	52	52	10	10	10	107	83	83	83	83
7	19		20	50	48	47	48	51	51	51	51	10	10	10	106	77	77	77	77
8	19		27	55	54	55	55	39	42	40	40.3	92	96	90	92.7	99	99	10	99.
9	20		18	55	55	55	55	46	44	45	45	77	77	75	76.3	56	57	57	56.
10	19		19	42	41	41	41	34	32	32	32.6	73	62	62	65.7	44	44	44	44
11	19		19	27	27	27	27	49	49	49	49	88	89	89	88.7	74	74	74	74
12	19		20	97	95	95	96	90	92	91	91	.	.	.	.	12	12	12	12
13	21		18	48	48	48	48	44	40	43	42.3	10	10	10	106	84	80	82	82
14	19		19	77	65	81	74	70	69	61	66.6	82	82	82	82	77	66	79	74
15	20		22	90	91	91	91	80	80	80	80	10	10	10	106	90	90	90	90
16	19		19	65	63	62	63	55	55	55	55	79	79	79	79	75	82	76	77.
17	19		25	75	75	75	75	63	63	63	63	.	.	.	.	10	10	10	10
18	19		17	27	27	27	27	22	22	22	22	57	57	57	57	30	35	30	31.
19	18		17	63	63	63	63	52	52	52	52	76	77	76	76.3	63	63	64	63.
20	19		23	51	53	54	53	53	48	52	51	56	62	64	60.7	58	62	75	65
21	21		25	64	65	64	64	57	56	56	56.3	71	67	70	69.3	59	59	59	59
22	20		16	46	46	46	46	40	43	40	41	10	10	10	101	49	49	50	49.
23	21		25	67	68	68	68	67	69	69	68.3	84	88	83	85	88	89	88	88.
24	19		16	65	66	65	65	55	55	56	55.3	77	76	77	76.7	59	59	58	58.
25	19		18	70	72	74	72	74	75	74	74.3	14	14	14	146	11	11	11	11
26	21		22	50	51	52	51	46	48	48	47.3	88	85	86	86.3	70	68	69	69
27	18		22	53	54	53	53	55	55	54	54.6	91	87	85	87.7	66	68	74	69.
28	19		25	65	75	71	70	59	58	56	57.6	89	88	87	88	63	68	65	65.
29	19		17	22	19	20	20	21	21	21	21	42	43	44	43	37	35	32	34.

30	18		23	73	74	75	74	74	74	74	74	.	.	.	.	10	10	10	10
31	19		19	28	30	32	30	44	45	42	43.6	49	49	49	49	42	42	42	42
32	19		26	25	26	23	25	34	35	34	34.3	61	59	60	60	48	49	50	49
33	23		22	48	49	49	49	39	39	39	39	80	80	80	80	53	53	53	53
34	18		16	60	61	61	61	41	42	42	41.6	.	.	.	.	98	10	99	10
35	18		30	106	106	10	107	10	10	10	101	14	14	13	141	11	11	11	11
36	20		16	43	42	43	43	60	65	63	62.6	97	97	97	97	86	85	85	85.
37	18		30	89	83	85	86	63	63	65	63.6	10	10	10	102	73	73	73	73
38	19		16	55	55	58	56	52	46	51	49.6	71	66	66	67.7	55	55	60	56.
39	22		20	53	54	53	53	53	53	53	53	59	58	54	57	57	57	57	57
40	20		21	63	63	62	63	59	57	59	58.3	70	67	68	68.3	62	62	63	62.
41	21		17	67	68	66	67	40	41	42	41	10	10	10	107	60	62	63	61.
42	20		18	100	100	10	100	90	91	90	90.3	13	12	12	129	11	11	11	11
43	20		20	78	81	77	79	79	60	69	69.3	83	87	86	85.3	73	79	73	75
44	20		27	57	58	57	57	40	42	44	42	57	58	58	57.7	45	46	49	46.
45	20		30	86	89	87	87	76	78	75	76.3	.	.	.	.	.	.	.	.
46	21		21	63	64	65	64	55	56	54	55	11	11	11	112	75	73	72	73.
47	20		24	30	37	38	35	36	32	32	33.3	96	96	96	96	50	52	52	51.
48	21		19	48	56	52	52	51	42	45	46	.	.	.	.	93	10	96	97
49	21		17	63	64	66	64	57	58	59	58	84	84	83	83.7	73	70	71	71.
50	21		19	66	66	66	66	96	97	94	95.6	97	97	97	97	96	97	99	97.
51	21		33	90	93	91	91	81	82	85	82.6	.	.	.	.	11	10	11	11
52	19		27	84	84	84	84	10	10	10	100	.	.	.	.	11	11	11	11
53	20		18	57	59	60	59	45	51	55	50.3	97	94	94	95	63	64	64	63.
54	19		20	39	40	39	39	55	54	53	54	.	.	.	.	.	.	.	.
55	20		22	50	54	60	55	45	52	54	50.3	74	73	72	73	10	10	10	10
56	20		25	79	82	76	79	60	67	65	64	10	11	11	109	68	67	64	66.
57	19		17	87	87	87	87	77	77	77	77	94	97	97	96	88	90	90	89.
58	21		23	66	65	66	66	55	55	52	54	11	11	11	116	74	74	74	74
59	19		21	30	30	30	30	28	27	29	28	41	42	41	41.3	32	34	34	33.
60	19		19	40	40	40	40	34	34	34	34	53	56	59	56	44	41	41	42
61	18		18	55	55	55	55	48	48	52	49.3	88	79	72	79.7	67	67	66	66.
62	21		24	92	95	95	94	78	78	77	77.6	12	12	12	127	95	93	98	95.
63	18		22	107	112	11	110	57	59	60	58.6	11	11	11	114	89	90	90	89.
64	25		29	65	64	63	64	61	62	62	61.6	11	11	11	115	69	67	68	68

65	19		20	72	73	73	73	62	61	60	61	11	11	11	116	82	83	84	83
66	18		27	82	82	83	82	43	44	43	43.3	58	59	60	59	44	45	45	44.
67	18		22	58	58	58	58	56	49	50	51.6	67	70	62	66.3	60	60	62	60.
68	20		28	78	79	80	79	50	51	52	51	77	76	74	75.7	72	73	70	71.
69	19		18	75	79	79	78	52	50	51	51	73	74	76	74.3	66	72	76	71.
70	19		30	52	53	54	53	44	42	50	45.3	83	77	77	79	60	58	57	58.
71	21		24	39	39	40	39	30	31	32	31	49	49	50	49.3	40	38	39	39
72	21		22	76	74	77	76	74	76	71	73.6	11	11	11	118	10	10	10	10
73	19		19	31	30	31	31	28	27	29	28	40	42	43	41.7	32	33	35	33.
74	19		29	58	56	55	56	46	50	47	47.6	13	13	13	134	83	85	89	85.
75	20		28	33	34	30	32	24	27	26	25.6	51	52	51	51.3	49	46	41	45.
76	20		26	71	70	70	70	62	63	63	62.6	93	92	94	93	70	71	73	71.
77	21		21	59	59	59	59	40	45	43	42.6	67	65	65	65.7	47	50	52	49.
78	22		22	40	42	30	37	45	36	37	39.3	63	63	65	63.7	65	54	57	58.
79	18		21	53	52	53	53	44	43	42	43	68	60	65	64.3	50	53	53	52
80	21		25	53	53	51	52	50	50	50	50	64	62	60	62	57	59	59	58.
81	18		17	44	42	44	43	44	45	43	44	11	11	11	114	99	98	97	98
82	18		18	47	47	47	47	33	33	33	33	81	81	81	81	59	50	55	54.
83	21		23	40	41	41	41	34	34	33	33.6	80	81	83	81.3	53	54	54	53.
84	19		22	73	78	76	76	73	69	71	71	12	12	12	122	85	81	82	82.
85	23		22	50	50	47	49	41	40	42	41	58	58	59	58.3	52	50	49	50.
86	19		21	68	68	66	67	55	54	53	54	92	82	89	87.7	74	68	68	70
87	19		17	24	23	23	23	17	18	17	17.3	64	64	62	63.3	58	55	57	56.
88	19		28	29	28	26	28	25	26	24	25	93	95	95	94.3	89	88	90	89
89	19		22	24	25	25	25	23	22	22	22.3	10	10	10	105	98	96	85	93
90	19		15	26	27	26	26	24	23	23	23.3	78	76	77	77	58	56	55	56.
91	19		24	35	35	34	35	31	30	29	30	97	95	94	95.3	92	91	93	92
92	18		20	80	82	83	82	47	46	48	47	10	11	10	109	76	77	72	75
93	19		23	31	32	31	31	35	40	46	40.3	66	73	72	70.3	67	62	63	64
94	22		23	70	72	73	72	65	64	63	64	14	14	15	148	95	96	95	95.
95	19		19	23	21	21	22	20	22	20	20.6	71	71	71	71	39	51	57	49
96	20		19	52	50	60	54	52	62	61	58.3	70	71	80	73.7	56	63	66	61.
97	22		17	33	34	31	33	28	30	29	29	98	99	10	99	67	68	70	68.
98	19		25	73	73	73	73	60	60	60	60	10	10	10	106	68	67	67	67.
99	19		23	55	57	56	56	53	52	53	52.6	90	94	96	93.3	67	68	69	68

10	21		21	73	76	74	74	47	48	47	47.3	10	10	10	103	52	50	51	51
10	23		20	50	49	47	49	59	51	56	55.3	13	13	13	131	93	97	95	95
10	21		25	66	66	66	66	53	53	54	53.3	11	11	11	114	66	66	66	66
10	20		16	66	66	66	66	71	69	71	70.3	12	12	12	125	10	10	10	10
10	21		18	35	37	38	37	39	38	38	38.3	87	87	87	87	55	58	57	56.
10	25		18	59	59	59	59	49	49	49	49	84	87	87	86	53	53	53	53
10	21		21	75	78	77	77	55	55	54	54.6	88	91	87	88.7	78	73	74	75
10	19		18	64	64	64	64	61	61	61	61	.	.	.	.	82	83	83	82.
10	19		21	43	42	44	43	49	47	48	48	67	68	68	67.7	58	59	58	58.
10	24		24	30	30	30	30	32	32	32	32	67	68	67	67.3	46	47	47	46.
11	19		16	34	37	34	35	32	36	34	34	40	44	45	43	35	37	36	36
11	19		20	39	39	39	39	36	36	36	36	11	11	11	116	11	11	11	11
11	22		20	53	53	53	53	53	53	53	53	59	59	58	58.7	57	57	57	57
11	23		20	34	34	34	34	30	30	30	30	99	99	99	99	97	97	97	97
11	23		21	18	18	18	18	16	16	16	16	59	59	59	59	57	57	57	57
11	21		16	13	13	13	13	14	14	14	14	55	54	55	54.7	49	49	49	49
11	19		16	11	12	13	12	14	13	14	13.6	55	56	55	55.3	49	47	49	48.
11	22		20	45	44	45	45	39	37	37	37.6	95	94	93	94	97	97	97	97
11	20		20	20	22	21	21	18	19	20	19	40	43	44	42.3	31	32	33	32
11	20		20	20	20	21	20	58	59	50	55.6	12	12	13	129	70	71	73	71.
12	20		20	20	22	21	21	18	19	17	18	12	12	12	129	70	75	75	73.
12	20		16	62	61	60	61	71	73	70	71.3	94	95	94	94.3	86	85	85	85.
12	20		20	20	22	21	21	18	19	17	18	12	12	12	129	70	75	75	73.
12	20		16	50	52	54	52	64	64	62	63.3	92	94	91	92.3	86	85	85	85.
12	18		20	53	53	54	53	53	53	53	53	57	56	57	56.7	98	98	98	98
12	20		16	43	42	41	42	60	65	64	63	97	97	98	97.3	86	87	88	87
12	21		16	43	42	41	42	60	65	64	63	98	97	98	97.7	86	87	88	87
12	19		20	43	42	43	43	60	65	63	62.6	97	97	97	97	86	85	84	85
12	20		18	55	55	56	55	46	47	48	47	77	71	72	73.3	56	56	57	56.
12	20		18	55	55	55	55	46	44	45	45	77	77	75	76.3	56	57	57	56.
13	19		22	50	50	50	50	52	52	52	52	11	11	11	110	84	84	84	84
13	20		16	48	47	49	48	60	65	62	62.3	97	97	97	97	86	85	85	85.
13	19		19	77	65	81	74	70	69	61	66.6	82	82	82	82	77	66	79	74
13	21		18	48	48	48	48	44	40	43	42.3	10	10	10	106	84	80	82	82
13	19		20	97	95	96	96	90	91	92	91	10	10	10	103	12	12	13	12

13	21		18	50	50	50	50	44	46	44	44.6	10	10	10	103	84	80	82	82
13	23		22	48	49	48	48	39	39	39	39	80	80	82	80.7	54	54	54	54
13	19		20	80	80	81	80	79	79	80	79.3	85	86	87	86	90	91	93	91.
13	22		24	55	55	55	55	52	46	47	48.3	71	70	72	71	55	56	57	56
13	22		24	55	55	58	56	52	46	51	49.6	71	66	66	67.7	55	55	60	56.
14	22		22	55	55	58	56	52	46	51	49.6	71	66	66	67.7	55	55	60	56.
14	21		24	37	44	46	42	27	31	37	31.6	55	56	57	56	47	47	47	47
14	23		22	73	70	71	71	65	63	64	64	84	97	83	88	73	73	74	73.
14	23		24	73	70	71	71	65	64	63	64	84	97	10	94.7	73	73	74	73.
14	19		16	55	55	58	56	52	46	47	48.3	71	72	73	72	55	56	57	56
14	20		16	55	55	56	55	52	46	51	49.6	71	72	73	72	55	56	67	59.
14	19		20	50	48	47	48	51	51	51	51	10	10	10	106	77	78	79	78
14	19		20	50	51	51	51	51	53	51	51.6	10	10	10	106	77	71	72	73.
14	19		20	97	96	97	97	90	92	91	91	10	11	11	110	12	12	13	12
14	20		20	97	95	95	96	98	98	98	98	10	10	10	100	12	12	12	12
15	19		22	50	50	50	50	50	51	52	51	10	10	10	108	84	84	84	84
15	19		20	50	47	48	48	50	51	49	50	10	10	10	106	72	74	78	74.
15	18		17	63	62	60	62	54	52	51	52.3	78	77	76	77	62	62	62	62
15	20		22	90	91	91	91	80	82	84	82	10	10	10	107	90	89	92	90.
15	19		20	98	97	95	97	90	92	91	91	13	13	13	132	12	12	12	12
15	20		16	43	42	43	43	60	65	63	62.6	97	97	97	97	86	85	85	85.
15	18		30	106	106	10	107	10	10	10	101	14	14	13	141	11	11	11	11
15	19		19	28	30	32	30	44	45	42	43.6	49	49	49	49	42	42	42	42
15	22		19	40	42	41	41	69	53	52	58	11	11	11	113	78	70	70	72.
15	19		21	37	42	41	40	32	30	31	31	53	47	52	50.7	49	50	50	49.
16	19		19	47	51	59	52	44	45	41	43.3	60	58	57	58.3	47	49	46	47.
16	20		22	41	38	37	39	40	42	42	41.3	99	10	10	99.7	71	71	71	71
16	23		22	36	37	38	37	41	40	41	40.6	94	99	96	96.3	10	11	10	10
16	23		22	90	91	91	91	80	90	80	83.3	10	10	10	106	11	11	11	11
16	20		30	79	75	73	76	81	81	82	81.3	11	11	11	117	11	11	11	11
16	23		25	37	40	44	40	32	36	26	31.3	49	50	50	49.7	53	52	49	51.
16	21		24	69	70	72	70	88	87	88	87.6	80	81	82	81	90	99	98	95.
16	19		19	82	83	82	82	83	83	83	83	89	89	89	89	13	13	14	13
16	20		22	57	51	52	53	60	59	58	59	98	97	10	99.3	10	10	10	10
16	22		25	100	100	10	100	90	91	90	90.3	13	12	12	129	11	11	11	11

17	20		17	100	100	10	100	90	91	90	90.3	13	12	12	129	11	11	11	11
17	24		26	80	82	86	83	63	62	61	62	13	12	13	128	90	91	92	91
17	23		20	63	62	61	62	59	60	61	60	11	11	11	112	12	11	12	12
17	20		17	63	63	63	63	52	52	52	52	81	81	81	81	63	63	63	63
17	20		16	47	46	47	47	51	52	50	51	99	98	97	98	10	10	11	10
17	18		26	55	55	52	50	52	46	52	56	51	69	70	71	70	70	70	71
17	18		30	76	106	10	108	10	10	10	102	10	11	11	139	12	11	11	11
17	20		16	77	43	42	43	43	60	65	63	63	97	97	97	97	86	85	85
17	18		30	78	89	83	85	86	63	63	65	64	10	10	100	10	73	73	73
17	19		16	79	55	55	58	56	52	46	51	50	71	66	66	67	55	55	60
18	23		22	81	48	49	49	49	39	39	39	39	80	80	80	80	53	53	53
18	19		23	82	51	53	54	53	53	48	52	51	56	62	64	60	58	62	75
18	21		25	83	64	65	64	64	57	56	56	56	71	67	70	69	59	59	59
18	21		25	84	67	68	68	68	67	69	69	68	84	88	83	85	88	89	88
18	19		16	85	65	65	65	65	55	55	56	55	77	76	77	76	59	59	58
18	19		18	86	70	72	74	72	74	75	74	74	14	14	146	14	11	11	11
18	21		22	87	50	51	52	51	46	48	48	47	88	85	86	86	70	68	69
18	18		22	88	53	53	54	53	55	55	54	55	91	87	85	87	66	68	74
18	19		25	89	65	75	71	70	59	58	56	58	89	88	87	88	63	68	65
18	20		18	90	55	55	55	55	46	44	45	45	77	77	75	76	56	57	57
19	20		25	91	63	64	63	63	53	54	55	54	12	11	120	12	67	69	70
19	19		22	92	51	51	51	51	52	52	52	52	10	10	107	10	83	83	83
19	19		19	93	77	65	81	74	70	69	61	67	82	82	82	82	77	66	79
19	21		18	94	48	48	48	48	44	40	43	42	10	10	107	10	84	80	82
19	19		20	95	97	95	95	96	90	92	91	91					12	12	12
19	23		22	96	48	49	49	49	39	39	39	39	80	80	80	80	53	53	53
19	19		20	97	50	48	47	48	51	51	51	51	10	10	106	10	77	77	77
19	20		22	98	90	91	91	91	80	80	80	80	10	10	107	10	90	90	90
19	18		17	99	63	63	63	63	52	52	52	52	76	77	76	76	63	63	63
19	18		22	60	61	63	61	43	42	41	42	94	96	95	95	62	63	69	64.
20	21		31	46	46	48	47	45	44	46	45	67	62	67	65.3	68	70	71	69.

Certificate

This is to certify that the project entitled "Normative values of sensory threshold and pain threshold in healthy young adults." is bonafide work completed by Anisha Gulatisupervision of Dr. Pothiraj P as a part of Final Year Group Project.

We have a great pleasure in forwarding this project to MGM Institute of Health Sciences (Deemed University), Kamothe, Navi Mumbai.

Acknowledgement

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