

HEALTH PROPAGANDA SERIES

(आरोग्य-संवर्धक माला)

BOOK I

NAMASKÂR

THE IDEAL ARYAN EXERCISE

(That builds health, strength and vitality)

BY

Vaidya Ganesh Pandurang Paranjape

(*All rights reserved*)

Price Annas 6

—*Publisher*—

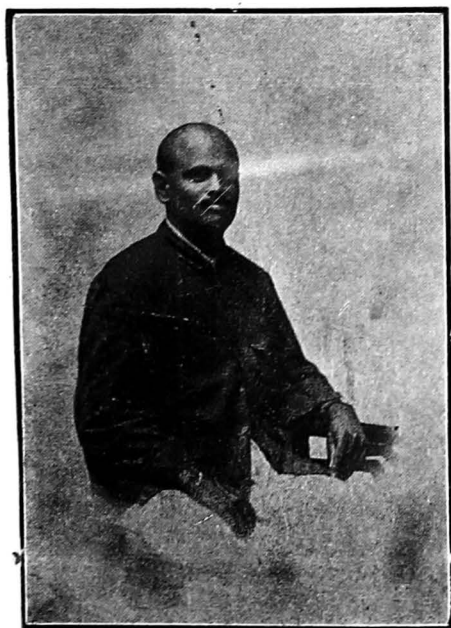
**Vaidya Ganesh Pandurang Paranjape,
Sangli, (S. M. C.)
Bombay Presidency, India.**

—*Printer*—

**Vaman Vasudev Atitkar, B. A.,
Nevin Samarth Vidyalaya's
Samarth Bharat Press,
947 Sadashiv Peth,
Poona 2.**

Vaidya Ganesh Pandurang Paranjpe,

SANGLI



Editor—Health Propaganda Series.

Publisher's Note

Health Propaganda Series (आरोग्य-संवर्धक-माला) has up to this time published 10 books in Marathi, all of which have been heartily received by the Marathi reading public. With a view to spread this propaganda over a wider circle an English rendering of the 5th book of our Series—*Namaskar*—is at first published.

The priority given to this subject is due to its special importance, which was fully recognised in former times by most of the Hindus, who regarded this exercise of *Namaskar* as a religious and honourable duty leading easily and fully to health and vitality; consequently they were generally healthy and long-lived. But unfortunately the last few generations lost sight of its all-round nature, which lies in this, that it can be taken by all without any distinction of caste, creed, colour, sex or age, that it requires no paraphernalia, that its simple but scientific movements lead to the symmetrical development of the body and strengthen external as well as internal organs, that the concentration therein makes the mind pure and strong, and that it thus produces the maximum of benefit with minimum loss of time and money.

But as good always comes out of evil this injurious neglect has resulted in re-awakening the minds of men. Accordingly we see that the Local Board Schools in the Districts of Satara, Belgaum, Kulaba, Ratnagiri, Karwar, and the Schools in the States of Kolhapur, Sangli, Jat, Ramdurg, Bhor and Oundh, have made this exercise compulsory to their students. Our sisters in Kanya-Shala, Poona, Anatha Mahilashrama, Hingane, and Kanyashala, Satara, and many other girls and women are also seen daily taking this exercise. Some schools in C. P., Berar, Goa, and some of the Colleges also have adopted this as the best of exercises. We thus see that the number practising this system of exercise is more than 5 lacs, but still, looking to the vast population, ours is not a good score and it is earnestly suggested that attention from all quarters should be immediately directed to this important topic.

The publisher is highly obliged to Mr. S. V. Joshi, B. A., Ajmeer, but for whose efforts, this book would have remained only a dream for ever.

Professor P. M. Limaye, M. A., Willingdon College, Kupwad, has also laid the publisher under great obligations by his valuable suggestions and encouragement for this publication. Also, we shall always be thoroughly aware of the obligations of Raosaheb Vaze, L.C.E., Nasik, who, in answer to our request, wrote an excellent preface, and added something new to the subject-matter of this book.

Grateful acknowledgments are also due to my friends, Dr. S. V. Sovani, L. C. P. S., Rabkavi, Dr. M. A. Paranjape, M. B., B. S., Sangli, Mr. R. T. Bagade, B. A. LL. B., Pleader, Kolhapur, and Mr. S. C. Khadilkar, B. A., Haripur, for their very valuable assistance in the presentation of this work to the public.

Suggestions, if any, shall be thankfully received and attended to in the next edition.

Sangli. }
25-3-1929.

Publisher.

PREFACE

The word व्यायाम, Exercise, comes from the root याम्, causal of यम्, to curb, with the prefixes वि in a particular manner and आ in all directions and means to stretch the body in all directions in a particular manner, *viz.* the manner which is congenial to its growth or wellbeing. The word शरीर itself denotes a thing that is always wasting and the body is always continuously rusting or decomposing and this rust, if not properly removed, causes rapid deterioration of the body as all rusts do. If one wishes to preserve a steel blade in proper working order one has always to keep it bright by rubbing or polishing as it is technically called. This rubbing does not wear or destroy the blade as quickly as rusting does. It is the same with the human body. It deteriorates more quickly by rust or idleness than it does by rubbing or use. "The much used key lasts longer" is the saying which embodies this experience of the world.

The human body is an organisation or society and its constituents get nourishment in proportion to the work they do or the exertions they undergo. The part which is frequently used and has much work to do gets more nourishment and becomes

larger and stronger while the organ which is not much used and has very little work to do gets less nutriment, grows thinner and ultimately disappears. This is the rule of natural economy. This society consists of four classes or constituents and in order that it may be efficient it is necessary that the welfare of all the four classes be properly looked after. The hands and feet which are the labouring classes in the body are generally exercised but they are not the only classes in it and the remaining classes must be taken into account in the scientific methods of taking exercise.

There are two methods of looking at the constitution of the human body *viz.* (a) चतुर्वर्ण्य or the four classed system method and (b) एकादशेंद्रिय or the eleven organed system method.

(a) In the first method the constituents of the human body are divided into four principal classes *viz.* (1) the brain and nervous system called ब्राह्मण or the intellectual class, (2) the lungs and blood supply system called क्षत्रिय or the administrative class, (3) the stomach and nutritive system called वैश्य or the commercial class and (4) the bones and muscular system called शूद्र or the labouring or working class.

(b) In the second method the constituents of the human body are divided into eleven organs *viz.* the five senses of seeing, hearing, smelling, tasting and touching, the five organs of disposing solids,

disposing liquids, moving about, working and speaking and the eleventh organ of thinking or co-ordinating the ten organs with one another *i.e.* the presiding power in the body.

The Namaskar system of exercise is based on the first method of looking at the human body and provides proper stimulation to all the four classes. Other systems of exercises take the muscular system only into consideration and are thus defective. The detailed uses of the various positions in the Namaskar system have been fully discussed in the book and need no further consideration at my hands.

Men striving after exercising the body, however, always lose sight of the other method of considering the composition of the human body. A strong and healthy man does not necessarily possess the best sight or the keenest hearing or the most delicate sense of taste, smell or touch. It is desirable to have not only keen senses but also an acute mind for the complete development of the human body. One thing is distinguished from another by the operations of the senses and exact discrimination and perfect co-ordination is possible only with an acute mind. In order to make this book a complete text on exercises it is proposed to indicate briefly the system of taking exercises based on the second method of looking at the constitution of the human body. For further

details persons interested are referred to the section on मनुष्यविद्या in कृषिशाल (Biology), volume five, of treatise on प्राचीन हिंदी शिल्प.

(1) For exercising the eyes, त्राटिका and भ्रामरी are recommended. त्राटिका means gazing steadily at the rising and setting sun and भ्रामरी means revolving the eye-balls to their utmost extent in all directions. नीरंजन--washing the inside of the eye every morning and evening with pure cold water is also to be resorted to.

(2) For exercising the ears, नादानुसंधान is enjoined. नादानुसंधान means concentrating the mind on hearing only one particular note out of many discordant sounds. In wireless telegraphy the operator has to distinguish the particular sound of his instrument out of the many reaching his ears.

(3) For exercising the tongue, one has to practise अमृतपान and ध्रुवस्पर्श. अमृतपान means folding the the tongue inside to reach the root of the nose. Here one feels the flow of the air inspired through the nostrils. ध्रुवस्पर्श means the touching of the tip of the nose with the tip of the tongue stretched out from the mouth. The thinner the tongue the more delicate and sensitive it is.

(4) For exercising the nose, धौति and पोति are to be practised. धौति means washing the inside of the nose by drinking water through it and पोति means passing a piece of cloth through the nose into the mouth and out of it.

(5) For exercising the sense of touch, अभ्यंग is recommended. अभ्यंग means rubbing a particular preparation of oil into the skin every Saturday or once a week.

(6) For exercising the digestive organs and disposal of solids, वस्ति (flushing) is enjoined. वस्ति means flushing the intestines with pure water and discharging the same after a time.

(7) For exercising the urinary system, a similar operation is recommended through that organ. In the end the urinary organ must be able to suck water and throw it out.

(8) For exercising the feet, walking and jumping are the best exercises.

(9) For exercising the hands, working and lifting and throwing weights are the best exercises.

(10) For exercising the speech and respiratory organs deep breathing, full expansion and emptying of the lungs or प्राणायाम is recommended. This प्राणायाम is measured by its duration or the time it occupies and the number of times it is repeated in one day or twenty-four hours.

(11) For exercising the mind it is to be strong, concentrated and steady like the steam in a steam engine. The steam must be superheated, it must be steady and working at the same pistons in order that it may drive the machine efficiently.

In the human skull or head there are two parts called the Cerebrum बुद्धि and Cerebellum चित्त.

At the junction of these two parts i.e. at the line joining the ears over the skull there is always some portion of the brain that remains undeveloped. This undeveloped part of the brain is called अहंकार and by the exercises noted above this part is stimulated and developed. When the skull has become hard this development crushes the other developed parts and the mind of the man practising these exercises becomes deranged. But if these practices are carried out at the early age when the skull is soft and pliable the development of this usually undeveloped brain causes a protrusion on the head and produces abnormal or superhuman or ultra-physical powers in the man. It is, therefore, desirable that these exercises should be taken at an early age beginning from the sixth year and ending with the twentififth year.

These are some of the exercises enjoined by Indian Psychologists for the complete development of the human body in addition to the ordinary exercises taken by Painters and Artists for training the eyes in distinguishing light shades of colours or by singers and musicians for training the ears in distinguishing delicate shades of tunes and such other professional practitioners.

The human body is a very complicated machine and the full details of its wonderful powers have not yet been realized by Western scientists. Their attention is only lately attracted to this sub-

ject by the phenomena of Mesmerism, Hypnotism Spiritualism and such other Psychic research works.

The subject deserves careful study and it is a good sign that Indian authors are also taking interest in reading their ancient Indian literature so highly appreciated by Western philosophers, particularly the German savants.

In conclusion, I am much thankful to the writer of this book for asking me to write a preface and thus giving me an opportunity of expressing my views on the subject.

Talegaon Dabhada, }
14th February 1929. }

K. V. Vaze.



NAMASKAR



A Foreword

A casual glance at the young generation to-day is enough to impress one with the sad deterioration in the physical health of the youth of India. Everywhere is heard the cry for reform in all possible spheres of national life except this one of physical fitness. A sound mind in a sound body is a maxim we only quote and repeat. That everywhere we meet with weak bodies, stunted growths, premature old age, short lives, enormous infant mortality, haggard and withered mothers in their teens, and youths with spent up vigour, is an undeniable fact. One is led to believe that with all the outward appearances of national growth and progress, the inner sap is gradually being exhausted and the resultant ruin is inevitable. With all the facilities of modern education and the ever increasing stress laid on physical education and outdoor games, this gradual deterioration has not yet been arrested. An orthodox mind fondly thinks this to be due to our ignoring the healthy and wholesome ways of the ancients. It is a matter of primary importance to improve, at any cost, the physical fitness of the Indian youths, to ensure their ability to tackle successfully all

the different problems of life and to prepare them for the responsibility, sure to fall on them in the near future, for the welfare of their country.

To this end the ancients devised a simple exercise, the cheapest, the easiest and most effective of its type, that of daily Namaskars (bowing down) to the Sun God, happily suited to the devout temperament of the Indian mind and well calculated to contribute to his bodily and mental growth.

From very early ages the Sun was considered the life-giving God and as if to support this belief of the ancients, modern scientists have proved him to be so. This exercise is very simple, and can be taken by men and women, young and old, irrespective of caste and creed and with utmost ease, in an incredibly short time. This helps one to imbibe the life-energy from the Sun at the very fountain.

Let all come to this holy spring and drink deep the infinite life-force and return to face the worldly difficulties and problems stronger and happier both in body and mind. Awake and arise and beware that man is the architect of his own fortune.

Need for exercise

Health is the most vital interest of man. "किं सौख्यमरोगिता जगति जंतोः" says Shri Shankaracharya. Health is the only blessing in this mortal world of ours. The primary duty of a man is to care for

it and strive hard to acquire it. It cannot be had by stuffing oneself with food and medicine; it will only be secured by using the means of storing vital energy supplied by Nature herself. The utmost and the best of light, air, food and exercise, unlock the door leading to the temple of health.

The power and energy found in any particular individual are derived from two sources:— (i) hereditary influences, (ii) additions resulting from physical and mental exercise. Physical strength derived from the first source is very rarely met with. But strength and health can be increased by the systematic use of exercise and work.

With all the spread of knowledge, the most unfortunate thing we find in these days is the gross neglect of physical culture in the present generation. This is proved by the ever increasing number of medical practitioners and patients. Weakness and disease are surely not born with the body. Early man, open to all natural influences and taking advantage of natural facilities did not suffer from any of them. As he gradually strayed away from his mother Nature's lap they began to assail him. The struggle for life becoming complicated took him every day away and away from the old happy conditions. There was a division of labour and bodily work became the lot of a certain class; others became brain-workers.

Mental development only cannot improve physical fitness. The struggle for existence requires both mental and physical capacity. A happy union of these is fondly wished for but rarely met with.

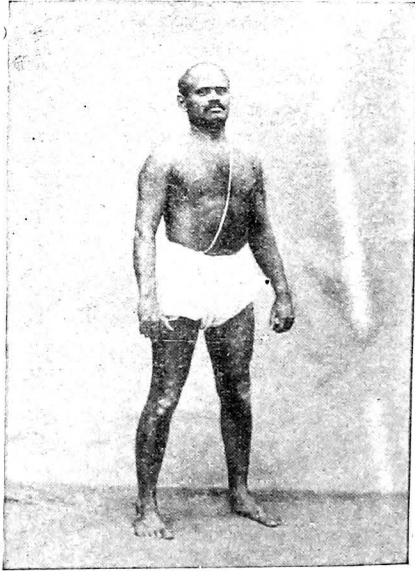
It is the duty of every one to realise this ideal. To say that our ancestors were world-famous brave men, fit to lead the world in earthly and spiritual matters, is a futile boast. We must show that we really deserve to be their descendants.

This will only be done by a system of regular exercise. There are ways and ways of taking exercise. Different outdoor games involving bodily action tend to strengthen particular parts of the body. They only develop the muscles. Keeping up a consciousness of duty and purity of thought is a kind of mental exercise. But there are very few exercises which combine both these. Namaskar is one such and claims a foremost place. It produces the best atmosphere for mind-refreshing exercise by insisting on the religious aspect; and moreover it helps physical culture by the systematic development of all organs of the body. Hence we may even boast that Namaskar is the only exercise which combines all the qualities like simplicity, effectiveness and cheapness, without any reservation of age, caste and sex.

How to take the Namaskar exercise

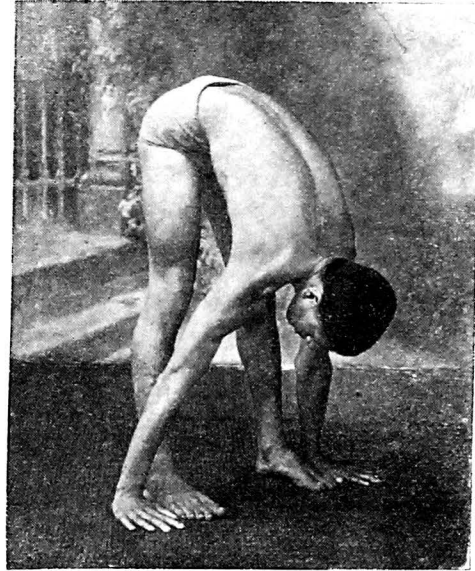
This exercise is a very simple one. It com-

Position No. I



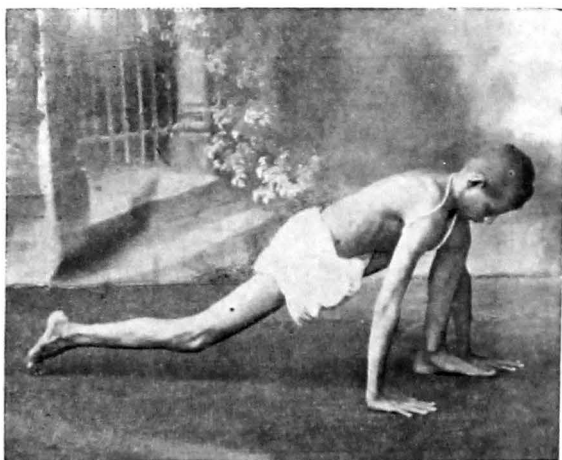
Stand erect. The distance between the feet should be equal to that between one's wrist and the elbow joint.

Position No II



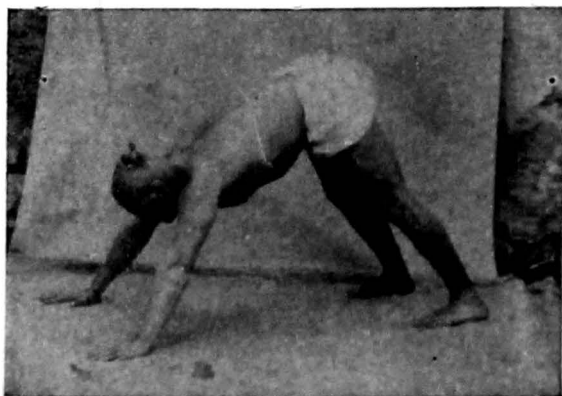
Bend down and place your palms fully spread, just near the feet and in the same line with them. Do not bend the knee.

Position No. III (A)



Then take your feet as far back as possible, first the right and then the left.

Position No III (B)



This time the soles of the feet should closely touch the ground with heels and toes. The distance between the feet should be the same as in Position No. I.

prises twelve different postures and positions of the body :—

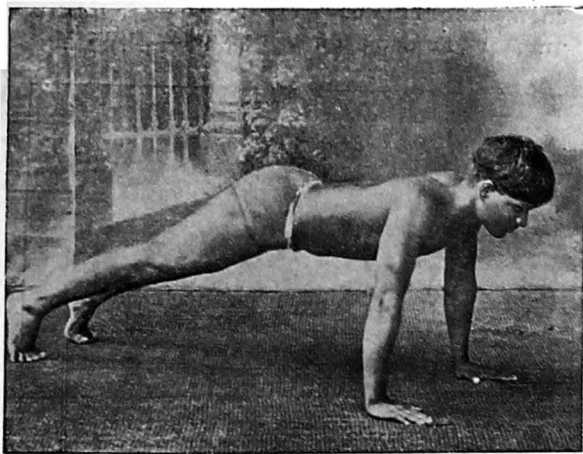
- (i) Stand erect before the deity with devout concentration, the whole of the body quite erect, back-bone unbent, limbs terse and not drooping. In this position the distance between the feet should be equal to that between one's wrist and the elbow joint.
- (ii) Bend down and place your palms fully spread, just near the feet and in the same line with them. Do not bend the knee.
- (iii) Then take your feet as far back as possible, first the right one and then the left. This time the soles of the feet should be flat and the distance between the two feet should be the same as in position No. 1 and should touch the ground with heel and toes. This position brings you to the initial posture of the exercise.
- (iv) Bring the major weight of the body on the hands keeping the arms vertical and the back-bone and neck in one line.
- (v) Gradually lower yourself down till the eight limbs touch the ground. The toes of the feet, the knees, the chest, the hands and the forehead—these are

the eight limbs of the body. The stomach is not to touch the ground. It ought to be held up. Similarly the nose is not to touch the ground which is made possible by pressing the chin on the breast. This is the chief position in the Namaskar exercise.

- (vi) Then lift your body up keeping it taut. Stretch your neck by throwing back your head as much as you can and bringing the chest forward.
- (vii) Then lift up the loins, keep the soles of the feet flat on the ground and try to reach your breast by your chin.
- (viii) Resume position No. 4.
- (ix) Then bring forward one leg, the right or left as the case may be, in the same line with hands.
- (x) Then bring forward the other leg and resume position No. 2.
- (xi) Then sit down with the heels raised and again stand erect. This movement is the well-known Baithak (sitting) exercise.
- (xii) After this make your bow, with deep concentration on the deity praying to Him to bless you with continual health.

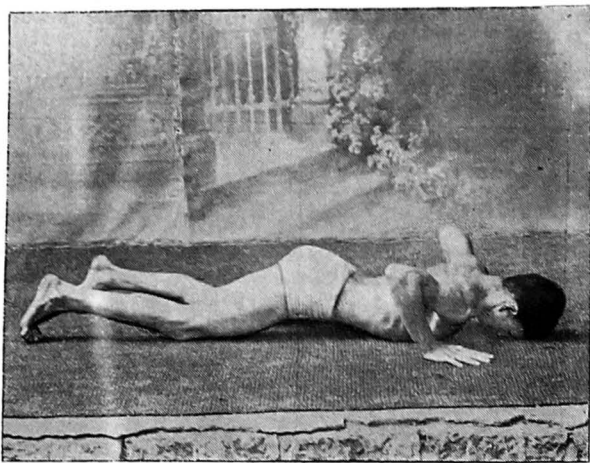
These twelve different movements constitute one Namaskar. The important thing to be borne

Position No. IV



Bring the major weight of the body on the hands keeping the arms vertical and the backbone and neck in one line.

Position No. V



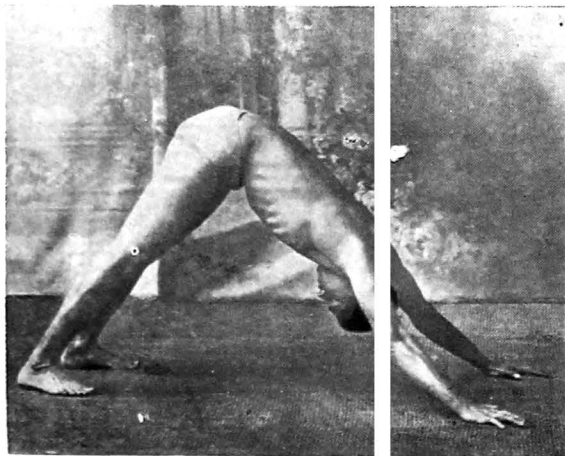
Gradually lower yourself down till the eight limbs (the toes of the feet, the knees, the chest, the palms, and the forehead) touch the ground. The stomach ought to be drawn in, the nose not touching the ground, the chin pressed against the chest.

Position No. VI



Then lift your body up keeping it taut. Stretch your neck by throwing back your head as much as you can and bringing the chest forward.

Position No. VII



Then lift up the loins, keep the soles of the feet flat on the ground and try to reach your breast by your chin.

in mind is regarding the breath. The best way is to inhale at the beginning, to keep the breath in the lungs all the time you do the twelve positions and to exhale it at the end. This is rather difficult and hence to begin with, inhale in the beginning; exhale when you are lying on the ground with the eight limbs; again inhale when you are doing the (7th) position and leave it off at the end. This halves the time between two breathings and thus reduces the strain. But the aim should be to attain the full time breathing.

These Namaskars should be gradually raised to 108 which should be the ordinary maximum limit. Hundred and eight Namaskars in these positions and accompanied by deep breathing are fairly equivalent to five hundred simple ones.

The best time for this exercise is early in the morning. The freshness of the early morning atmosphere is made still more potent by the health-giving properties from the rays of the Sun. Life-force can be drawn from the Sun in conjunction with pure air. It has been proved that a species of water germs that are at the bottom before sunrise, come to the surface to inhale vital energy from the Sun. It has been experimentally established that, for nearly three hours after sun-rise, the Sun's rays contain a greater proportion of radio-active properties. The early Sun's rays are as healthy as the cooler air on the mountains. It is, therefore,

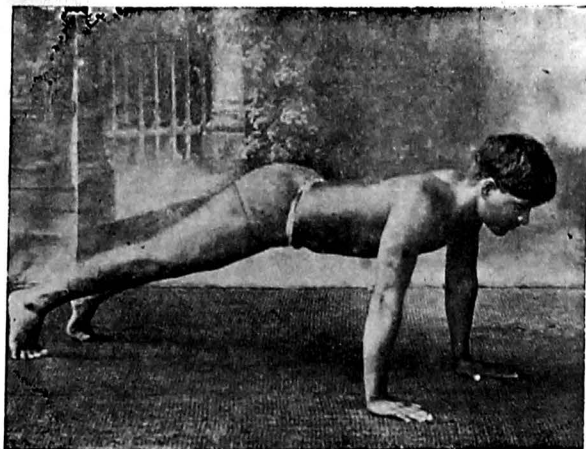
vitally important to practise the exercise in pure air of the early morning.

Other exercises require a suitable place and other paraphernalia which make them possible to those only who can afford the expense. No such elaborate arrangement is necessary for this exercise. A place open to the Sun's rays and allowing plenty of free air is quite the thing for it. Only, care should be taken that no direct current flows over the body.

The governing deity of this exercise is the Sun-God. After every Namaskar, he is to be seen, remembered with concentration and bowed down to. It is impossible to fix in mind Him, the Omnipresent. An image of the All-pervading must be concentrated upon. The Sun is an ever glorious visible image of God and it is well to concentrate upon him. If this is not possible, an image of the Sun God should be left in front. The Dravidians draw a figure of the Sun on the ground with red sandal-wood paste. They first worship this and take this exercise. The intention is to concentrate the mind on the image.

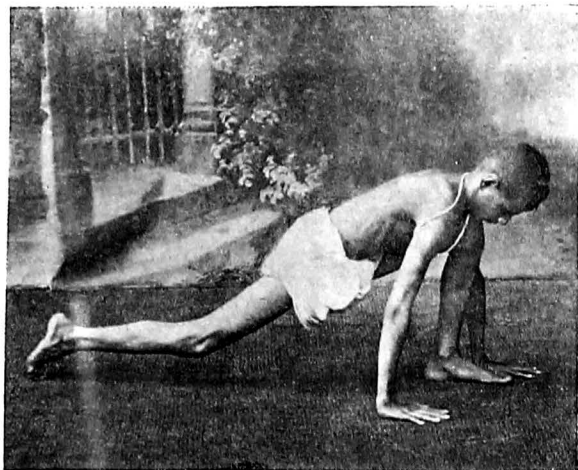
This practice helps a good deal in making the mind strong. The image of any other deity is equally efficacious. The concentration is always to be the desired effect. I would like to insist on the image of the Sun as there are no reservations of caste and creed in regard to his worship.

Position No. VIII



Resume position No. 4.

Position No. IX



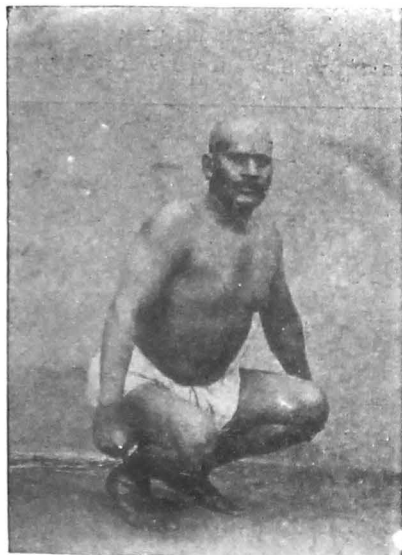
Then bring forward one leg, in the same line with the hands.

Position No. X



Then bring forward the other leg and resume position No. II.

Position No. XI



Then sit down with the heels raised and again stand erect.

The importance of keeping the mind centered on only one thing should be grasped. All other thoughts are to be banned. Only those about health and improvement of the body should be entertained. Every day try to force the vitality to different parts of the body by will-power and always be thinking that that part of the body is getting healthy and powerful.

The mind should be calm and cheerful. This quality of the mind is established and increased by reciting aloud the twelve attributes of the Sun-God and bringing the full force of their meaning to the mind. These names are preceded by the symbol ☀ which plays an important part in Hindu philosophy. The symbol helps the mind to concentrate, which concentration, in its turn, produces that self-confidence which is so necessary to crown all mental and physical works with success. Mr. Sandow has given it as his experience that an exercise taken with full mind for a quarter of an hour is more beneficial than one taken for an hour with half the mind.

At the end of the exercise a little of water, taken for Achamana (water sipped before the beginning of a religious rite, by way of purification) in the beginning, is drunk devoutly as purified water capable of destroying all kinds of disease and early death. The ancients looked upon this water as a most sacred blessing.

Thus this daily exercise of Namaskars is the simplest exercise which bestows two most coveted blessings on mankind. It makes the body strong and healthy and it makes the mind and spirit powerful—a combination calculated to make a man master of the world.

Rules to be Observed

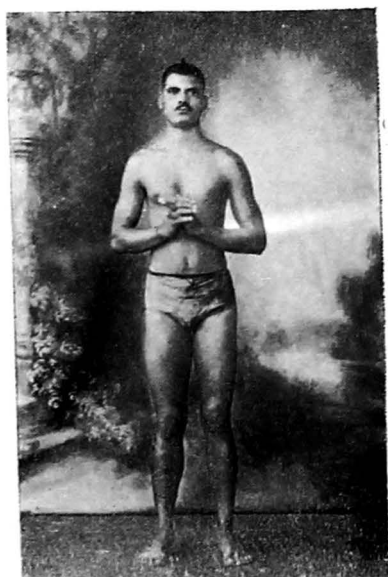
The proper age to begin this exercise is seven and upwards. The first thing is to learn correctly the different positions. These should be taught one by one as some of them are very difficult to attain at the very start.

Another thing of great importance is to change now and then, the order of bringing forward and taking back the feet as in positions No. III and IX. If in doing the first twelve Namaskars the right foot is brought forward first, in the next twelve the left should be brought forward first. Always taking the same foot forward may result in overstraining the muscles of the abdomen.

While performing the last posture of sitting down, the heels are *not* to touch the ground.

A student must practise deep-breathing assiduously. In the beginning it is rather difficult to keep the breath in the lungs and it may happen that he has to breathe twice or thrice in the course of one full Namaskar. Still this certainly will be attained after some practice and this assuredly must be the object. Again the inhaling and ex-

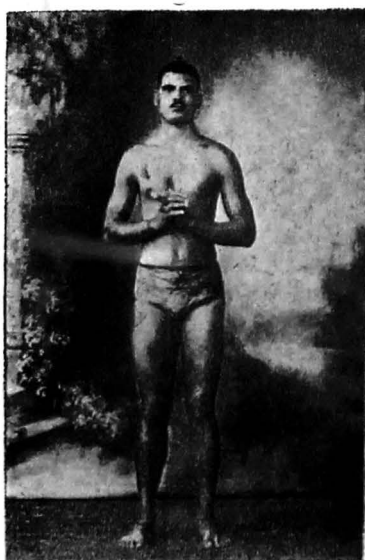
Position No. XII



After this make your bow, with deep concentration on the deity praying to Him to bless you with continual health.

This physical development is due only to the exercise
of Sashtang Namaskaras.

Keshav Mahadev Javadekar



Daily practises 108 Namaskaras and has got excellent
health.

Age	Height	Weight	Chest	Belly	Neck
21	5-11	160	39	25	17
	Arm	Thigh	Calf	Wrist	
	14	21	14½	7	

haling of breath is not to be done in a precipitate and hap-hazard fashion as this obstructs the normal working of the lungs by imposing sudden jerks on them. Breathing should be a slow but regulated process and it should be carefully taught at the beginning.

The beginner should not practise all the positions at the start. He should learn them all during a period of four to six days. He must begin Namaskars without deep-breathing and the *baithak* at the end. These additions may be introduced when he feels himself well posted in the system.

All this time the mind is to be concentrated and, therefore, looking and bowing to the image of the deity must be begun from the first.

This exercise is not to be hurried up. At the most only six should be completed in a minute. If this number is increased the action of the heart is quickened and it sometimes leads to heart disease which must be prevented with due care.

The food should be healthy and of such quality as will increase the energy and build up the body. Milk, wheat, almonds, oranges, butter, buttermilk all are good and wholesome. However, rich food is not absolutely necessary. Experience tells us that a cup of fresh butter-milk is often found sufficient for this exercise.

Irregularities in diet, work and sleep must be avoided and the law of continence must be observed. Thoughts should be pure and healthy.

Morning air is always exhilarating and its potency as the diffuser of vital energy is increased by the Sun's rays. It is always better to take this exercise in the morning in the Sun-light. If Sun-light is not available the exercise should be taken on dry ground where there is an ample supply of light and air.

It is proved by experience that this exercise produces a beneficial effect on women and we recommend it without hesitation to the fair sex. A pregnant woman can take it, up to three months of pregnancy. It can again be conveniently begun two months after delivery. This exercise should not be taken during the period of monthly course.

A question is often raised as to the desirability of touching the ground with breasts. It is feared that the beauty of the fair sex will be marred by this. They should put a pad of cloth two inches thick on the ground where the breasts touch it and no harm will result.

No rule can be laid down as to the number of Namaskars to be taken by women. It all depends on the amount of other labour they have to do. This ought necessarily be controlled by other conditions and is accordingly left to indivi-

dual choice. Those women who do not do any other toilsome work should take this exercise just like men. The following table gives the number of Namaskar exercises appropriate to different ages:—

Age	No. of Namaskars at the beginning	Rate of increase	Maximum limit
7-10	1	1 after 4 days	25
10-14	2	2 " 4 days	50
14-30	4	4 " " "	100 to 108
30-50	4	1 " 2 days	50
above 50	2	2 " " "	25

The Effects of Namaskars.

(As verified by experience)

(1) On the external Organs:—

Exercise helps to promote health and strength. The muscle that is used is developed. It, therefore, follows that exercise should be such as will develop all the muscles of the body. Some exercises such as Dand, Baithak, work particular muscles. That exercise is, therefore, the best which can work all the muscles of the body. Namaskar is one such exercise. Every part of the body is moved and worked, which naturally develops and strengthens all muscles. No part is over-worked and the whole body becomes light and

active. The breathing is regular and deep which provides ample pure air to the lungs and thus makes them strong and healthy. They cleanse the blood rapidly and supply the whole body with pure blood full of oxygen, which kills all disease germs.

This exercise strengthens and builds the muscles of the back, spine, chest, hands, neck, abdomen, thighs, waist-hips, stomach, calves and nearly every part of the body. The whole body is put to work and thoroughly exercised in a short time.

Namaskar has an effect upon both the systems of nerves which tends to make the brain more powerful and this is why we are more pressing in inviting youths to have this exercise. It produces also the right kind of religious mentality which is a great asset in life.

Breathing and mind are closely related. Quicker breathing produces non-stability of the mind and the chain of the thought is disturbed. Therefore, that exercise is beneficial which involves deep breathing and a great storage of vital energy and Namaskar is one of the foremost of such exercises.

Patanjala Yogashastra says that devotion towards the Sun-God leads to the knowledge of the world—'भुवनज्ञानं सूर्ये संयमात् ।'

Sitting in a stooping manner, carrying weights on shoulders or the back have very bad effect on

cartilage which in its turn gives rise to irregular and defective breathing. To ensure good breathing the bones on both the sides of the chest must develop and it is so very happily and easily done by breathing in this exercise.

Another important advantage gained by this exercise is the expansion of the chest which must be considered by a student as a blessing. Namaskar cleanses the lungs and helps the development of the chest. Orators and singers reap a profit by the practice of this exercise. Namaskar fills the air-cells in the lungs every time with pure air and thus enlightens the body with a new freshness. The air-cells of those having narrow chests and butting shoulders begin to be useless and lifeless and become the breeding places of harmful germs, e. g. of consumption, due to the lack of sufficient amount of fresh pure air. Namaskar is the easiest and the best remedy to stop this.

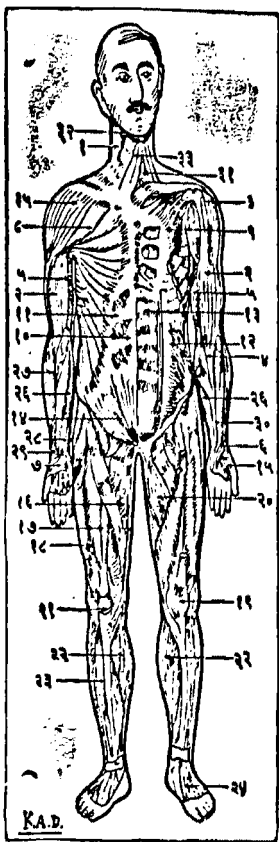
It is also proved to be an effective remedy for the nervous debility which is to be seen afflicting all the brain-workers in the present generation.

(2) Effects on the Internal Organs:—

A slight study of the anatomy of the human body will show that, blood arteries are ramified throughout the system. There is a regular network of capillaries in all the internal organs—lungs, heart, liver, spleen, intestines and in all the external organs like hands and feet.

The health of the body depends upon the storing of vital energy through the constant purification of blood and expulsion of impurities from the system.

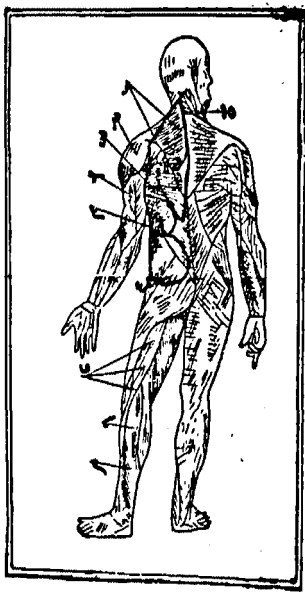
Metabolism and Katabolism are constantly going on in the body. This process is highly accelerated by exercise thus increasing the efficiency of the functions of the different parts. In order to counteract the loss new tissues are constantly formed making the brain, the bones and other parts highly efficient and strong. A greater amount of blood is sent to that muscle, which is under exercise, through the arteries which dilate for the purpose ensuring good circulation of blood throughout the body. When the muscles contract they press the veins and thus the return of impure blood to the heart for purification is accelerated. In contracting they also stimulate the progress of lymph towards the heart. This is carried through local ducts and is accumulated in the thoracic duct. Thence it is impelled into the veins and mixing with the impure blood reaches the heart by way of the lungs. This process is strengthened by exercise. Nearly all exercises help these functions to a varying extent. In the quicker exercises like running, this action is very quick and thus is of very little use. In Namaskar it is slow and immediate, ensuring best the effects of exercise and enhancing vigour and energy.



K.A.D.

Muscles at the Front

Namaskar brings all these into play, making them strong and healthy.



Muscles at the Back

All these are highly toned up by the Namaskara form of exercise.

In other exercises the function of the lungs and the heart is speedily accelerated imposing continued hard work on the skin and the kidneys of throwing out the impurities. Thus these are unnecessarily exhausted. In Namaskars all the organs eliminating impurities are worked to the proper extent and are able to work on without exhaustion in their natural vigour.

While touching the ground with the eight parts of the body in this exercise, the chest is to be expanded and the stomach to be held in. The diaphragm is stretched and pressed from below. The rib muscles are strained and the abdominal muscles below them are contracted. This presses the liver, and its function is facilitated. Below the right lobe of the liver is the gall-bladder *exuding* bile which is one of the most important digestive ingredients. In Namaskar this gall-bladder is pressed thus inducing it to produce an increasing amount of bile which is helpful for digestion in three ways:- (1) It makes the fatty matter emulsified and soporified and fit for digestion. (2) It stops fermentation in the intestines which sets in the undigested parts of food. In these days nearly all people complain of gases in the bowels. Namaskar is the most useful exercise as it increases the amount of bile. (3) One of the most prevalent complaints is that of constipation. Bile helps to prevent the hardening

of the excreta. Here also Namaskar is a natural remedy.

The internal side of the intestines is covered with a thin and moist layer of mucus membrane, soft as velvet. Here are very small branch-like projections called villi. Those in the smaller intestines are called Bruner's and those in the bowels are called Liberkan's. When bile acts on the inside of the intestines these villi begin to secrete a juice called Succus Entericus. It is this juice which sets up movement in the intestines and helps the peristaltic movement. Namaskar helps this process in a remarkable way. Constipation is the cause of dyspepsia, worms, headache and a world of other diseases, a fact which enhances the value of Namaskar exercise hundredfold.

Spleen lies on the left side of the chest between the 9th and the 11th ribs. The organ is charged with the function of increasing the white corpuscles in blood. While touching the ground with the eight parts in this exercise pressure is exerted on the spleen and it automatically begins to produce a greater quantity of these white corpuscles which are potent germicides in the body.

Another noteworthy effect of Namaskar is the way it prevents cholera and typhoid and other serious diseases. The germs of these diseases enter the intestines with both solid and liquid food and if the gastric juice is not properly secret-

ed, they become potent enough to do harm. In the gastric juice the proportion of pepsin and hydrochloric acid is such as to make it antiseptic and abundance of this juice is efficacious in killing all the germs that enter the body. Namaskar specially helps the production of this juice.

The lengthwise and crosswise muscles of the abdomen are called Rectus Abdominus, Obliques Externus and Obliques Internus. Below these and above the intestines covering the whole of the abdominal organ is the peritoneum. Below this are the kidneys and the intestines. When the external muscles of the abdomen contract a relative pressure is exerted on the peritoneum which in its turn presses the kidneys and the intestines thus stimulating their respective actions.

Fat accumulates between the different layers of peritoneum and causes obesity. In order to lessen obesity the peritoneum covering of the abdomen must be well exerted. Namaskar provides necessary exercise to this covering and this is a natural help to lessen obesity; it lessens the volume of fat and expands the chest.

There accumulates undigested fermenting matter in the intestines due to bad and irregular habits in the matter of drinking and eating. This being sticky in nature forms a compact layer on the intestines and deadens the living cells which failing in their proper germicidal work make a man liable

to fall an easy victim to such diseases as dyspepsia and chronic diarrhoea. Namaskar is quite efficient to guard against this, strengthening these cells by a proper supply of blood, preventing such diseases.

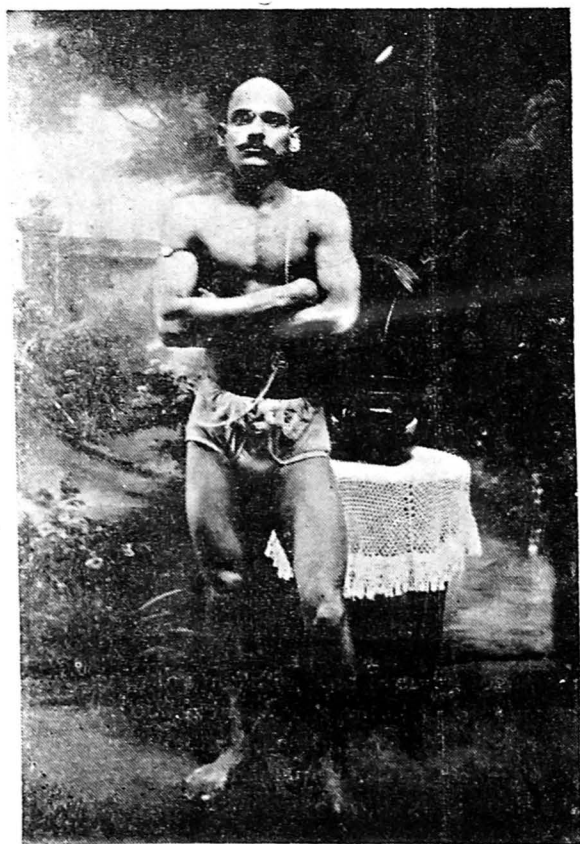
The kidneys being pressed are enabled to throw out impurities to a greater extent. This exercise helps them in such a way as not to over-exhaust them. In many other exercises the kidneys are unduly over-worked tending to their ultimate inefficiency.

Weakness of the heart is unfortunately becoming a general complaint. Weakness is the beginning of many diseases of heart. Namaskar gradually strengthens the muscles of the heart. Heart-disease specialists advise the patients to practise deep breathing and some light exercises calculated to develop the muscles of the chest, ribs, neck and shoulders. All this, being included in the simple Namaskar, proves conclusively its great efficiency. Even those who take regular exercise are sometimes seen suffering from weakness of the heart. This is due to sudden overstraining of heart muscles. Namaskar moderately exhilarates the heart. The heart-beats are slow and regular. This leads to its perfect development.

As has been already pointed out this exercise cleanses the lungs through deep and full breath-

This physical development is due only to the exercise
of Sashtang Namaskaras.

Hari Tatyaji Bhute



Every day in the morning and evening together he
practises 300 Namaskaras only by this system:
has got excellent health. Age-28. Resident
of Loni Dhamani, District Poona.

Photo-21-1-1929.

Gangadhar Ganesh Paranjpe, Haripur, Sangli.



Student. Every day he practises 50 Namaskaras. Age 15.

Weight	Height	Chest	Belly	Arm
90 lbs,	5-2	31	22	8!
Neck	Wrist	Thigh	Calf	
12½	5	16½	10½	

He possesses excellent health and is also a good student.

Photo-24-2-1929.

ing and the diaphragm becomes strong as it is fully stretched. The lungs become powerful and quite competent to fight the germs of different diseases as pneumonia, diphtheria, cough and asthma. It is hoped that Namaskar will efficiently ward off the serious types of Pneumonia wherein, if the heart is weak, the chances are that the patient succumbs. Namaskar is the best heart tonic as is already shown.

The spine is the most important part of the body. It is the mainstay of the human system. Its deformity is the cause of indescribable harm. In Cricket, Foot-ball, Dand and other exercises the spine is bent in a particular way and doctors are at one in saying that this untoward bending causes many diseases. To avoid these harmful effects Yogashastra has prescribed *Asans* involving contrary movements of the spine, in these words:— 'समं कायशिरोश्रीवम्' meaning that the body, neck and the head must be in a straight line. This is followed to the letter in the Namaskar exercise. The different positions are calculated to prevent this unnatural bending of the spine. We are assured that it is by far the best exercise to ensure this most vital condition. It strengthens all the muscles which make the spine and also the Intervertebral Cartilages so strong.

Bad position in sitting, sleeping, standing and working, often produces a curvature of the spine

which results in harmful diseases. This is noticed among students and weak boys and girls. It is a great handicap to feminine beauty ; but still more it arrests the development of the body ultimately resulting in the bearing of weak and short-lived children. It is thus very important that this cause of spinal curvature should be destroyed at the root, which can so easily be done by Namaskar exercise.

The curvature of the spine exposes the delicate spinal chord open to any jerks and undue pressures, which set up inflammation in it. This may result in the decay of the spine. Moreover this inflammation obstructs the flow of the spinal fluid and ultimately makes the chord and the brain weak and unhealthy. These serious effects must be checked in time by taking the one helpful exercise, we are advocating.

Weakness of the waist, faltering gait and other similar signs of weakness of the spine vanish with this exercise and the attention of men and women is specially drawn to this for beauty requires a strong and well-proportioned waist.

The arrangement of the bones of the spine in the neck is a very peculiar one. If the bones are disorganised the impure matter in them affects the nerves and causes great pain which stops the movement of the head sometimes leading even to death. Namaskar is the best remedy for this.

Doctors and other physicians say that waste of semen due to bad habits and various other causes has become generally common among students which weakens the spinal chord and causes a disease called Locomotor Ataxia. This renders both the feet very useless. Those who wish to guard against this must store semen, by the regular practice of this scientific exercise of Namaskar.

Thus it will be seen that Namaskar combines all the preventive qualities with those giving health, vigour and energy. Women taking this exercise share all these benefits with certain additional ones which will be dealt with below.

Women and Namaskars

Women naturally have some different organs than those possessed by the males. Of such organs the womb and breasts share in the good effects from Namaskar.

The womb is a small bag of muscles skilfully arranged and is tied by round ligaments which are supported by the peritoneum. The pressure exerted on the peritoneum in Namaskar exercise is also transferred to these ligaments causing a greater flow of blood towards the womb and thus making it strong and healthy. The fair sex is being increasingly weakened by the weakness of the womb and other diseases pertaining to the womb. It has been proved by experience that Namaskar is beneficial in such cases.

The womb and the breasts are closely related. When the baby begins to suck at the breasts the dilated womb contracts. Thus it may well be seen that the weakness of the womb imparts a corresponding weakness to the breasts. It is our own experience that rustic women working hard in open air have an abundant supply of milk as compared with the women of higher classes, confined to their homes. The womb of the former assumes its natural size in only a fortnight while that of the latter class takes nearly two months. The real cause of this difference is that the womb of the rustic woman is healthy and strong, causing abundant supply of milk which makes the child healthy, strong and capable to fight with hardships. Woman's health lies not in dainty food but in regular exercise.

Some may argue that woman is burdened with household duties and girls can get sufficient exercise in games. But the scientific inventions of the 20th century are day by day taking over the labour from the hands of women and girls very rarely play their old games. The increasing liking for tea and dainty food and passing leisure hours in some intellectual work is becoming a fashion among the fair sex. These habits lead unconsciously to harmful diseases. It is, therefore, desirable that women also should practise Namas-kar—the only suitable preventive—before they

fall a prey to these diseases. This exercise requires no separate place, nor apparatus; it can be taken in practically a fragment of an hour, even in the kitchen. A prominent feature of it is its religious aspect which women expect so much.

Female beauty comprises the symmetry and shape of the different organs suffused with the glow of health and activity. Westerners have devised some exercises so that the breasts and abdomen may not grow out of proportion and thus deform the figure. I hear that the same have caught the fancy of our educated sisters. When the need is felt why not have our own purely Indian exercise combining all the good qualities in a simple form?

There is one more advantage of immense value if our fair sex take to this exercise. Training and education given by the mother more than equals, in quality, that given by a hundred school teachers. They hold in their hands the strings of the nation's cradle. It devolves on them to teach their young children who are the architects of the destinies of India. What a benefit it will be if our young generation learns the value of exercise from their very cradles, with the milk they suck at the breasts of strong and healthy mothers! They really are the best teachers in the world.

To have only a pair of strong, healthy and happy children is far better than to bear a dozen

of deformed, unhealthy and shortlived ones. These two can be of some use to the nation. India is crying for help and the young must come forward with will and enthusiasm. Can this be expected from the weak? No. It is, therefore, your duty, oh mothers, to practise and teach your children the way to health, wealth and happiness. India expects at least this much from you.

APPENDIX



The twelve names of the Sun-God are:—

१. मित्रः—Friend of the Universe.
२. रविः—Sung by all *i. e.* Lord of the world.
३. सूर्यः—Father of all and the chief motive power.
४. भानुः—Shining one.
५. स्वः—Giver of knowledge.
६. पूषन्—Supporter of all.
७. हिरण्यगर्भः—Full of spirit and energy.
८. मरीचिः—Destroyer of diseases.
९. आदित्यः—Lover of freedom (bondage against)
१०. सविता—The Creator.
११. अर्कः—Deserving of universal worship.
१२. भास्करः—Increaser of the shine of the body.

