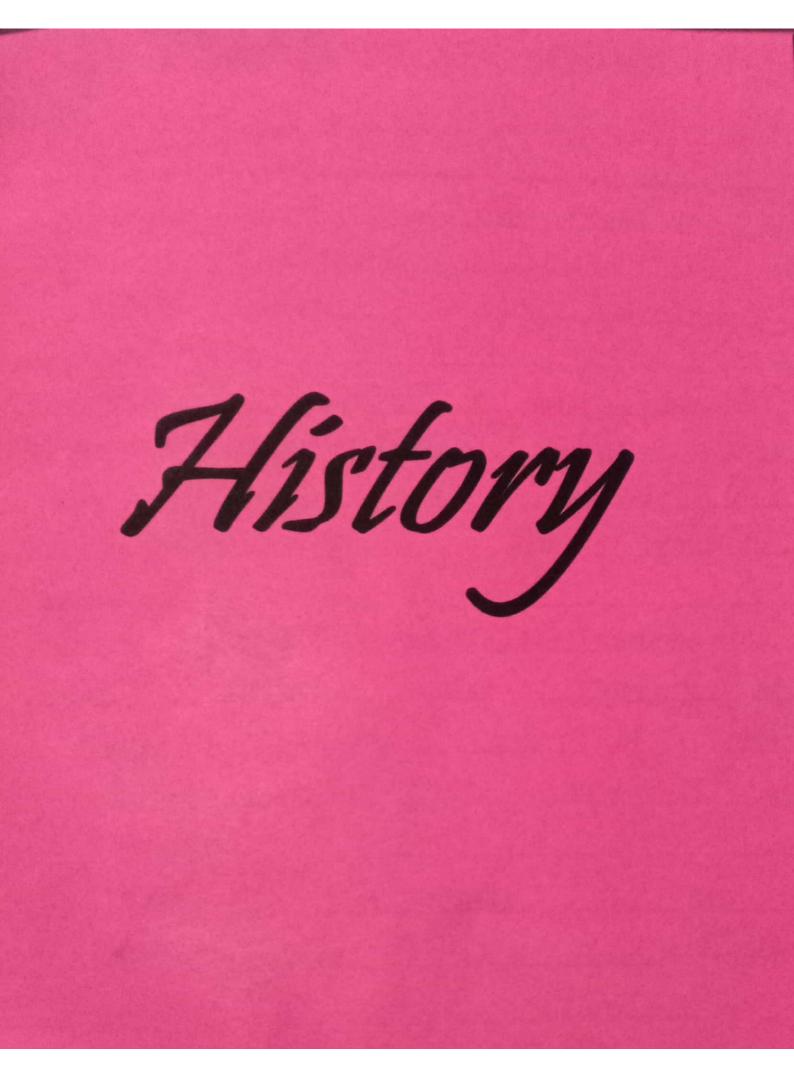
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- 1. History
- 2. Measurment of field and Court
- 3. Rules of the game.
- 4. Fundamental Skill.
- 5. Terminology
- 6. Important Tournament.
- 7. Equipment
- 8. Physical Fitness (AAPHER)
- 9. Senior Citizen Fitness Test For 5 elderly Family members.
- 10. Introduction of Yoga
- 11 Asanas, Benifits and Contraindiction for each lifestyle disease.
- 12. Back Pain → Vakrasana, Shalbhasana
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 - 15. Hypertension Tadasana, Ardhachakrasana.
 - 16. Asthma. -> Chakrasana, Gomukhasana.



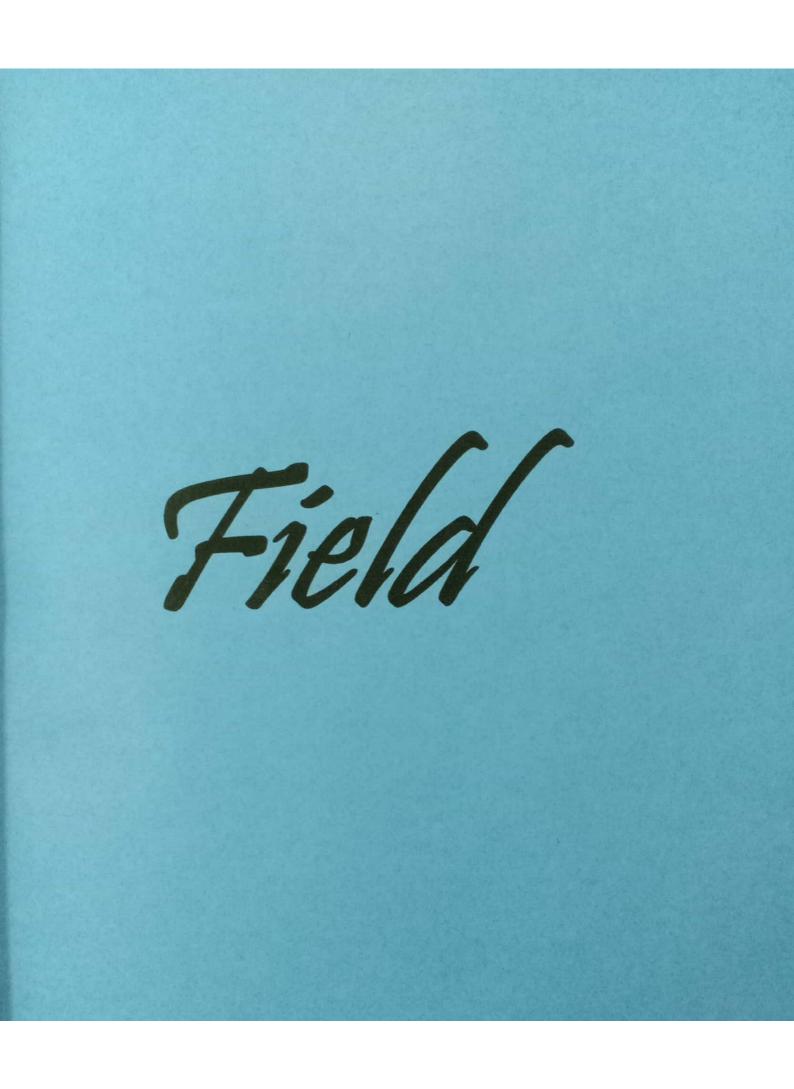
Кно-Кно	game	ûs am	Indian	
sport	common!	y p	layed u	m
schools	.amd	colleges	-arrous	nd
the count	ly.			
When	it com	es to k	cho - kho	
his tory		ndian	knows	that
the	$\alpha_{\alpha m \alpha} U$	1,004	Somouron	to
be pla	yed since	the	eau	liest
of	times.			
Gt "is	played	in a	uertang	ulau
count	between	two	trams 1	of
				1/ .
9 take	player	field	and 3	aul
JUS	l Hills	V		
Kho-Kh		gueat	test or	1
particip ants	physical	fitness	, stu	mgth,
spee		od s	tamina.	
No one	have	exact	knowled	ge
son 1	(ho-16ho h	istory,	though	many
histourans	say that	ı it	i si c	retually
modified	Journ	of RUN	CHASE.	<i>y</i>
U	υ	D	1	

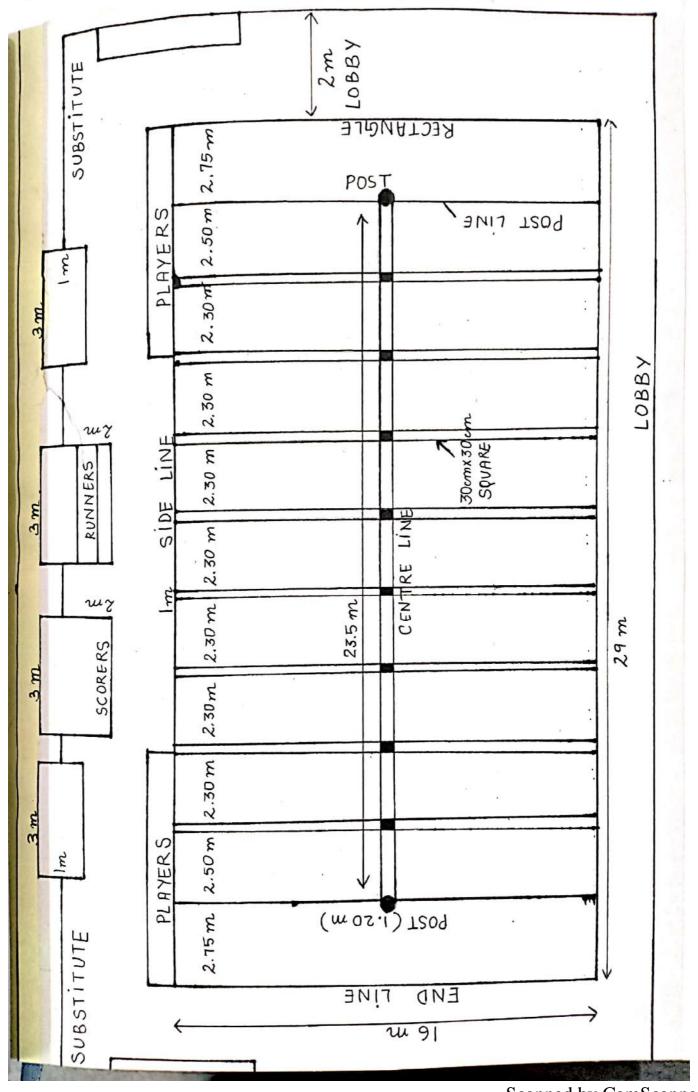
In ancient times, as version
of kho kho game was played
Don yaths or chariets in
Mahayashtua. This was known as
'RATHERA'
In ancient kho-kho history, thou
uelle no vigid rules and regur-
lations for playing. Kho - Kho ulls were fraging frist framed
rules men frist framed
in early 1900 %. For this
a committee was fourned at
GYAMKHANA PUNE. in 1914.
As the history of the game
started in the state of
MAHARASHTRA, the game had
been very popular in marathi
speaking people. In order to
make the game popular,
DECCAN GYAMKHANA CLUB of POONA
tried to formalize the game.
tried to fournalize the game. The frist edition of the rules
0

of ARYABATYA KHO-KHO AND HU-TU-TU
was published in 1935 by the
newly fourness
AKHIL MAHARASHTRA SHAREERIKA SHIKSHAN
MANDAL
One of the main preint of
successful animal life is "Actuel
chase" which is the
fundamental principle of Indian game salled Kho-Kho synonymoun
game called Kho-Kho synonymoun
with phrase "GAME OF CHASE"
This game of chase was in ancient
times also regarded as
legend. The current adaptation
of the game is actually an exacting adaptation about the
1011
1,000
times game in modern

There were neither any dimension
to the play guound nou
the poles which demarkate.
the central line factor was
also missing.
AKHIL MAHARASHTRA SHARIRIK SHIKSHAN MNDAL
was set up in the year 1928
It sparaed no efforts to
negotiate with kho - kho exputs
and formulated the euros
and regulations of the game
and regulations of the game. The experts from Sixty
yam khanas cance together and
evolved a joint tode of
Jules under banner.
The first all Indian Kho-Kho
Shampionships were swanged at VIJAY VADA in 1959-60 under
Tratumed Among of INDIA (1960-1961).
Featweld women's championiship for
the first time was

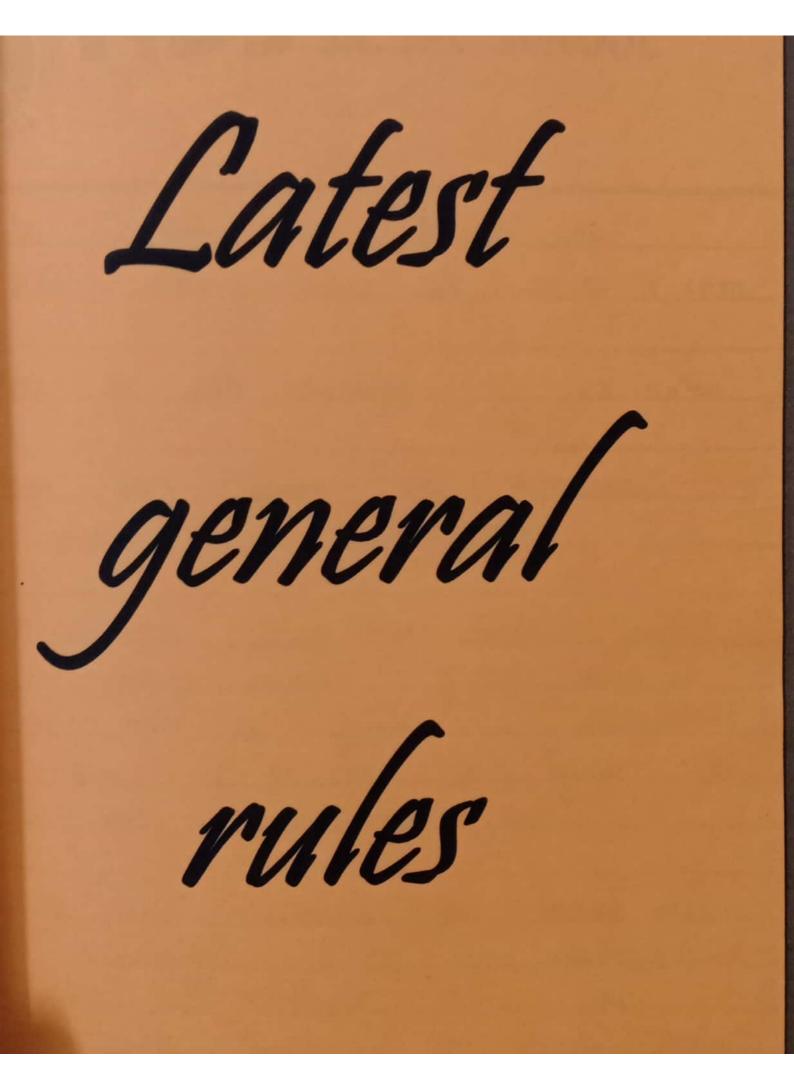
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4	ndian	Olyn	npic	Associ	ation.	Few
yeans	<u> </u>	latin	in	1989	game	Mas
U	sem	Лs	a	dl	monstu	ation
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ga	ml	were	l in	corpora	the ted	ly
Asia/	n e	edevation	U	The	yean even p" ong c	1998
sa	w	the		fuist	ever	
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	KOLKI	ATA.			· · · · · · · · · · · · · · · · · · ·	<i>V</i>





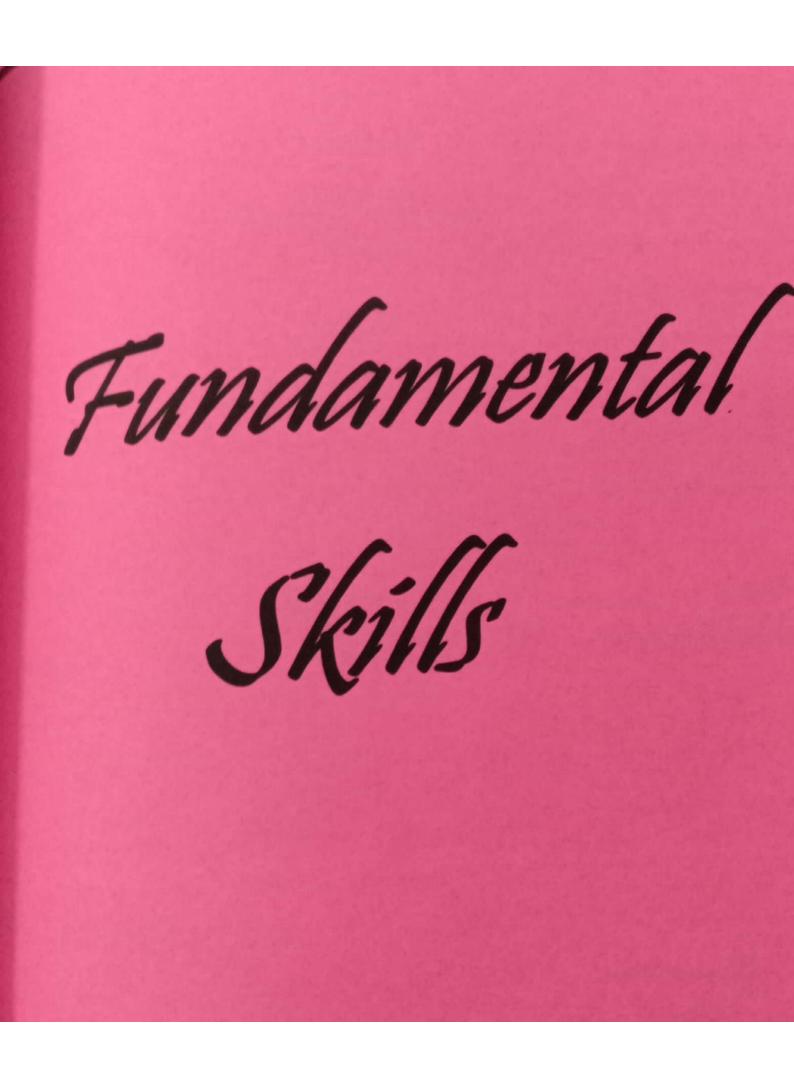
A kho-kho playgewound is RECTANGULAR It is 29 metus in length and
It is 29 meters in length and
16 meters in width. One side of
the rectanger is 16 meters and
other is 2.7 meters. In the middle
of those two rectangles them
of those two rectangles there are two wooden plates. The
central lane is 23.5 mitus long and
30 centimeters wide. There are
light cuss lanes which liv
across central lane. Length of
the cross sames are 16 m and
width 30 cm. It makes the small
suctangles and each of it is
16 m in length and 2.3 m in
breadth at eight angle to the
rentral lane and divided equally
1.85 m. lach by central lane
It the end of rentral some,
ture parts are finial.

They are 120	am high	fuon	r the
guound	and	theil	
evicum luence	eis	not	leso
than 30 cm		not	more than
	ipost is	made	of
wooden poles	which	all	e smooth
all over			

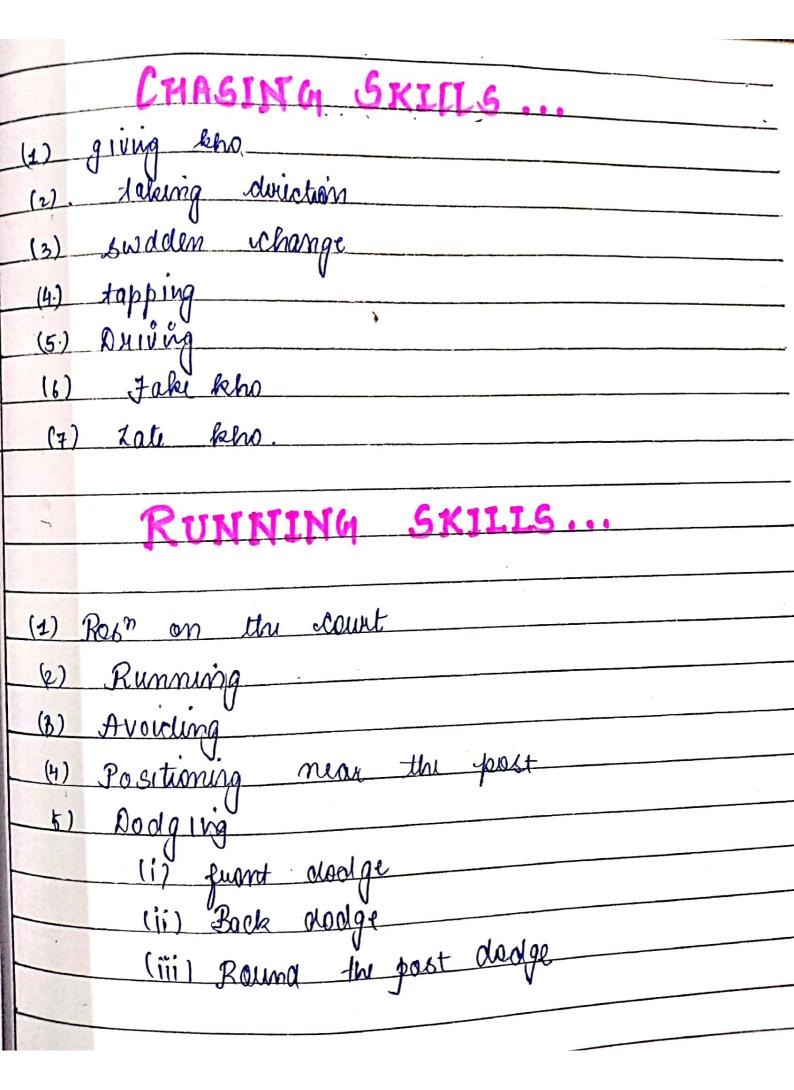


	The length and breath of Kho - Kho court is 29 m x 16 m.
	Kho-Rho court is 29 m x 16 m.
k	Pole to pole distance is 23.50 m.
*	Each tean plays for 9 minutes
	instead of 7 x 1/2 minutes.
	0
*	A numer shall not touch any
	sitting chaser. If he does so
	he mile be given a courtion.
	But if he does it orgain, he
	meile be declared out
1	
	+ If there eurners are made out
	sonseculing ley an action ch-
	asur, he cannot stouch the
1	Sowith number he will have
1	to kho to any sitting shaken.
	Sitting chase one not allowed to swater any obstruction in the
	suate any obstruction in the

was of summer.
way of summer is souched by an active schaser die to such
obstructions the summer will
not lu considered sout
* A team consists of 12 players
out of which 9 players Team
play and remaining 3 players
act as extra player.
* A toss of coin should decide the
ught to chase knasing ou
defending.
* The captain may end their turn
sufore allowed time
* When the turn starts, a chaser
when the turn starts, a chaster should not leave the square
without getting a "KHO"

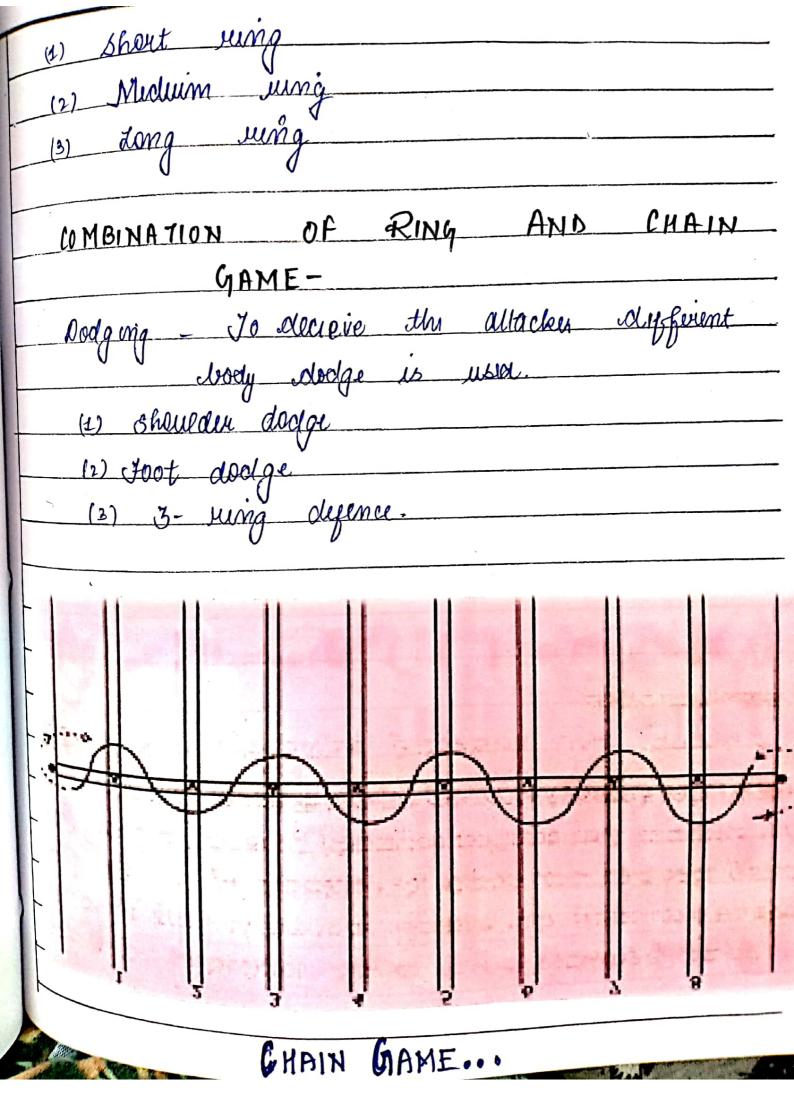


SKILLS
OFFENSIVE SKILLS
(4) Iwo steps (Pursumity steps) (2) Iwo steps (Distor steps) (3) Advance Isha umming ahead clifender and dropping kho (4) Deceptic kho that a decim objected by diff.
Pole Turning - Jo turn the poles in continution of allack . Role durning from 8th 59. cfrom selling posm)



(2) 5 up turn : turning poles by latering 5 steps
B Running pole turning: Pole twining without giving kno
Without gluing ho
COVERING ON CROSS LAME -
To cour the defender on the cross lane
(1) · Ouadruped
(2) Biped
(3) Rush Mungh
(4) Combination
DRIVE -
(1) Running flat duve
(2) sleady dive
(3) sièl divie
TAPPING-
(1) Shouldy tak
(2) Hele tah
1000

DEFENSIVE SKILLS
CHAIN GAME-
Defender takes enly behind in silving
chasir and sums in 319-3ag path
by making the attacker to give
kho kehina
(1) sik singil up
b). 2 five six up.
(3) two three sinc up.
(4.) there four fuir sin up
(5.) one four fuir six up
[6] One four seum up.
RING GARAGE
RING GAME -
Referredu euros in the shape of a
surig by making use of four
splan. In funt ung defende
feces the schocker. In back ring
det ender shown his back & plays
ung game.
y willing.





C 4/
GIVING KHO
A chase must say that would 'KHO'
A chase must say that World 'KHO' when he is touching the sitting chase. It is foul if he does
chaser. It is foul if he does
not say this word.
TAKING DIRECTION
After receiving the kho, a chaser should take his first step out
should take his first step out
of the russ lane with
core beleause that step decides the
direction of move
11
LAKE KHO
In such kho, the chaser putlends to
five kno but he actually follows
the runnur.

IAPPING
Japping is touching an active summer ly extending an aum. Japping
by extending an own. Jahring
should be done when the unning is
on the post, while tapping the
on the post, while topping the lody should be llan forward and sum should be extended competily
arm should be extended combettly
The state of the s
IRAPPING
For trapping, the active chase
For trapping, the soctive chaser should try to vering two or there
sunner to one side for towards
the post.
A
DIVING
In this technique, a chasey hounces
In this technique, a chaser pounces
him spontaneously.

CHASER
the player sitting in the square sue known as chaser
RUNNERS
The players of the side other than the chasers side one kenower
as jummers.
Foul
The sitting of an active chases
foul A foul is to be declared by
dhe foul is convected.

			
SHOULI	DER LIN	IE	
dn un	iaginary lin	ie suins	ring through
the co	nters of	the she	ruldeus of
a play	r is b	noum as	ring through wholeus of shoulder line
Jut O	F LIMI	TG	
48 a	euna wi	esis his	contact of
the gu	euna wi	thin the	limit
•	the property of the state of th	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
the	gueund e	uside	the limits,
he is	said	to	have gone
out	of units.		
	<i>D</i>		
-			
LNTR	Y		
A MIMMON	is said I	to have e	ntered the
limits	4 0 000	ML ML	
soul act	with the	gueuna	outside
the	linits.	U	
- All	WIIW		

ACTIVE LHASER
Active runner is that player who persuades the sunner to put
then out.
<u></u>
SOUARE
It is place for the chaser to sit down.
sit down.
EXTRA PERIOD
Any period played often the end of a
regulation game in order to severale
ia til is called extra period
SIDELINE
40
The line parallel to each other equal to the lines on side of the
blo by a since the
kho kno field.

TIELD
The limits of the kho kho field
endless and sidelines,
Post
over 120 to 125 cm. Above and
perpendicular de dhe guouna fixéd
frimly in the free zone st. tangent to the post lines.
CENTRAL LANE central sane is a vectangle in letterer
two sports measuring 30 am any
of the court which divides the source units equal halves and
forms square at the intersection.

LROSS LANE
Each of the vectorals means
Each of the rectangle measuring 30 cm in width of the
court that intersects the 8
squares central lane at right angle
us known as cross lane.
Lobby
The area surrounding that field
ley a measure of 1.5 m in
width.
WIDTH OF LINE
Widtle of anch line should ble around
3 cm and is not fisciol.
1 Mc Dacte
LINE OF POSTS
The are minist angles
The line which are at night angles to the central lane and
The Contract of the Contract o

sun parallel together to the cross
eane at tangent to the posts.
SITTING BLOCK
sitting block is for reserve player,
ceach and manager. It shall be at
sitting black is for reserve player, coach and manager. It shall be at either sides of the field. Just outside the lobby adjacetment to the end line.
the loppy any acetment to the end line.
TO
TO RECEDED
When an attacken while going to
a particular direction touches
the ground which he had already
covered he is said to le
uirlylld.



Important Journaments
1) Federation Rup
2) Nehru Gold cup.
2) Nehru Gold cup. (3) National KHO KHO Championship
* NATIONAL KHO KHO CHAMPION SHIP
The 1st national Kho Kho Championship
of men was held at Vijay wada
in 1960 and for women at
of men was held at Vijay wada in 1960 and for women at Kolhapeur en 1961.
*JUNIOR NATIONAL KHO KHO CHAMPIONSHIP
This championship is held for
guils and boys of his than 18 yes.
Cham puons hip

Equipments

KHO-KHO can be played by
men, women and chieuen
of all cases.
small pièce of evenly surfacea
small piece of evenly surfaced
guound rectangulay in shape
gueund rectangulau in shape and 27 m ly 16 m in size.
0
The equipments used in KHO-KHO are:-
(1). Poles Posts
(3). Metallic Measwing tope
(3). Metallic Measwing tope
(4). dime Powder
(5). Wire nails
(6). Two Watches
(1). Two types of rungs having unnive
CUMMENIMOL of Tours
X hote
(9) Some stationary to write results



Officals

Total no. of officials 05 Match Umpire 02 01 Refree 02 Scorer 01 Time Keeper (02 innings 04 for each term) **Total Innings** 9 min. Duration of innings 5 minutes Interval 9 or more points Follow on

Laminor

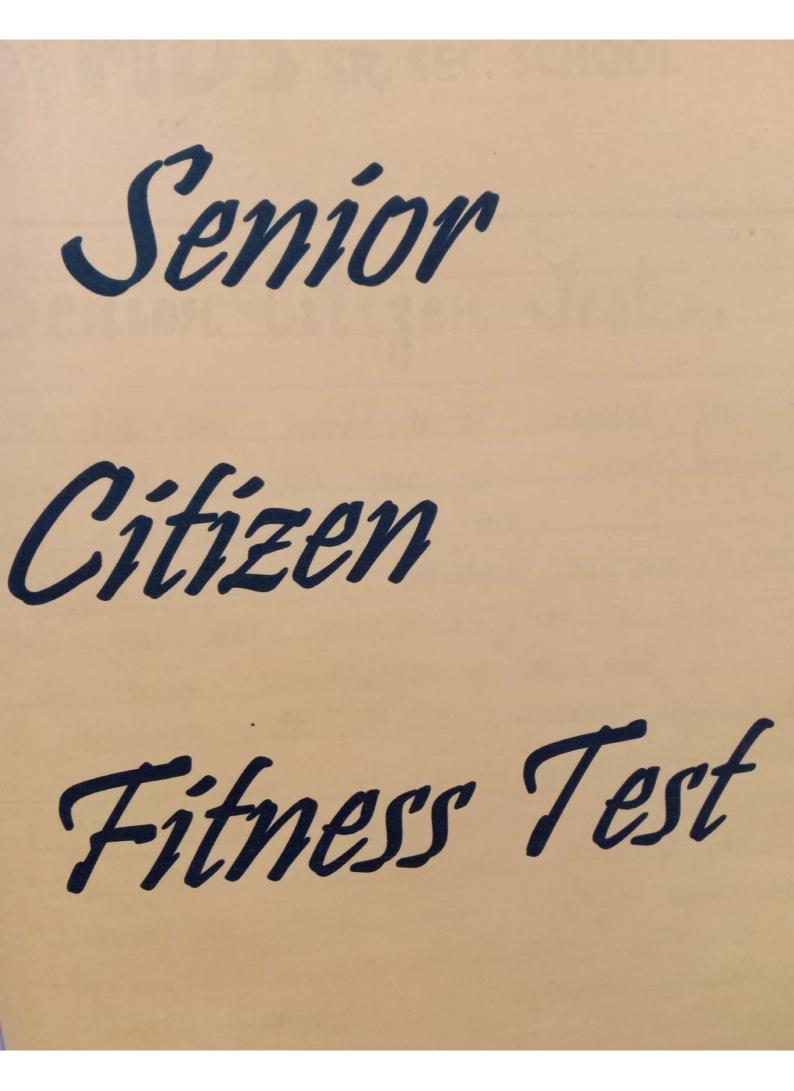
Aapher Physical Fitness Test

Aanben Jest ... It is a motor fitness test carller the name of this alliance was AAPHER i.e. American Alliance for health, physical edu. and recreation. but now it is known as AAPHERD is. Remucan alliance for health, physical education revuation and dance." and is one of oldest organisations of USA. The 1st test was pullushed in 1958 then was suffiséed in 1965 and vin 1946 finae Ilest manual was prepared with go leaving items. Pull ups (for boys) & flexed arm hang (for girls) Flered eg situps Standing long jump. 50 yourd dash. (f) 600 -y and un walk.

10 PULL UPS ... This test measures the total no. of supetations done without taking just on a horzontal bar. The total no. of pull ups are noted. The chin must made above the ban. (b) FLEXED ARM HANG... This is administrated on an eadjustable horizontal bou. The height of the bar should be earlywited sol that it is equal to standing height for student. With the help of 2 students the body is lefted up until her chin maches above bar on is required to hold the far maximum time. Fine is noted in seconds also she may be allowed to under take one trual

2) Flexed leg Sit ups... The stident lies on the lack with legs in funcial post ie en bent knu postum Onis hand should be bulind the neck. Elbours must touch the knus while doing situps. The total number of repetitions are noted in Imbre. 3) Shuttle Run... Lines rue mouleed on ground 30 feet apart. The two exocks are placed luhind one of the lines. The subject starts man. Subject juns and picks one of the black and then um back to the starting line. Then similarly for the end block The time for this is also noted down. Two trials may

A Charles and a
GSTanding Long Jump
A take off line is marked on the
line subject swings the owns and bend
his knus to take a fump
in long jump pit. There trials
au given and trials are noted.
V
(5) 50 - Jard Dash The subject takes the starting
The Subject takes the starting
posn and starts lunning after
the sound "Go". The two subjects
can run at same time if There
the soul is
sieconolid.
6) 600-Yord Run Walk
1 1
In this the subject puris
600 meters. During the course of 600 m
the subject may walk The time
the sulfer min's and sec.



Even in old age, people want to be fit and be able to continue to do their work without pain as long as possible. It requires proper fitness regime during old age. In the beginning, there were not enough tests to assess functional fitness. This test is also known as Fullerton Functional Test of senior citizens. Rikli and Jones developed the Senior Citizen Fitness Test in 2001. This test has proved to be beneficial for senior citizens. It helps the early identification of at-risk participants. Along with this, it is significant to plan safe and effective physical exercise programmes for senior citizens because individual's health and fitness level can be known better with the help of this test. The Senior Citizen Fitness Test includes the following test items.

A. Chair Stand Test

Purpose. The main purpose of this test is to measure the lower body strength, particularly the strength of legs which is usually required for various tasks such as climbing stairs, getting in and out of vehicles, bath tub or chair.

Equipment Required. A chair with a straight back and a seat of at least 44 cm and a stopwatch.

Instructions for Participants

- 1. The participant should sit in the middle of the chair.
- 2. He should keep his hands on the opposite shoulder crossed at the wrists.
- 3. The feet should be flat on the floor.



Chair stand test

- 4. His back should be erect.
- 5. Repeat standing up and sitting down for 30 seconds.

Administration of Test: Keep the chair against the wall. The participant sits in the middle of the seat. His feet should be shoulder width apart and flat on the floor. The arms should be crossed at the wrists and held close to the chest. From the sitting position, the participant should stand up completely and then sit down completely at the start of the signal. This is repeated for 30 seconds. Count the total number of complete chair stands. In case the participant has completed a full stand from the sitting position when the time is finished the final stand is counted in the total.

Scoring. The score is the total number of completed chair stands during the given 30 seconds. The following table shows the recommended ranges for this test for different age groups.

Recommended Ranges for Chair Stand Test

Norms for Men					
Age	ge Below Avera		Above Average		
60-64	<14	14 to 19	>19		
65-69	<12	12 to 18	>18		
70-74	<12	12 to 17	>17		
75-79	<11	11 to 17	>17		
80-84	<10	10 to 15	>15		
85-89	<8	8 to 14	>14		
90-94	<7	7 to 12	>12		

Norms for Women				
Age	Below Average Avera	Average	Above Average	
60-64	<12	12 to 17	>17	
65-69	<11	11 to 16	>16	
70-74	<10	· 10 to 15	>15	
75-79	<10	10 to 15	>15	
80-84	<9	9 to 14	>14	
85-89	<8	8 to 13	>13	
90-94	<4	4 to 11	>11	

B. Arm Curl Test

The arm curl test is a test to measure the upper body strength. It is a part of the senior citizen fitness test. It is designed to test the functional fitness of aged people.

Purpose: The main purpose of this test is to assess the upper body strength and endurance which is required for performing household and other activities involving lifting and carrying things.

Equipment Required: A 5-pound weight for women and a 8-pound weight for men, a chair without arms and a stopwatch.

Procedure: The aim of the test is to find out the maximum number of arm curls that one can complete in 30 seconds. Arm curl is performed with the dominant arm side. The participant sits on the chair, holds the weight in the hand using a suitcase grip. It means the palms should be facing towards the body. The arm should be in



a vertically downward position. The upper arm should not move but lower arm should move freely. Curl the arm up through a complete range of motion gradually keeping the palm up. When the arm is lowered through the complete range of motion, gradually return to the starting position. The arm should be completely bent and then completely straightened at the elbow. This complete action should be repeated by the participant as many as times as possible within 30 seconds.

Scoring. The score is the total number of arm curls performed within the given 30 seconds duration. The following table shows the recommended ranges for the test for different age groups.

Recommended Ranges for Arm Curl Test

Norms for Men					
Age	Below Average	Average	Above Average		
60-64 65-69	<16	16 to 22	>22		
	<15	15 to 21	>21		
70-74	<14	14 to 21	>21		
75-79	<13	13 to 19	>19		
80-84	<13	13 to 19	>19		
85-89 <11		85-89	<11	11 to 17	>17
90-94	<10	10 to 14	>14		

	Norms for Women					
Age	Below Average	Average	Above Average			
60-64	<13	13 to 19	>19			
65-69	<12	12 to 18	>18			
70-74	<12	12 to 17	>17			
75-79	<11	11 to 17	>17			
80-84	<10	10 to 16	>16			
85-89	<10	10 to 15	>15			
90-94	<8	8 to 13	>13			

C. Chair Sit-and-Reach Test

Purpose: To assess the lower body flexibility, which is important for good posture, normal gait patterns and various mobility tasks such as getting in and out of bath tub or car.

Equipment required: Ruler, a chair with straight back approximately 44 cm high.

Procedure: The participant sits on the edge of the chair (kept against a wall for safety purpose). One foot should remain flat on the floor while the other leg should be extended forward with the knee in straight position.



Chair sit-and-reach test

Heel should be on the floor and ankle should be bent at 90°. Place one hand on the top of the other with tips of the middle fingers at the same level. Instruct the participant to inhale and then as he exhales, reach forward towards the toes by bending at the hip. His back should be straight and head up. Avoid any jerk or bounce and never stretch too much. Keep the knee straight and hold the reach for 2 seconds. The distance is measured between the

tip of the finger tips and the toes. If the finger tips touch the toes then the score is zero. If they do not touch, measure the distance between the fingers and the toes (negative score). If they overlap, measure the distance (positive score).

Scoring. The score is noted down to the nearest 1/2 inch or 1 cm as the distance reached either a negative or positive score. The following table shows the recommended norms in inches for this test for the different age groups.

Recommended Ranges for Sit-and-Reach

Norms for Men (in inches)					
Age	Below Average Average	Above Average			
60-64	<-2.5	- 2.5 to 4.0	>4.0		
65-69	<-3.0	- 3.0 to 3.0	>3.0		
70-74	<-3.5	- 3.5 to 2.5	>2.5		
75-79	<-4.0	- 4.0 to 2.0	>2.0		
80-84	<-5.5	- 5.5 to 1.5	>1.5		
85-89	<-5.5	- 5.5 to 0.5	>0.5		
90-94	<-6.5	- 6.5 to 0.5	>- 0.5		

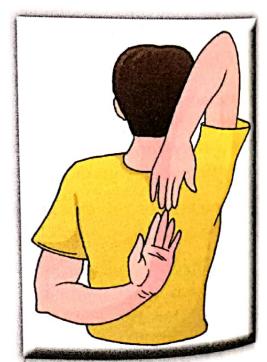
N	Norms for Women (in inches)					
Age	Below Average	Average	Above Average			
60-64	<- 0.5	– 0.5 to 5.0	>5.0			
65-69	<- 0.5	– 0.5 to 4.5	>4.5			
70-74	<- 1.0	- 1.0 to 4.0	>4.0			
75-79	<- 1.5	- 1.5 to 3.5	>3.5			
80-84	<- 2.0	-2.0 to 3.0	>3.0			
85-89	<- 2.5	- 2.5 to 2.5	>2.5			
90-94	<- 4.5	-4.5 to 1.0	>1.0			

D. Back Scratch Test

Purpose: This test helps to assess the upper body (shoulder) flexibility, which is essential for a person to perform various jobs such as combing hair, putting on overhead garments, reaching for a seat belt, etc.

Equipment Required: A ruler.

Procedure: This test is performed in a standing position. Keep one hand behind the head and lower it down gradually over the shoulder and reach as far as possible at the middle of your back. Your palm should touch your body and the fingers should be downwards. Then carry your other arm behind your back with palm facing outward and fingers facing upward and try to reach up as far as possible in order to touch or overlap the middle finger of the other hand.



Back scratch test

Fingers should be aligned. Measure the distance between the tips of the fingers. If the finger tips touch then the score is zero. If they do not touch measure the distance between the fingertips (negative score). If they overlap measure the distance (positive score). Let the participant practise twice and then two trials be conducted.

Scoring. Record the best score out of the two trials to the nearest centimetre or 1/2 inch. The following table shows the recommended norms (in inches) for this test for different age groups.

Recommended Ranges for Back Scratch Test

Norms for Men (in inches)					
Age	Below Average	Average	Above Average		
60-64	>6.5	6.5 to 0	<0		
65-69	>7.5	7.5 to -1.0	<-1.0		
70-74	>8.0	8.0 to -1.0	<-1.0		
75-79	>9.0	9.0 to -2.0	<-2.0		
80-84	>9.5	9.5 to -2.0	<-2.0		
85-89	>10.0	10.0 to -3.0	<-3.0		
90-94	>10.5	10.5 to -4.0	<-4.0		

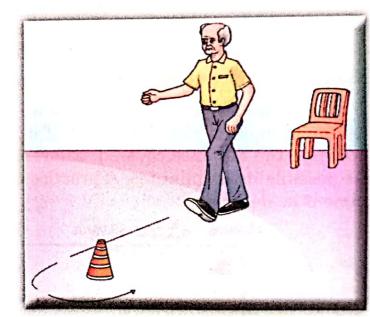
Norms for Women (in inches)					
Age Below Average		ge Average			
60-64	>3.0	3.0 to 1.5	<1.5		
65-69	>3.5	3.5 to 1.5	<1.5		
70-74	>4.0	4.0 to 1.0	<1.0		
75-79	>5.0	5.0 to 0.5	<0.5		
80-84	>5.5	5.5 to 0	<0		
85-89	>7.0	7.0 to -1.0	<-1.0		
90-94	>8.0	8.0 to -1.0	<-1.0		

E. Eight Foot Up and Go Test

This test is conducted to assess coordination and agility in aged people.

Purpose: This test helps to evaluate speed, agility and balance of a person while moving. These are important factors in performing jobs which require quick manoeuvring, such as getting off a bus in time, to answer the phone, etc.

Equipment Required. A chair with straight back (about 44 cm high), a stopwatch, cone marker, measuring tape and an area without any hindrances.



Eight foot up and go test

Procedure: Keep a chair next to the wall and place the cone marker 8 feet away in front of the chair. The participant is initially completely seated, hands resting on the knees and feet flat on the ground. On the command 'Go', stopwatch is switched and the participant stands and walks (no running at all) as quickly as possible towards the cone, turns around and returns to the chair to sit down. Time is noted as he sits down on the chair. Two trials are given per participant.

Scoring. The best trial is recorded to the nearest 1/10th second. The table shows the recommended norms or ranges in seconds for this test for different age groups.

Recommended Ranges for Eight Foot Up and Go Test

Norms for Male (in Seconds)					
Age	ge Below Average	Average	Above Average		
60-64	>5.6	5.6 to 3.8	<3.8		
65-69	>5.7	5.7 to 4.3	<4.3		
70-74	>6.0	6.0 to 4.2	<4.2		
75-79	>7.2	7.2 to 4.6	<4.6		
80-84	>7.6	7.6 to 5.2	<5.2		
85-89	>8.9	8.9 to 5.3	<5.3		
90-94	>10.0	10.0 to 6.2	<6.2		

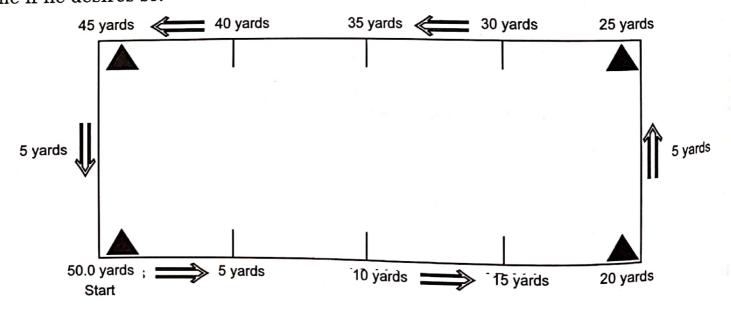
Norms for Female (in Seconds)					
Age	Below Average	Average	Above Average		
60-64	>6.0	6.0 to 4.4	<4.4		
65-69	>6.4 to 4.8		<4.8		
70-74	>7.1	7.1 to 4.9	<4.9		
75-79	>7.4	7.4 to 5.2	<5.2		
80-84	>8.7	8.7 to 5.7	<5.7		
85-89 >9.6		9.6 to 6.2	<6.2		
90-94	>11.5	11.5 to 7.3	<7.3		

F. Six-minute Walk Test

The six-minute walk test is designed to test the functional fitness of senior citizens.

Purpose. This test helps to assess the aerobic fitness or aerobic endurance of a person which is an essential component for walking distances, stair climbing, shopping, sightseeing, etc. **Equipment Required.** A measuring tape, a stopwatch.

Procedure: The walking distance or course is marked i.e., 45.72 m or 50 yards in a rectangular area (20 × 5 yards) of 5 yards with cones placed at regular intervals to indicate the distance covered. Efforts are made to walk maximum distance as quickly as possible in six minutes. A practice trial is given to the participant. He may stop any time if he desires so.



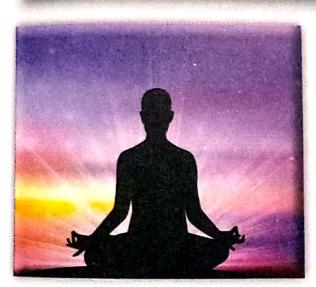
Six-minute Walk Test

Scoring. The total distance covered in six minutes is recorded to the nearest metre.

Recommended Ranges for Six-Minute Walk Test

	Norms for	Male (in yar	ds)	1	Norms for 1	Female (in y	ards)
Age	Below Average	Average	Above Average	Age	Below Average	Average	Above Average
60-64	<610	610 to 735	>735	60-64	<545	545 to 660	>660
65-69	<560	560 to 700	>700	65-69	<500	500 to 635	>635
70-74	<545	545 to 680	>680	70-74	<480	480 to 615	>615
75-79	<470	470 to 640	>640	75-79	<430	430 to 585	>585
80-84	<445	445 to 605	>605	80-84	<385	385 to 540	>540
85-89	<380	380 to 570	>570	85-89	<340	340 to 510	>510
90-94	<305	305 to 500	>500	90-94	<275	275 to 440	>440





Yoga—part of Indian culture

The history of yoga is indeed very old. Nothing can be said firmly about the origin of yoga. Only it can be alluded that yoga was originated in India. The available evidences show that history of yoga is related to the Indus Valley Civilisation. At that time, people used to do yoga. Usually, we depend on secondary sources to know about the history of yoga. On the basis of various sculptures and scriptures, we reach the conclusion that yoga was a part of this civilisation. Yoga is also mentioned in Mahabharata, Ramayana and Upanishads. **Patanjali** also wrote about yoga in 147 BC. During this period, yoga had been developed significantly. Even **Kabir**,

Tulsidas and Surdas had mentioned about yoga in their writings. Yoga is the main part of Indian culture.

ASANAS FOR OBESITY

Obesity is a physical condition in which a person has accumulated so much body fat that it might have a negative effect on her/his health. Obese people are prone to several potential diseases, such as arthritis, hypertension, cancer, flat foot, respiratory disease, liver problem, diabetes, etc. Obesity can be caused by genetics, overeating, eating frequently, physical inactivity, and also psychological factors.

Trikonasana

Trikonasana, or the Triangle Pose ('trikona' for 'triangle'), is another standing yoga pose which those wanting to control their weight will find useful. It has three advanced forms: utthita trikonasana (extended triangle pose), baddha trikonasana (bound triangle pose) and parivrtta trikonasana (revolved triangle pose), which should be done only after the basic procedure given below has been mastered.

Procedure

1. The first step is to stand straight with the knees unbent and the feet about 3½ or 4 ft apart.

2. Turn your right foot completely to the outside by 90 degrees and the left foot inside by 15 degrees. Your heels should be kept in line with the hips.

3. Align the centre of the right heel with the centre of the arch of the left foot.

Your feet should

- press the ground firmly and the weight of the body should be equally balanced on both the feet.
- 4. Spread your arms to the sides. They should be parallel to the ground with the palms facing down. Extend your trunk to the right.
- 5. Drop the right arm so that the right hand reaches the front of the right foot.
- 6. Now, extend the left arm vertically. Twist the spine and trunk gently in a counter-clockwise direction. This time, the spine should remain parallel to the ground.
- 7. Stretch the arms away from one another. You may turn your head and look up to intensify the spinal twist.
- 8. Hold this position for 5 to 10 breaths. Inhale deeply. Relax your body with each exhalation.
- 9. Repeat the posture by switching the position of the legs.

- It relieves gastritis, indigestion, flatulence, and acidity. Since it helps burn fat, it is highly recommended for those hoping to lose excess weight.
- It also improves flexibility of the spine and corrects the posture of the shoulders.
- It massages the pelvic organs and strengthens them.
- It reduces stiffness in the back, neck, shoulders and knees.
- It reduces anxiety and stress.
- It improves blood circulation and strengthens and stretches the hips, back, arms, thighs and legs.

- 1. This asana should be avoided by those who have migraine, diarrhoea, blood pressure problems or injuries of the neck and back.
- 2. Those with high blood pressure should not raise their hand overhead if they want to try this pose, as the stance may raise the blood pressure.
- 3. Beginners should practise this under the guidance of an expert.
- 4. Those with cervical spondylosis should not look up for too long.
- 5. Those with a heart condition should practise against a wall and avoid raising the arm. Rather the arm should rest along the hip.

Ardha Matsyendrasana

Ardha Matsyendrasana ('Ardha' meaning 'half', 'matsya' meaning 'fish', 'eendra' meaning 'king'), also known as Half Lord of the Fishes Pose and Half Spinal Twist Pose is a seated yoga pose. One of the twelve basic yogas performed in Hatha Yoga, it is named after Yogi Matsyendranath, who is considered to be the father of Hatha Yoga. It is more complicated version of Vakrasana, which we will read about later.

Procedure

Figure 12.4 Ardha Matsyendrasana

- legs stretched out straight in front of you. Keep the feet together and the spine erect.
- 2. Bend your right leg. Place the heel of the right foot beside the left hip, and bring the left leg over the right knee.
- 3. Place the right hand on the left leg and the left hand behind you.
- 4. Gently twist your waist, shoulders and neck in this sequence to the left, looking over the left shoulder. Your spine should be erect.
- 5. Hold the position for a few seconds, keeping your breath steady.
- 6. Exhale and release the left hand first, followed by the waist, chest, and then finally the neck.
- 7. Sit up relaxed yet straight. Repeat with the other side.

- The twisting position massages the abdominal organs, increasing the release of digestive juices and improving the functioning of the digestive system.
- It brings relief from stiffness, stress and tension in the back.
- By opening up the chest, it greatly increases the supply of oxygen to the lungs.
- It also loosens up the hip and makes the spine more flexible.
- It improves the circulation of blood.
- It improves the flexibility of the back muscles, leg muscles, etc. and tones the muscles.

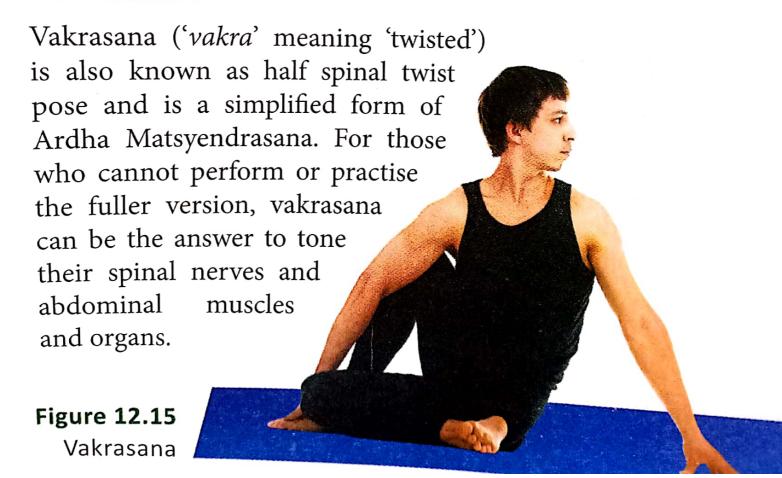
- 1. Pregnant and menstruating women should avoid this position as the twisting of the abdomen might be too strong for them.
- 2. People who have had heart, abdominal or brain surgeries, and those with spinal problems and slipped discs should not practise this asana.
- 3. People who have severe back or neck pain should practise carefully and under the supervision of an expert.

ASANAS FOR BACK PAIN

Back pain is pain felt in the back and may be neck pain (cervical), middle back pain (thoracic), lower back pain (lumbar), or coccydynia (tailbone). It may differ in intensity or duration. Sometimes, it may extend to the hands and feet.

The common causes of back pain are incorrect body posture resulting from poor build of the body or slouching due to use of electronic gadgets, accidents, excessive weight, muscle strains and/or spasms, sports injuries, lack of exercise, etc.

Vakrasana



Procedure

- 1. Sit down and stretch out your legs. Rest your hands beside your thighs or buttocks.
- 2. Keep your right leg straight and stretched.
- 3. Place your left foot beside the right knee as you keep your left knee raised upward.
- 4. Inhale and straighten your elbows by raising the shoulder. As you exhale, twist your body to the left by placing the right arm by the outer side of the left knee and with your right hand, hold on to the left ankle. Then place the left hand behind the back by resting the palm on the floor.
- 5. Turn your head backward from the left side. The final position of each stage should be held while breathing naturally. Hold the position as long as it is comfortable.
- 6. Next, inhale and straighten the elbow of your right arm by raising your shoulder. As you exhale, release your body that is twisted towards the left by placing your right hand by the side of the right buttock and left hand by the side of the left buttock.
- 7. Relax as you take a deep breath. Repeat the same steps on the other side.

Benefits

- It helps to reduce abdominal fat, which can cause back pain. It also improves the function of the spine.
- It massages the abdominal organs and enhances digestion by regulating the secretion of digestive juices.
- * Among other things, it strengthens the kidneys and prevents enlargement of the liver and spleen.

Contraindications

This asana should not be performed by individuals who have ulcer and liver problems.

Shalabhasana

Shalabhasana ('shalabh' meaning 'locust'), also known as locust pose because the body looks like a locust or a grasshopper, is simple to do and suitable for everybody. This asana is especially beneficial for the spine.

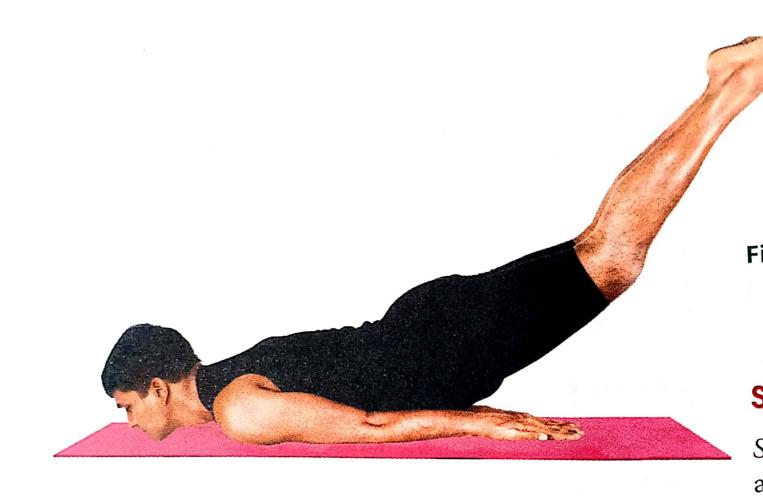
Procedure

- 1. Lie down on your stomach and place both hands underneath the thighs.
- 2. Inhale and lift up your outstretched right leg. Rest your chin on the ground.
- 3. Maintain this position for 10 to 20 seconds. Then exhale and bring back your leg to its initial position.
- 4. Follow the same steps with your left leg and repeat the cycle 5 to 7 times.
- 5. Inhale and lift up both your legs without bending the knees. Repeat the same process for both your legs 2 to 4 times.

Benefits

- It is beneficial for the disorders of the lower end of the spine, especially backache and sciatica.
- It helps in reducing extra fat around the abdomen, waist, hips and thighs.
- It has the ability to cure cervical spondylitis and spinal cord ailments if practised daily.
- It strengthens the muscles at the back.

- Do not practise this asana if you have injured or weak knees.
- 2. Also, avoid this pose if you have an injured ankle.



ASANAS FOR HYPERTENSION

An increase in blood pressure beyond normal level is called hypertension. The main function of the heart is to supply purified blood to various parts of the body through the arteries. When the heart contracts, it pushes the blood through the blood vessels and consequently the blood pressure increases in the arteries. This pressure is called systolic blood pressure. When the heart muscle is relaxed between beats, it is said to be in diastolic mode. The systolic and diastolic pressure represent the maximum and minimum pressure respectively. Normal blood pressure at rest should be within the range of 100–140 mm/Hg systolic (which is the top reading), and 60–90 mm/Hg diastolic (bottom reading).

Hypertension may lead to strokes, aneurysms, arterial diseases and even chronic kidney diseases. It is a major cause of death throughout the world.

Causes of Hypertension

Genetic causes

Unhealthy lifestyle

Obesity

Lack of exercise

Tadasana

The prefix 'tada' means 'palm', so this asana is also referred to as palm tree pose. Alternatively, it is also called the mountain pose. It is a simple preparatory asana which can be used to warm-up before taking on complicated poses. Though it can be performed at any time of the day, it is recommended that you do it 4-6 hours after taking your meals.

Procedure

- 1. Stand erect with your feet together and your arms at the sides. Breathe steadily.
- 2. Distribute your body weight evenly on the feet. Then lift and spread your toes and the balls of your feet. Lay them gently on the ground.
- 3. Make your thigh muscles firm and lift your knee caps. This should be done with the relaxation of the abdominal muscles.
- 4. Lift your inner ankles to strengthen the inner arches.
- 5. Turn your upper thighs slightly inward.
- 6. Elongate your tailbone towards the floor and lift your pubis towards your navel.
- 7. Now breathe in and stretch your shoulders, arms and chest upwards. Raise your heels. Your weight should be balanced on the toes.
- 8. Feel the stretch in your body right from your feet to your head.
- 9. Hold the pose for a few seconds and exhale
- 10. Make sure that while doing this pose, you don't tuck your tailbone and flatten your lumbar spinal curve. Doing this pushes your hips forward and prevents you from forming a long line from your feet to the top of the head.



❖ It strengthens the chest and improves respiration, and opens up the heart and spine. The flow of blood in the arteries thus becomes more fluid and smooth.

- It enhances the nervous system, strengthening your ability to focus.
- It improves posture, and makes the buttocks and abdomen firmer.
- It strengthens the thighs, knees, and ankles, in addition to increase their flexibility.

- 1. Tadasana should be carried out with caution by those suffering from headaches, insomnia or low blood pressure.
- 2. Hyper extension of the knee can cause knee problems.
- 3. This asana should be avoided during pregnancy.

Pavanmuktasana

Pavanmuktasana ('pavan' meaning 'wind', and 'mukta' meaning 'free'), also known as wind removing pose or wind liberating pose, is a bending pose in which the practitioner lies supine to release tension in the abdomen and back area.



Figure 12.7 Pavanmuktasana

Procedure

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- Ideally, this asana should be performed in the morning in order to get rid of gas inside your body. It is particularly effective to do it as the first step of your morning routine since it will make other poses easier. If not, then allow at least four to six hours to pass after your meal.
- Lie on your back on a smooth and flat surface and keep the legs straight and relax.
- 3. Inhaling slowly, raise your legs and bend the knees. Bring them gradually towards the chest till your thighs touch the stomach.
- 4. Clasp your hands around your legs to hug your knees. Lock your fingers to secure the position.
- 5. Next, try to touch the knee with the nose tip.
- 6. Hold this position for 20 to 30 seconds.
- 7. Exhale slowly and undo the pose after you roll from side to side about three to five times. Relax.
- 8. Practise 3 to 5 cycles daily.

- It strengthens the abdominal muscles and massages the intestines and internal organs of the digestive system. Consequently, trapped gases are released and digestion is enhanced.
- It helps burn fat in the thighs, buttocks, and abdominal area, thereby contributing to loss of weight.
- It also brings relief from menstrual cramps and pain in the lower back.
- It boosts blood circulation in the hip areas.

- Those who have had abdominal surgery recently or are suffering from hernia or piles must avoid this asana.
- Pregnant women must avoid this asana in order to avoid causing stress to the body or causing complications.
- 3. It should also be avoided by patients of heart problems, hyper-acidity, high blood pressure, slipped disc, hernia, back and neck problems, or a testicle disorder.
- 4. An individual with a neck injury should practise this asana with her/his head resting on the floor, and only with the approval of a doctor.

ASANAS FOR DIABETES

Diabetes Mellitus, or diabetes, is a disease that causes sugar to build-up in our blood. Our body uses a hormone called insulin to control the level of sugar in our blood. When the body fails to produce sufficient amount of insulin or when insulin does not work properly, diabetes occurs. This disease, also known as 'blood sugar', is characterised by hyperglycaemia (high blood sugar level), glucosuria (glucose in the urine), polydipsia (excessive thirst) and polyphagia (excessive appetite). Tiredness, blurred vision, poor immunity, slow recovery from wounds, excessive weight gain or loss are other common symptoms.

There are three main types of diabetes:

- 1. **Type 1 (insulin dependent):** The pancreas gland does not produce insulin.
- 2. **Type 2 (insulin independent):** An inherited variety that normally appears after the age of 40 years in which cells fail to respond to insulin properly. The primary cause is excessive weight and lack of physical activity.
- 3. Type 3 (gestational diabetes): It occurs when pregnant women without a history in diabetes suddenly develop a high blood sugar level.

Bhujangasana

Bhujangasana ('bhujang' meaning 'cobra'), also known as cobra pose is a back bending pose which forms the eighth pose of the twelve poses of Surya Namaskar. It should be practised on an empty stomach; you should have taken your meals at least four to six hours before practising this pose. The best timing for performing this asana is early morning.

Procedure

1. First, you must lie flat on your stomach with forehead touching the floor. Place your hands on the side of your thighs.

- Move your hands to the front, keeping them at the shoulder level, and place your palms on the floor.
- 3. Balancing your body's weight on the palms, breathe in and slowly raise your head and trunk. Your arms should be bent at your elbows at this stage.
- 4. Work towards arching your neck backward. This is done to assume the pose of a cobra with a raised hood. It is important that your shoulder blades remain firm and that your shoulders are away from your ears.
- 5. Press your hips, thighs and feet to the floor.
- 6. Hold the position for 15–30 seconds while breathing normally.
- 7. To undo the pose, slowly bring your hands back to the sides. Rest your head on the ground by bringing your forehead in contact with the floor. Place your hands under your head. Then, slowly rest your head on one side and breathe.

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- It puts the abdominal muscles and shoulders to work, increasing the circulation of the blood and oxygen in those regions, which in turn raises the body temperature and boosts the body's metabolism to levels that are beneficial at controlling diabetes.
- It fights acidity, indigestion and constipation, and helps the practitioner lose weight.
- It enhances the function of the liver, kidney, pancreas and gall bladder.
- It strengthens the arms and shoulders.

- 1. Those with severe back problems, neck problems, hernia and carpal tunnel syndrome and pregnant women should avoid this *yoga* pose.
- 2. Those suffering from stomach disorders like ulcers and intestinal tuberculosis should perform this under the guidance of a trained expert.

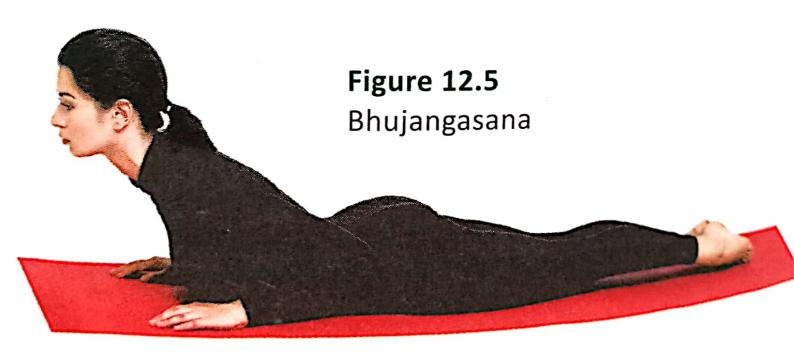




Figure 12.6 Paschimottanasana

Paschimottanasana

Paschimottanasana ('paschim' meaning 'west', or backside of the body, and 'uttana' meaning 'stretch'), also known as seated forward bend pose is a sitting pose used for stretching the spine. It is particularly beneficial for diabetic people.

Procedure

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- 1. The first step is to lie down on your back on a mat. Your legs should be straight.
- 2. Stretch your hands upward, keeping your fingers straight. Inhale deeply.
- 3. With your arms still stretched, slowly raise your body and sit. Your spine should be erect and toes flexed towards you. Breathe normally.
- 4. Slowly raise both the arms straight above your head and stretch your back. This should be done while inhaling.
- 5. With slow exhalation, bend forward from the hip joint. Move your chin towards the toes keeping the spine erect.
- 6. Place your hands on your legs without over-exerting them.
- 7. If you can hold your toes, pull on them to help you go forward. If not do not put undue pressure trying to achieve this step. The trick is to start with what you are comfortable with.
- 8. Stay in this position as long as possible. Then breathe in and rise, stretching your arms above your head.
- 9. Exhale and bring your arms down, placing the palms on the ground.

- While practising paschimottanasana, the intestine and gall bladder are smoothly pressed and stimulated, enhancing their functions.
- It massages and tones the abdominal and pelvic organs and improves blood circulation.

It also reduces belly fat and brings relief from constipation.

- 1. Pregnant women and those who have had stomach operation should avoid this asana.
- 2. In case of a damaged and enlarged liver and/or spleen, or if you have a herniated disc or acute appendicitis, it is advisable not to practise this asana.

ASANAS FOR ASTHMA

Asthma is a respiratory disease in which the airways become blocked or narrowed, resulting in breathing difficulty. Symptoms include extra production of mucus, excessive coughing, wheezing and shortness of breath. Asthma tends to occur in the mornings and nights – especially during the colder hours. For some people, asthma can be a serious and debilitating condition. They have to carry a nebuliser (breathing machine) around to help them recover from the attacks. It is an incurable disease, but one that can be

controlled. The causes of asthma are as follows:

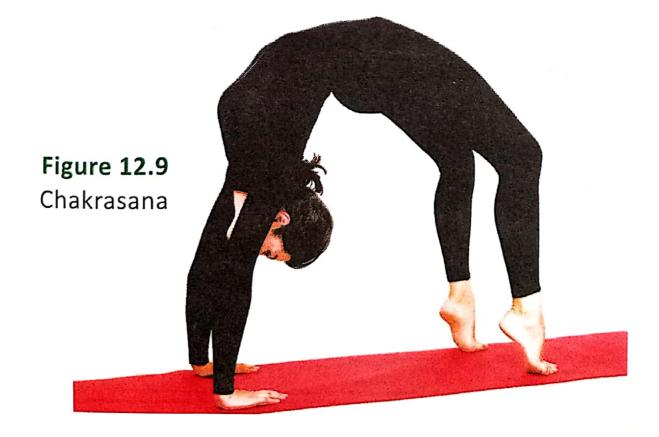
- It can be allergic or non-allergic. In the former case, attacks are often triggered by allergens in the air, including smoke and fumes, perfumes, scented soaps, etc.
- 2. Genetic factors are also known to cause asthma.
- 3. Respiratory infections such as cold, flu, sore throat and sinus infections, exercising in cold temperature, and certain medications like aspirin and nonsteroid anti-inflammatory drugs are also found to be causes of asthma.

Chakrasana

Chakrasana ('chakra' meaning 'wheel') also known as Urdhva Dhanurasana or upward facing bow pose, is a back-bending pose commonly referred to as 'back bridge' in acrobatics and gymnastics. It is one of the final sequences in Ashtanga Vinyasa Yoga, the modernised version of classical yoga popularised by K Pattabhi Jois.

Procedure

- 1. You may begin this asana with a performance of bhujangasana.
- 2. Lie on the back with the feet parted, bend the knees and bring your feet closer to the buttocks.
- 3. Fold your arms and bring the palms under the shoulders. The two elbows should have a shoulder width distance between them.



- 4. Inhale and press your palms firmly against floor.
- 5. Lift your shoulders using your elbows as levers. Both your palms and feet should be firmly pressed against the floor as you do this.
- 6. Now, raise your hips so that your spine is arched in a semicircular fashion.
- 7. Stretch your arms and legs as much as possible so that the hips and chest are pushed up. Hold this position for at least 15–30 seconds.
- 8. To release yourself from this pose, lower your head and shoulders to the floor by bending the elbows. Then bend your knees and lower your spine and hips. Breathe normally.

- Chakrasana opens up our lungs and stretches our chest and shoulders. As this refines the act of breathing, this asana is highly advantageous for asthma patients.
- * Additionally, it makes the shoulder blades, wrists, arms, legs, spine, buttocks, the heart and the muscles of the hips stronger.
- It also stimulates the thyroid and pituitary glands.

- 1. This asana is not recommended for those with carpal tunnel syndrome, back injuries, blood pressure problems, headache, diarrhoea, hernia or heart problems.
- 2. Pregnant women too are advised against taking up this asana.

Gomukhasana

Gomukhasana ('go' means 'cow' and 'mukha' means 'mouth' or 'face') is also known as cow face pose. It is so named because the overall position of the thighs, calves and feet of the person has the appearance of the face of a cow when viewed from above. This position must be practised on an empty stomach and after bowel movements. It is best to do it in the morning.

Procedure

- 1. Sit on the floor with your legs stretched out in front of you. Your spine should be erect.
- 2. Gently bend your left leg and bring it under your right leg so that the calf rests beneath the right hip. Fold your right leg and position the calf above the left thigh.



Figure 12.10 Gomukhasana

- 3. Stack your right knee on top of the left one.
- 4. Now fold your left arm and place it behind your back. The elbow should point downwards. Fold your right arm and bring it behind the shoulder with the elbow pointing upwards.
 - 5. Stretch your arms till the two hands are touching each other. Do not worry if you cannot achieve this the first time.
 - Still keeping the spine straight, open up your chest, then lean back slightly.
 - 7. Hold this pose for as long as you can, taking deep and slow breaths.

- This asana strengthens the chest and eases breathing. It also gets rid of stiffness in the shoulders and the back.
- It also trains an individual to breathe correctly by making her/him focus on her/his own breathing.
- Additional benefits include relaxation, stretching of muscles, and bringing relief from frequent urination.

- 1. This asana should be avoided by those who have ailments of the knee, back and neck.
- Overweight individuals should start slowly and not exert themselves beyond comfortable limits.