

ROLE OF PSYCHONEUROBICS IN MANAGEMENT OF THYROID DISORDER AMONG INDIAN ADULTS PEOPLE

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Abstract

Thyroid disorders are one of the most common diseases that cause significant burden in India and around the world. According to clinical survey of various studies on thyroid disease, it has been estimated that about 42 million people in India suffer from thyroid diseases. People living in the northern regions have more cases of hypothyroidism than the rest of the country. Early severe diagnosis and complete treatment with appropriate medications can be successfully managed. Thyroid hormone is a key substance in normal homeostasis, having variable influence on cell metabolism on different organs. Hypothyroidism is common, potentially serious, often clinically overlooked, readily diagnosed by laboratory testing, and eminently treatable. This study was conducted with the aim of finding the effect of regular physical exercise of medium-intensity on thyroid function in patients already undergoing treatment for hypothyroidism. A total of 20 ambulatory treated hypothyroid patients were included in the study. Serum samples were collected and evaluated for triiodothyronine (T3), thyroxine (T4), thyroid stimulating hormone (TSH) both before and after 3 months of daily 1 h physical exercise, from those patients doing exercise and from those who did not do any physical exercise. T-test was used to find a significant difference between the two groups.

Keywords: Physical exercise, thyroid hormone levels, treated hypothyroidism

Introduction

Thyroid diseases are, arguably, among the commonest endocrine disorders worldwide. India too, is no exception. According to a projection from various studies on thyroid disease, it has been estimated that about 42 million people in India suffer from thyroid diseases. Thyroid diseases are different from other diseases in terms of their ease of diagnosis, accessibility of medical treatment, and the relative visibility that even a small swelling of the thyroid offers to the treating physician. Early diagnosis and treatment remain the cornerstone of management.

Neurobics reflects the hypothesis that cognitive capabilities can be taken care of or even raised by exercising the brain. This is predicted by the observation that health and fitness are actually raised by exercising the body muscles and joints. Neurobics is actually the science of mind exercise. The term neurobics was coined by Dr. Lawrence Katz and Manning Rubin to describe these brain exercises and it consists of methods that help the brain stay healthy.

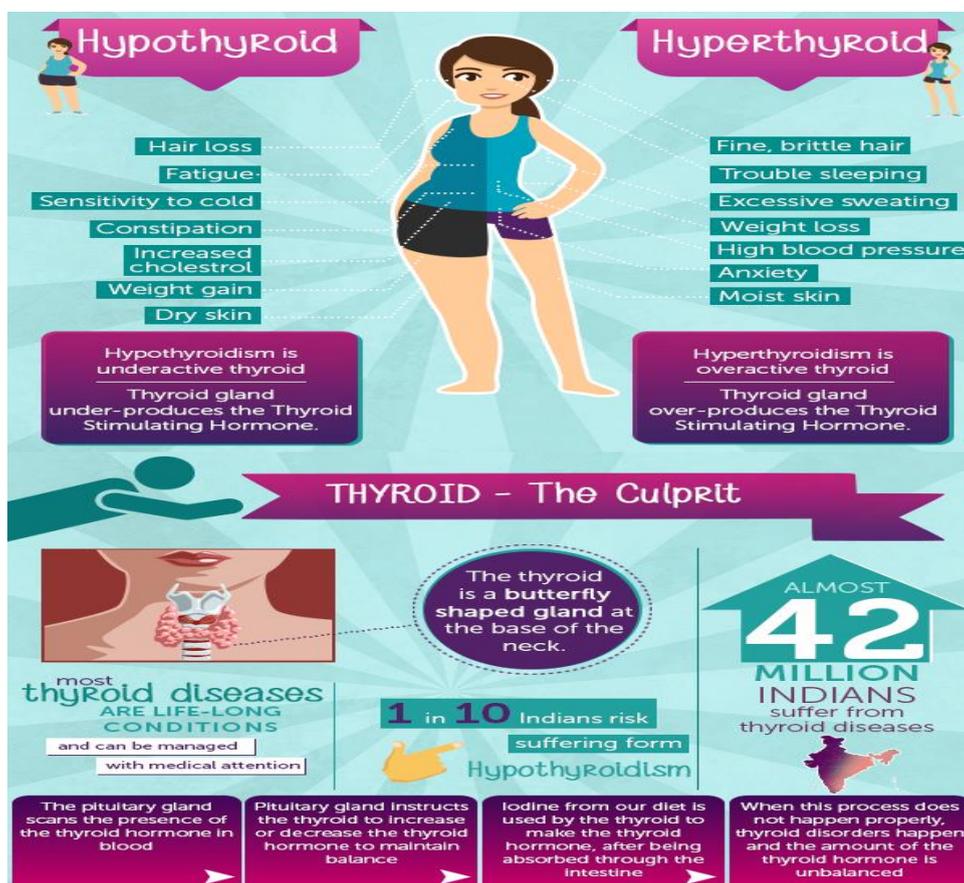


Figure 1: Thyroid Disorder

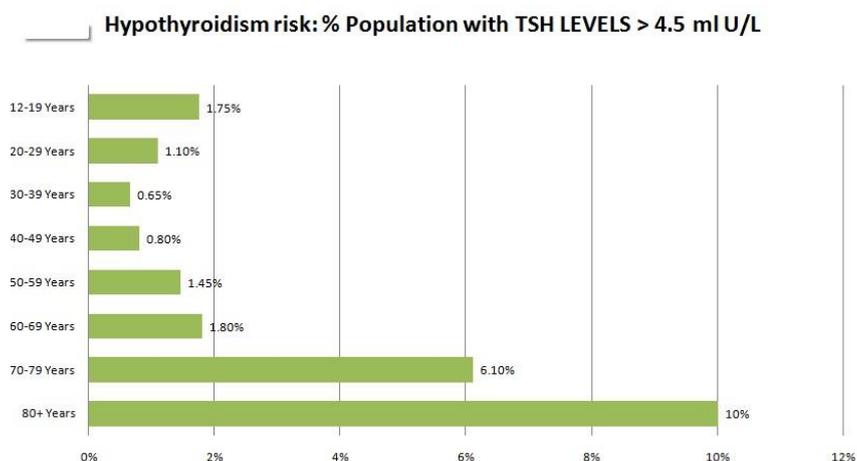


Table 1: Thyroid categories according to different age groups

Psycho-neurobics is actually the science and method of producing the right vibrations in the body based on specific concepts and technology. By implementing some meditation methods and exercises using specific styles, sounds, and mudras, we are able to generate the frequency in the subconscious of ours and attract divine energy.

Thus Psycho-neurobics helps us to improve our mental strength and will power. It is a procedure of taking astronomical vitality that is in the universe by the intensity of mind and after that exchanging it to mental faculties and neuro system. The word psycho (mind) reflects that the gather and exchanging this vitality through the intensity of the brain.

Research has demonstrated that just rehearsing an ordinary Psycho-neurobics routine all the time is able to provide results of by and large better health. It balances out the mental faculties and body, to begin with, and strengthen the soul as the ultimate outcome.

The mind can be exercised or stimulated either by hue/colour (Light Neurobics), or vibrations (Sound Neurobics) or by tasks such as Asanas / Pranayama (Easy Neurobics). The Psycho-neurobics joins all of these 3 Neurobics to bridle the strength of mind for self-healing.

There are following three kinds of Neurobics. The Psycho-Neurobics joins all these three Neurobics to bridle the power of mind for self-recuperating.

Light Neurobics: Research shows that hues have vibrational vitality which has profound effect on human mind, inclination, discernments and feelings. Envisioning hues through third (shrouded) eye trigger Chakras and Nadis framework. This evacuated blocked energies and cleanses human body everything being equal and negative vitality.

Sound Neurobics: Sound waves travel in the Universe through making vibrations. This clarifies the inclination adjusting and quieting impact of specific mantras, supplications, rhymes and notes on our mind. Presenting certain tried mantras with contemplation and breathing activities puts our mind, body and soul in concordance, which has gigantic power to repress development of harmful cells.

Easy Neurobics: This comprises of neuro-strong and neuro-respiratory activities, for example, 'hastamudras'; 'asanas' and 'pranayama' that changes divine vitality into life powers for our body and also to free detached mystic vitality. Psycho-Neurobics is a powerful procedure that joins the energies of mind, body and soul for re-establishing an amazing harmony vitality. It is demonstrating instrumental in relieving infections, for example, – Cancer, Diabetes, Migraine, Blood Pressure, Stress, Depression, Heart Problem and the

various psychosomatic maladies. Numerous individuals have affirmed the enhancement of insusceptibility. It likewise strengthens the mind cells – this has wide advantages as a rule health, Alzheimer's sickness and memory enhancement.

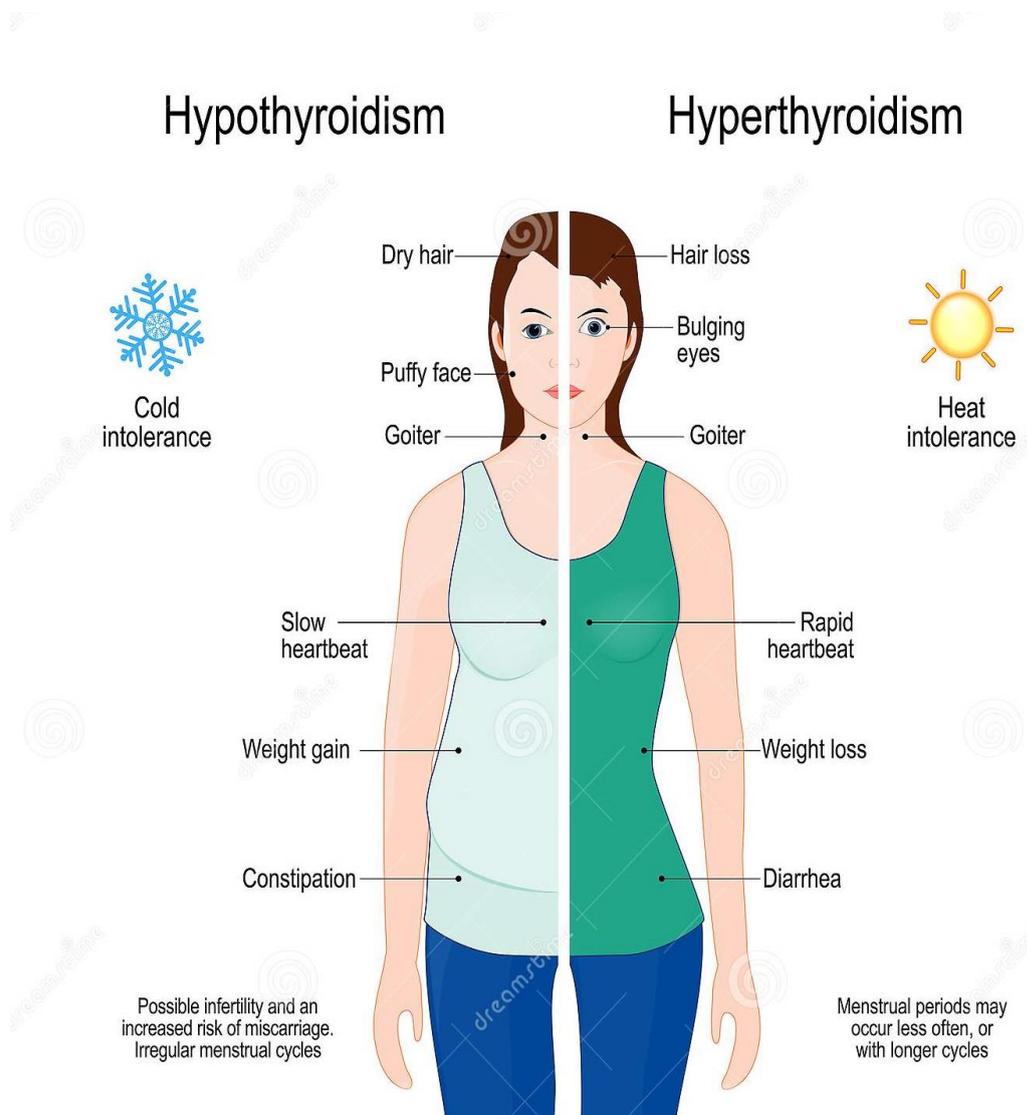


Figure 2: Disorder of the Thyroid gland

Literature Review

Thyroid diseases are common worldwide. In India too, there is a significant burden of thyroid diseases. According to a projection from various studies on thyroid disease, it has been estimated that about 42 million people in India suffer from thyroid diseases. This review will focus on the epidemiology of five common thyroid diseases in India: (1) hypothyroidism, (2) hyperthyroidism, (3) goitre and iodine deficiency disorders, (4) Hashimoto's thyroiditis, and (5) thyroid cancer. This review will also briefly cover the exciting work that is in progress to

ascertain the normal reference range of thyroid hormones in India, especially in pregnancy and children.

Tripathi D (2018) Hypothyroidism is defined as failure of thyroid gland to produce sufficient thyroid hormone to meet the metabolic demands of the body. A significant number of women as compare to male are suffering from hypothyroidism. It is characterized by elevated thyroid stimulating hormone. Regular practices of yoga hand mudra are useful in preventing and managing a wide range of clinical condition such as diabetes, anxiety, depression, pain, thyroid disorders and hypertension includes seven subjects suffering from hypothyroidism from age group 30-65. The patients were asked to perform yoga mudra according to standard procedure. The pathological parameters T3, T4, TSH and parameters from magnetic resonance Analyzer T3, FT4, Thyroid secretion index and Pituitary secretion index for hypothyroid patients were recorded before and after performing the mudra.

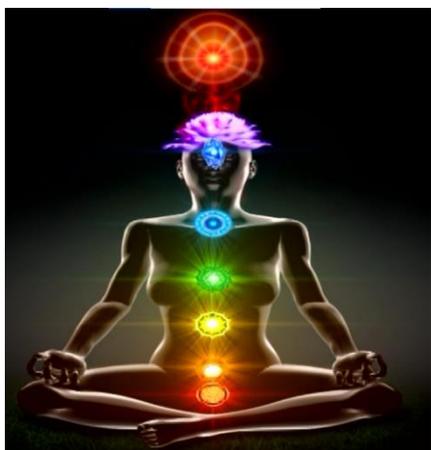
Dr C Shekhar (2018) Neurobic recuperating is a multi-year-old system that has re-emerged in present day times and has been creating leap forward results in restorative fields. This exceptional system uncovers the unbelievable power of our subliminal mind. It is an elective mending strategy that should be possible sitting at one place and is without any sort of reactions. A very much prepared and powerful mind isn't just ready to interface with the celestial vitality existing in the Universe yet in addition ready to pull in it by charging. Human body is comprised of an arrangement of Chakras and Nadis. Chakras are the substantial areas which has concentrated vitality. There are seven noteworthy Chakras. Notwithstanding Chakras, we have many-sided systems of 72,000 Nadis. The cross purpose of Nadis makes up the Chakra. Both Chakras and Nadis framework are firmly identified with our Endocrine framework which directs every single hormonal action in the human body. Vibrational vitality moves through these Chakras and Nadis to make human life. The lop-sidedness of this vibrational vitality is the fundamental reason for different illnesses. Neurobic mending, utilizes the standard of Law of Attraction, to prepare the human mind and draw in the infinite vitality.

J A Franklyn (2005) Thyroid disease is common, affecting around 2% of women and 0.2% of men in the UK. Our understanding of the effects of thyroid hormones under physiological circumstances, as well as in pathological conditions, has increased dramatically during the last two centuries and it has become clear that overt thyroid dysfunction is associated with significant morbidity and mortality. Both hypo-and hyperthyroidism and their treatments

have been linked with increased risk from cardiovascular disease and the adverse effects of thyrotoxicosis in terms of osteoporosis risk are well established. Although the evidence suggests that successful treatment of overt thyroid dysfunction significantly improves overall survival, the issue of treating mild or subclinical hyper- and hypothyroidism remains controversial. Furthermore, the now well-established effects of thyroid hormones on neurodevelopment have sparked a whole new debate regarding the need to screen pregnant women for thyroid function abnormalities. This review describes the current evidence of the effects of thyroid hormone on the cardiovascular, skeletal and neurological systems, as well as the influence of thyroid diseases and their treatments on the development of malignancy. Furthermore, we will describe some recent developments in our understanding of the relationship between thyroid status and health.

Methodology

The study was conducted in Department of Biochemistry in a tertiary care. 20 ambulatory otherwise healthy treated hypothyroidism male patients with comparable level of hypothyroidism were included in study, out of which 10 patients complied to do regular physical exercise for 1 h daily, and rest were not willing to do physical exercise. Serum T3, T4 and thyroid stimulating hormone (TSH) levels were analysed preintervention ally to avoid any biases in the distribution of subjects into both groups. The regular exercise session in the form of sports or jogging continued for 3 months. All the patients were between age 30 and 40 years. All the subjects were stable on their respective thyroxine replacement doses (eltroxine) since last 6 months. Mean thyroxine dose was 97 µg/day in the exercise group and 100 µg/day in non-exercise group. Brief clinical history and examination along with some epidemiological data were taken. After a written and informed consent samples were collected and processed. Ethical clearance was taken for the study.



Neurobic Spa: Spa is a 27 min. visual video meditation practice. It has 7 Chakras cleaning, healing & strengthening. Delta Healing Music has been used in this, which users do in Apana Vayu Mudra & this is done only by seeing the video. So, that no other thoughts will disturb. Through this visualization process, each and every chakra is healed.

Exercise: Mudra- Apan Vayu Mudra

Blissful Neurobics: The seventh major chakra is found near the inside of the top of the head and looks like a ceiling fan coloured in vivid royal violet. It's essential to clear cognizance or "clear knowing", which is the ability to receive thoughts, information & ideas from the Divine mind or collective can tap into the wealth of creativity & inventions that abound in the spiritual plane.

Exercise:

Mudra- Akash Mudra

Colour- Violet

Sound Chanting- "Humming"

Peaceful Neurobics: The fifth major chakra is the Throat Chakra, also known as the Vishudhi Chakra. It spins at a fast rate and is sky blue in Color. An activated and clean Throat Chakra looks like a sparkling clear day bathed in sunshine, while a dirty and deactivated Throat Chakra looks like a dreamy, dismal day.

Exercise:

Mudra- Akash Mudra

Colour- Sky Blue

Sound Chanting- "Humming"

Enlightening Neurobics: The sixth major chakra is located between the two eyes. We often call it the Brow or the Ajna Chakra. However, we most commonly call it the Third Eye, and for good reason. If your eyes, take a few deep breaths, and place your attention on the area between your eyes, you will begin to see you close or feel an oval-shaped object lying on one side. This is your third eye; it is the eye of your true self or your higher self. The reason why the eye is turned towards you is because everything is what is in There is nothing else within except you. Heart your and mind. It is only an illusion that a material world exists outside and separate from you.

Exercise:

Mudra- Pran Mudra

Colour- Indigo

Sound Chanting- "O"

Participants were also asked to perform PSYCHONEUROBICS exercise. These included Enlightening, Blissful & Peacefull Psychoneurobics along with Neurobics Spa performed in Pran, Aksh and Apan Vayu mudra respectively. The details and the impact of the above tools have been proved in one of the other papers highlighting its efficacy and its importance. Thyroid levels are also affected when rigorous exercise is undertaken, this is cannot be

termed as a cure but physical exercise along with good diet to some extent helps in regulating the thyroid hormone as exercise lowers the stress levels of the body and it impacts body's overall functioning. Participants were asked to stick to a particular diet routine along with planned exercise regime. The diet which was administered to the participants was pure sattvic diet which was energized using PSYCHONEUROBIC technique of energization.

Water Charging**Food Charging**

**TABLE 2: HOLISTIC HEALTH MANAGEMENT
WITH PSYCHONEUROBICS EXPERIMENTAL
GROUP**

Sl. No.	Participants	Results of TSH	
		Before Psychoneurobics	After Psychoneurobics
1	Participant 1	6.874	2.351
2	Participant 2	9.391	3.071
3	Participant 3	14.259	3.257
4	Participant 4	22.595	3.054
5	Participant 5	7.274	1.978
6	Participant 6	6.240	1.984
7	Participant 7	9.015	2.784
8	Participant 8	7.952	2.014
9	Participant 9	7.640	2.754
10	Participant 10	8.741	3.014
11	Participant 11	7.894	2.214
12	Participant 12	8.951	2.874
13	Participant 13	7.258	2.287
14	Participant 14	18.136	3.574
15	Participant 15	6.493	3.396
16	Participant 16	6.153	2.011
17	Participant 17	9.821	2.878

18	Participant 18	8.660	3.055
19	Participant 19	13.297	3.784
20	Participant 20	11.328	2.654
21	Participant 21	6.283	2.987
22	Participant 22	5.003	2.345
23	Participant 23	7.923	2.342
24	Participant 24	0.012	1.698
25	Participant 25	0.097	2.471
26	Participant 26	0.007	1.974
27	Participant 27	0.197	2.145
28	Participant 28	0.105	2.450
29	Participant 29	0.174	1.874
30	Participant 30	0.147	2.141
31	Participant 31	0.058	1.874
32	Participant 32	0.087	2.415
33	Participant 33	0.078	2.158
34	Participant 34	0.198	2.147
35	Participant 35	0.121	2.144
36	Participant 36	0.138	2.014
37	Participant 37	0.078	2.474
38	Participant 38	0.078	3.014
39	Participant 39	0.078	2.474
40	Participant40	0.054	2.478
41	Participant 41	0.098	2.478
42	Participant 42	0.058	2.157
43	Participant 43	0.078	1.987
44	Participant 44	0.098	2.574
45	Participant 45	0.232	2.567
46	Participant 46	0.123	3.549
47	Participant 47	0.243	2.616
48	Participant 48	0.336	2.908
49	Participant 49	0.212	2.567
50	Participant 50	0.232	2.836

**TABLE 3 - HOLISTIC HEALTH
MANAGEMENT WITH PSYCHONEUROBICS
CONTROL GROUP**

Sl. No.	Participants	Results of TSH	
		Before Psychoneurobics	After Psychoneurobics
1	Participant 1	5.584	8.214
2	Participant 2	7.981	11.784
3	Participant 3	5.211	8.014
4	Participant 4	14.154	19.458
5	Participant 5	8.874	12.587
6	Participant 6	7.887	9.574
7	Participant 7	6.018	9.876
8	Participant 8	10.544	13.544
9	Participant 9	7.147	10.201
10	Participant 10	11.474	17.207
11	Participant 11	6.588	9.485
12	Participant 12	9.974	14.871
13	Participant 13	8.214	9.874
14	Participant 14	7.584	11.254
15	Participant 15	6.101	8.174
16	Participant 16	8.974	11.874
17	Participant 17	12.878	15.748
18	Participant 18	60.00	70.00
19	Participant 19	15.574	17.897

20	Participant 20	8.584	12.784
21	Participant 21	7.145	9.174
22	Participant 22	9.654	11.854
23	Participant 23	7.634	6.134
24	Participant 24	6.058	8.588
25	Participant 25	6.217	8.213
26	Participant 26	0.765	2.896
27	Participant 27	0.645	0.212
28	Participant 28	12.580	15.877
29	Participant 29	9.028	11.547
30	Participant 30	8.247	11.027
31	Participant 31	12.148	14.547
32	Participant 32	8.954	11.587
33	Participant 33	8.574	10.258
34	Participant 34	11.574	13.987
35	Participant 35	0.565	0.111
36	Participant 36	0.543	0.234
37	Participant 37	7.577	9.474
38	Participant 38	10.987	12.743
39	Participant 39	12.025	15.254
40	Participant 40	8.257	12.028
41	Participant 41	9.245	12,870
42	Participant 42	10.654	13.554
43	Participant 43	13.014	14.984
44	Participant 44	11.574	13.710
45	Participant 45	10.987	12.987
46	Participant 46	0.656	0.122
47	Participant 47	7.546	15.897

48	Participant 48	8.954	11.558
49	Participant 49	9.998	12.058
50	Participant 50	0.675	0.212

Results

Totally 20 male treated hypothyroid patients of middle age group ranging 30-40 years were evaluated for thyroid function, out of which 10 patients belonged to regular physical exercise group and 10 nonexercised group. Mean age for all 20 patients was 34.1 ± 2.69 . Serum TSH, T3 and T4 were analysed at the end of 3 months in both exercise group and nonexercised group.

Serum TSH was found to be significantly decreased in patients of regular exercise group postinterventionally ($P < 0.001$), but no such significant difference was seen with nonexercised group ($P = 0.43$).

Serum T3 and T4 were also found to be significantly raised in regular exercise group post interventional ($P = 0.007$ and $P < 0.001$ respectively) but no such significant difference in T3 and T4 was found in nonexercised group ($P = 0.92$ and $P = 0.73$ respectively). On inter group comparison significant decrease in TSH was found in regular exercise group ($P = 0.002$) and significant increase was found in levels of T3 ($P = 0.002$) and T4 ($P = 0.001$) in regular exercise group. Mean weight was found to be decreased in regular exercise group post interventional.

Discussion

The present study is the first description of the effect of regular physical exercise on thyroid disorder status in and around this region.

Table 4: Thyroid profile in exercising and non-exercising group pre interventional

Serial no.	MEAN + SD		Test of significance
	Exercise Group	Non exercise Group	
T3	1.30 ± 0.28	1.10 ± 0.25	$t = 1.5, P = 0.12, df = 18$
T4	8.09 ± 0.45	8.64 ± 0.97	$t = 1.5, P = 0.14, df = 18$
TSH	2.51 ± 0.24	1.92 ± 0.85	$t = 2.00, P = 0.06, df = 18$

Tables 5: Thyroid profile in exercise group pre and postintervention

Serial no.	Preintervention	Postintervention	Test of significance
T3	1.30±0.28	2.33±1.03	t =3.03, P =0.007, df =18
T4	8.09±0.45	11.34±1.98	t = 5.05, P =0.00, df=18
TSH	2.51±0.24	0.61±0.42	t =12.11, P =0.000, df =18

Table 6: Thyroid profile in non-exercise group pre and postintervention

Serial no.	Preintervention	Postintervention	Test of significance
T3	1.10±0.25	1.11±0.23	t =0.10, P =0.92, df =18
T4	8.64±0.97	8.77±0.82	t =0.34, P =0.73, df =18
TSH	1.92±0.85	2.34±1.42	t =0.80, P =0.43, df =18

Tables 7: Thyroid profile comparison in exercise versus non exercise group postintervention

Serial no.	Preintervention	Postintervention	Test of significance
T3	1.10±0.25	1.11±0.23	t =0.10, P =0.92, df =18
T4	8.64±0.97	8.77±0.82	t =0.34, P =0.73, df =18
TSH	1.92±0.85	2.34±1.42	t =0.80, P =0.43, df =18

According to present study thyroid functions improve in hypothyroid patients doing regular physical exercise, as TSH levels decreased, and T3 and T4 increased in regular exercise group. Exercising increases metabolic activity, which helps burn more calories and helps keep weight down. Research at the University of Gaziantep in Turkey set out to study the effects of exercise on levels of TSH, to see if it would help those with lower TSH levels. The results showed that medium-intensity aerobic exercise, which the study classified as 70% of a person's maximum heart rate, produced the best results for improving TSH. Hence some improvement in thyroid function can be attributed to decreasing in weight in regular exercise group. Exercise can by itself also improve thyroid function may be through better perfusion of gland. However, this needs to be investigated further. Even gentle exercise such as walking, swimming, or yoga stimulates thyroid gland secretion and increases tissue sensitivity to THs. Peripheral metabolism of THs can be changed significantly by a number

of physiological and pathological conditions, which can alter the deiodination pathway and lead to a change in the circulating level of THs. The biological effects of short-term changes in the TH levels are not currently completely understood but are potentially important in the body's adjustment to stressful or catabolic states. A connection is established between increasing training to 80 km/week and elevated hormone levels. Examined the TH levels of professional cyclists during a 3 weeks stage competition, they concluded that serum T4, FT4 and FT3 levels showed a significant increase by the last week of competition while concentrations of TSH and T3 remained unchanged.

Conclusion

Hypothyroidism reduces exercise capacity but after hormone replacement with thyroxine exercise capacity can be attained back. After being euthyroid on hormone replacement regular physical exercise can improve thyroid function and thus improve mental and physical status of hypothyroid patient and concomitantly decrease dose of thyroxine replacement therapy. So every young to middle aged hypothyroid patient should do regular physical exercise to improve his/her thyroid status.

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