AAHPER TEST

Introduction:-

AAPHER Physical Fitness Test: This test was designed to help the teachers of physical education and other recreation leaders in the field to find out the performance levels of their students, compare them with national norms and inspire them towards the higher levels of achievements.

Test Contents: The test consists of the following six items:

(a) Pull ups: In case of girls, the pull-ups are to be started from a flexed arm hang. This test item judges the arm and shoulder girdle strength.

(b) Flexed Leg Sit-ups: This test is meant to judge the efficiency of abdominal and hip flexor muscles.

(c) Shuttle Run: This test item is meant for judging the speed and change of direction.

- (d) Standing Long Jump: For judging the explosive power of leg muscles.
- (e) 50 Yard Dash or Sprint: For judging speed.
- (f) 600 Yard Run: For judging endurance.

Administration of Tests:

These tests can be conducted in a gymnasium or out-doors. The only apparatus required in these tests is a horizontal bar having a diameter of approximately 1 ~ inches for pull-ups and flexed arm hang for girls. However, arrangement should be made for the timing and recording of all scores with the help of timers and recorders.

Item No. 1—Pull up: This item should be done from a hanging position on the bar by using the overhead grasp (with palms facing outwards). The arms and legs of a subject should be fully extended. From hanging position, the subject should raise his body with his arms until his chin is placed over the bar. Then, he should lower his body to a full hanging position. In doing so, the knees should not be bent and the pull should not be jerky or snap pull. The number of completed pull-ups is the score of the subject. Item No. 1 (Girls)—Flexed-arm Hang: In this test item for girls, the subject is required to hang from the bar with flexed arms and overhead grasp. She should raise her body to a position where the chin is above the bar, the elbows are flexed and the chest is close to the bar. The stopwatch is started as soon as a subject assumes such

a hanging position and is stopped when the subject's chin falls below the level of the bar. The time recorded in seconds for which a subject holds the hang position is her score.

Item No. 2—Sit-ups: For this test meant for boys and girls, the subject should He on his or her back with knees flexed and kept not more than 12 inches from the buttocks. The hands of the subject should be placed at the back of the neck, fingers clasped and elbows touching the mat. From this position, the subject should raise his or her head and elbows forward upwards till the elbows touch the knees. This constitutes one sit-up. The number of correctly performed sit ups in 60 seconds from the start of the first sit-up is the score of a subject.

Item No. 3—Shuttle Run: For this test item, two parallel lines are drawn at a distance of 30 feet from each other and two blocks of wood are placed behind one of the Hnes. The subject has to stand behind the Other line and on the signal "Ready", "Go" should run to pick up one block, run back to the starting line and place the block behind the line. He should again turn back to pick up the second block and bring it also behind the starting line. Two such trials are given.

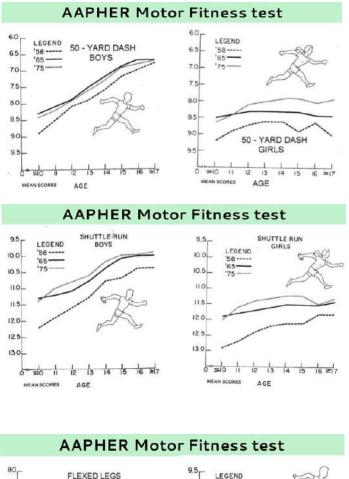
The better time of the two trials to the nearest 10th of a second is the score of the subject.

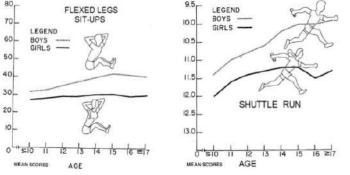
Item No. 4—Standing Long jump: In this test, a subject is required to stand behind a take-off line, with feet apart. He takes a jump forward by extending his bent knees and swinging the arms forward.

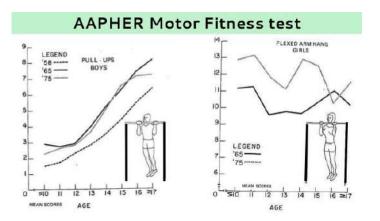
The best jump recorded, out of the three trials given, is the score of the subject. The jump should be recorded in feet and inches.

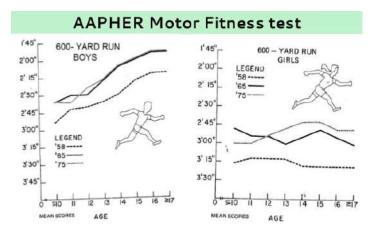
Item No. 5—50 Yard Run: Two Hnes are drawn at a distance of 50 Yards from each other. The subject is made to run from the start Hne to the finish Hne and his time taken is recorded in seconds (nearest to the tenth of a second.) This indicates his score.

Item No. 6—600 Yard Run: This run can be organized on a track, on a football field or an open area marked for this purpose. In this test item, a subject runs a distance of 600 Yards, the subject takes a standing start from the start line. The subject may walk in between. However, the objective is to cover the distance in the shortest time, when he crosses the finish Hne, he is informed of his time. The time taken to run the distance is recorded in minutes and seconds.









**The above pictures are the graphs plotted for various types of AAHPER Motor Fitness Tests for both boys and girls.

BARROW FITNESS TEST

Introduction:-

The Barrow Motor Ability Test was developed by Dr. Harold M. Barrow in 1953 for partial fulfilment of the degree of Doctor of Physical Education in the School of Health, Physical Education, and Recreation at Indiana University. Dr. Barrow is now head of the Physical Education Department at Wake Forest College, Winston-Salem, North Carolina.

Objective:-

The purpose of his study was to develop an easily administered test of motor ability of college men. The results may be used for classification, guidance, and measurement of achievement.

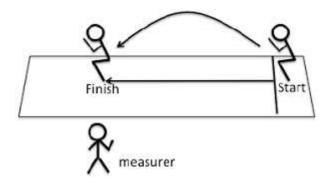
Methods of the test:-

For measuring general motor fitness, the three-item test battery of Barrow is used. In this test, battery of three items such as standing broad jump, zig-zag run and medicine ball are used to measure the general motor ability of an individual. The details of administration of these tests are described below:

1. Standing Broad Jump (for measuring leg strength)

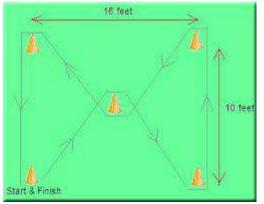
Equipment and material: A mat of 5x12 feet and a measuring tape, if the mat is unmarked.

Procedure: A take-off line is marked on the ground. Subject stands just behind the take-off line with the feet several inches apart. The subject swings the arms and bends the knees to take a jump in the long jump pit. Three trails are given to the subject. The distance is measured from the take-off line to the heel or other part of the body that touches the ground nearest to the take-off line. All jumps are measured and the best one is recorded.



2. Zig-Zag Run (for measuring agility and speed) Equipment and material: Stopwatch, five obstacles and space enough to accommodate the 16x10 feet course.

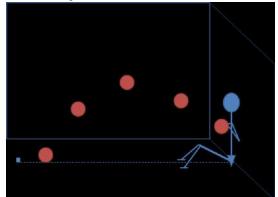
Procedure: The subject begins from a standing start on the command to run. The subject runs the prescribed pattern stated to him as quickly as he can run. The subject runs the prescribed pattern stated to him as quickly as he can without gasping. Three complete circuits are run. The stopwatch is started when the command to run is given and stopped immediately when the subject crosses the finish line. The time is recorded to the nearest tenth of a second. Before running the zig-zag run, the subject should warm up properly. The subject should wear proper fitting shoes with good traction to avoid blisters and slipping. Demonstration of the pattern of the course should be given by the administrator before the beginning of the run.



3. Medicine Ball Put (for measuring arm and shoulder strength)

Equipment and material: A medicine ball and measuring tape.

Procedure: The subject stands between two restraining lines which are 16 feet apart. In case of girl, a medicine ball of 1 kg is provided, whereas in case of boys a medicine ball out as far as possible without crossing the restraining line. He/she should hold the medicine ball at the junction of the neck and shoulder then the ball should be put straight down the course. Three trails are given to him/her. The best of three trails is recorded. The distance is computed to the nearest foot. A put in which the subject commits a foul is not scored. However, if all the trails are foul, subject he/she should try until he/she make a fair put.



SI. No.	Name	Jump	Zig-Zag Run	Medicine Ball
1.	Anup Singh	1.95 m	39 s	12 ft
2.	Arpan Sen	1.89 m	42 s	11.52 ft
3.	Ritesh Saha	2.03 m	30 s	12.95 ft
4.	Ankit Karmakar	2.00 m	45 s	12 ft
5.	Anupam Goswami	1.93 m	50 s	10 ft
6.	Varun Bhalla	1.98 m	51 s	10 ft
7.	Swarup Ghosh	2.00 m	43 s	12 ft
8.	Vivek Singh	1.94 m	43 s	11.98 ft
9.	Ramesh Paul	2.09 m	30 s	13 ft
10.	Mohit Aggarwal	1.99 m	41 s	11.39 ft



VAJRASANA:-

Vajrasana वज्रासन (/vədʒˈrɑːsɪnɪ/; IAST: vajrāsana), "vajra Pose", is a sitting asana in yoga. It is a kneeling position sitting on the heels. A person need not be sitting in an erect position to do it.

Description

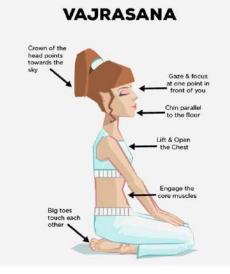
The practitioner sits on the heels with the calves beneath the thighs. There is a four finger gap between the kneecaps, and the first toe of both the feet touch each other and sit erect.

Benefits

This asana may help in digestive issues like constipation. It also strengthens the muscles of the legs and back.

Contraindications and cautions

Some orthopaedic surgeons claim Vajrasana may be harmful to knees. It has also been linked to damage to the common fibular nerve resulting in foot drop, where dorsiflexion of the foot is compromised and the foot drags (the toe points) during walking; and in sensory loss to the surface of the foot and portions of the anterior, lower-lateral leg. In this context, it has been called "yoga foot drop".



PADA HASTASANA:-

Padahastasana or the Hand Under Foot pose is a 'forward bend asana'. This pose requires a considerable amount of flexibility in the back, abdomen, and legs which is why it is not considered to be one of the best yoga poses for beginners. However, this does not mean that yoga beginners cannot do this pose, it simply means that you need to have some level of physical fitness before you attempt this asana.

The term Padahastasana is a combination of the words pada (the Sanskrit word for 'foot'), hasta (which means 'hand'), and asana (meaning posture). Padahastasana strengthens the muscles of the limbs as well as the core and promotes good form which is why it is one of the most commonly recommended yoga postures for people who are interested in overall fitness and muscle flexibility. Once you are proficient in basic yoga poses and yoga exercises for beginners, you can try more challenging asanas such as Padahastasana.

How to Perform Padahastasana:-

Padahastasana must be performed at least 4-6 hours after a meal and it is preferable that your stomach (and bowels) are empty at that time. You should perform a few preparatory asanas as this will prepare you both physically and mentally to perform Padahastasana. You can learn a few Padahastasana prep poses such as Adho Mukha Shvanasana (Downward Facing Dog pose), Paschimottanasana (Seated Forward Bend), Janusirsasana (Head-to-Knee pose), and Supta Padangusthasana (Reclining Hand-to-Big-Toe pose) before you learn how to do Hand Under Foot pose. These prep poses for Padahastasana are basic yoga poses that will gently stretch and strengthen the muscles of your calves and thighs as well as stretch and strengthen your back and abdominal muscles. These are the 7 Hand Under Foot pose steps: 1. Stand on the floor in an upright position with your hands held loosely at your sides.

2. Lift your hands straight up and allow your palms to lightly touch each other.

3. Exhale and stretch your arms out while slowly bending at your waist.

4. Keep bending until your hands reach your toes. Your chin should come in contact with your knees.

5. Slide your fingers under your toes and hold this position for 5-15 seconds.

6. Exhale and bend downwards from your hips until your hands reach your toes.

7. Hold the toes with your hands and remain steady. Relax.

Follow these Padahastasana steps carefully and do not make any changes to them. It is important to follow the Padahastasana sequence of steps to maximise the effects of this asana and to ensure that you do not place any unnecessary strain on your thighs and lower back.

Benefits of Padahastasana:-

Strengthens the thighs and calves as well as the lower back. Firms the buttocks and abdomen by working on your core stomach muscles.

Improves posture and balance.

Improves the ability to sustain forward bending poses for a longer period of time.

It helps to control digestive problems.

Yoga brings together physical and mental disciplines to increase muscle flexibility and body tone while also eliminating stress and anxiety. Yoga for strengthening thigh and calf muscles will also help to increase stamina and will enhance your overall fitness levels. While there are many benefits of Padahastasana and it is undoubtedly one of the best thigh strengthening yoga asanas, you should ensure that you are doing it correctly as doing it incorrectly can put a great deal of stress on your thigh and calf muscles as well as your ankles.

There are several Padahastasana variations depending on whether you are a beginner, intermediate, or advanced practitioner. This pose can also be done where you touch the tips of your fingers to your big toes – this is one of the best modifications of Chaturanga Dandasana for beginners and people who are not as flexible. While there are several yoga poses that work wonders for pregnant women, it is advisable to avoid this pose when you are pregnant. Padahastasana is physically

challenging as well as mentally taxing as it requires immense focus and determination. Most yoga beginners lose their focus within a few minutes as their minds start to wander and this is one of the most common mistakes made by yoga beginners. However, with regular yoga practice you will be able to overcome this problem.

Contraindications of Padahastasana:-

While the benefits and importance of Padahastasana are immense, there are certain circumstances when you should avoid this pose. Avoid practicing this asana if you have hypertension or any kind of heart problem. Padahastasana is also not recommend for people with lower back pain or any sort of spinal problem. The Hand Under Foot pose for beginners generally consists of the same steps but the amount of time spent in this position is much shorter.

PADAHASTASANA



<u> Trikonasana:-</u>

Trikonasana (/trɪkoʊˈnɑːsənɑː/ trik-oh-NAH-sə-nah; Sanskrit: त्रिकोणासन; IAST: trikoṇāsana) or Triangle Pose is an asana. Variations include utthita trikonasana (extended triangle pose), baddha trikonasana (bound triangle pose) and parivrtta trikonasana (revolved triangle pose).

Description:-

Trikonasana is usually performed in two parts, facing left, and then facing right. The practitioner begins standing with the feet one leg-length

apart, knees unbent, turns the right foot completely to the outside and the left foot less than 45 degrees to the inside, keeping the heels in line with the hips. The arms are spread out to the sides, parallel to the ground, palms facing down; the trunk is extended as far as is comfortable to the right, while the arms remain parallel to the floor. Once the trunk is fully extended to the right, the right arm is dropped so that the right hand reaches the shin (or a block or on the floor) to the front (left side) of the right foot, with the palm down if flexed. The left arm is extended vertically, and the spine and trunk are gently twisted counter clockwise (i.e., upwards to the left, since they're roughly parallel to the floor), using the extended arms as a lever, while the spine remains parallel to the ground. The arms are stretched away from one another, and the head is often turned to gaze at the left thumb, slightly intensifying the spinal twist. Returning to standing, the bend is then repeated to the left.

Benefits:-

lyengar claims practice of this asana improves the flexibility of the spine, corrects alignment of the shoulders; relieves backache, gastritis, indigestion, acidity, flatulence; massages and tones the pelvic organs, corrects the effects of a sedentary lifestyle or faulty posture, assists treatment of neck sprains, reduces stiffness in the neck, shoulders and knees, strengthens the ankles and tones the ligaments of the arms and legs. A book from Sivananda Yoga Vedanta Centre claims the asana can reduce or eliminate pain in the lower back, tone the spinal nerves and abdominal organs, improve the appetite, digestion and circulation. Swami Satyananda Saraswati claims the asana stimulates the nervous system and alleviates nervous depression, strengthens the pelvic area and tones the reproductive organs.

Contraindications and precautions:-

This side bend may cause issues in practitioners with lower back problems. Farhi warns that those with posterolateral disc herniation may find the twisting in this asana challenging the back. Iyengar advises: those prone to dizzy spells, vertigo, or high blood pressure do not look down at the floor in the final asana or turn the head; those with cervical spondylosis do not look up for too long; those with a cardiac condition practise against a wall and do not raise the arm, but rest it along the hip; and those with stress-related headaches, migraine, eye strain, diarrhoea, low blood pressure, psoriasis, varicose veins, depression or extreme fatigue do not practise this asana. Satyananda Saraswati states that the asana should not be practiced by those suffering from severe back conditions.



Ardhmatseyendrasana:-

Ardhmatseyendrasana (Sanskrit: अर्धमत्स्येन्द्रासन; IAST: Ardha Matsyendrāsana), Half Lord of the Fishes Pose, Half Spinal Twist Pose or Vakrasana is an asana. The asana usually appears as a seated spinal twist with many variations, and is one of the twelve basic asanas in many systems of Hatha Yoga.

Description:-

One foot is placed flat on the floor outside the opposite leg and torso twists toward the top leg. The bottom leg may be bent with the foot outside the opposite hip or extended with toes vertically. The arms help leverage the torso into the twist and may be bound (Baddha Ardha Matsyendrasana) in a number of configurations by clutching either feet or opposite hands.

Benefits:-

Ardha Matsyendrāsana allows the spine to be twisted all the way from the base of the spine to the very top. This asana tones the spinal nerves and ligaments, and improves digestion, and also improve liver and pancreas health.

Contraindications:-

People suffering from severe back or neck pain should practice with caution, and with close supervision. Those with slip disc problems should avoid this pose completely. Those with internal organ issues may find this pose difficult and painful. Should be avoided by pregnant women as it can press the foetus.



<u>Tadasana:-</u>

Tadasana (IPA: [tɑːd̪ɑːsɐnɐ]; Sanskrit: ताडासन; IAST: Tādāsana) and Samasthiti (IPA: [sɐmɐst̪ʰit̪ih]; Sanskrit: समस्थिति; IAST: samasthitiḥ) are two names for a common standing yoga posture is an asana. Depending on the Yoga lineage practiced, Samasthitiḥ and Tādāsana may refer to the same asana or two similar asanas.

Procedure:-

Stand with feet together. Ground down evenly through feet and lift up through the crown of your head. Lift your thighs. Lengthen up through all four sides of your waist, elongating spine. Breathe easy. Although Tāḍāsana is a very basic asana, it is the basis and starting point for many standing asanas. As such, Tāḍāsana is important in the context of other āsanas because it allows the body and consciousness to integrate the experience of the preceding āsana and prepare for the next. Further, as a common and fundamental asana, Tāḍāsana can help develop habits for further practice and asanas. Asanas that help prepare for Tāḍāsana include Adho Mukha Svanasana and Uttanasana. Urdhva Hastasana is a very similar asana with the hands raised above the head.

Benefits:-

The asana strengthens the abdomen and the legs. It may help relieve sciatica, reduce flat feet,[citation needed] and help plantar fasciitis and heel spurs by improving the strength of deeper foot muscles which support your foot, and reducing the load on the less suited plantar fascia.

Contraindications:-

Unable to Stand: This yoga pose cannot be beneficial to anyone who finds it difficult to stand for long with feet together or otherwise. Severe Migraine or Giddiness: Someone who is suffering severe migraine or giddiness would find this pose a challenge.

Weak Leg Muscles: Weak muscles of the legs will not help standing in Tadasana even in the simplest of the pose without variation.

Knee Locking: Locking the knee can be challenging for long periods and so one must be wary of this.

Strain on Spine: Avoid putting too much strain on the spine by carrying the entire body weight. This can bring more stress to the spine.

Don't Hurry: Initially don't work hard on raising the body and remaining still, but first work on just standing still even if the spine is not expanded and stretched. When the body is ready then move towards a little stretch and not too much. Slowly work on this.





SENIOR CITIZEN FITNESS TEST

The Senior Fitness Test was developed at Fullerton University, by Dr. Roberta Rikli and Dr. Jessie Jones. As such, the test is sometimes known as the Fullerton Functional Test. It is a simple, easy-to-use battery of test items that assess the functional fitness of older adults. The test describes easy to understand and effective tests to measure aerobic fitness, strength and flexibility using minimal & inexpensive equipment.

The individual fitness test items involve common activities such as getting up from a chair, walking, lifting, bending, & stretching. The tests were developed to be safe & enjoyable for older adults, while still meeting scientific standards for reliability & validity.

List of Equipment Required

The following is a complete list of the equipment you will need to complete the Functional Fitness Test:

A Chair Without Arms – preferably a folding chair for greater stability A Stopwatch or Watch with a second hand 5 Pound Weight for women 8 Pound Weight for men Piece of String or Cord about 30" in length Visible, bright colour duct tape Counter – to track number of repetitions completed or paper and pencil to track manually Ruler that goes up to 12" Measuring Tape Small Orange Cone Functional Fitness Tests

CHAIR STAND TEST - Testing Lower Body Strength

Daily Benefit: Lower body strength is important for activities such as getting out of a chair, on the bus, out of the car, & rising up from a kneeling position in the

house or garden. The strength of your lower body can directly affect the ease with which you perform the activities you do every day.

Equipment: Chair without arms, Stopwatch

Test Steps:

Place the chair against a wall where it will be stable.

Sit in the middle of the chair with your feet flat on the floor, shoulder width apart, back straight.

Cross your arms at the wrist and place them against your chest.

The test partner will tell you when to begin and will time you for 30 seconds,

using the stopwatch. You will rise up to a full stand and sit again as many times as you can during the 30-second interval.

Each time you stand during the test be sure you come to a full stand.

When you sit, make sure you sit all the way down. Do not just touch your backside to the chair. You must fully sit between each stand.

Do not push off your thighs, or off the seat of the chair with your hands to help you stand unless you have to.

Keep your arms against your chest crossed and do not allow the arms to swing up as you rise.

If you are on your way up to stand when time is called you will be given credit for that stand.

Risk Zone: Less than 8 unassisted stands for men & women.



Fig:- Chair-Stand test

ARM CURL TEST - Testing Upper Body Strength

Daily Benefit: Upper body strength is important for activities such as carrying laundry, groceries, & luggage. It is also important for picking up grandchildren & giving them a big hug! A lack of upper body strength could keep you from pouring milk from a jug, being able to go grocery shopping for yourself & maintaining your independence.

Equipment: 5 lb Weight & an 8 lb weight, stopwatch & a straight-back chair with no arms.

Women will curl a 5-lb. weight in this test and Men will curl an 8-lb. weight for their test. It is extremely important to the accuracy of the test that you use the appropriate weight for men & women in this test.

Test Steps:

Your test partner will tell you when to begin and will time you for 30 seconds, using the stopwatch or a watch with a second hand.

Do as many curls as you can in the allotted 30-second time period, moving in a controlled manner.

Remember to do a Full Curl, squeezing your lower arm against your upper arm at the top of each curl and returning to a straight arm each time. Keep your upper arm still.

DO NOT SWING THE WEIGHT.

If you have started raising the weight again and are over halfway up when time is called, you may count that curl!

Risk Zone: Less than 11 curls in correct form for men & women.



Fig:- Arm-Curl test

CHAIR SIT AND REACH TEST - Lower Body Flexibility Test

Daily Benefit: Lower body flexibility is important for preventing lower back pain. It also plays a role in your balance, posture, in fall prevention, and in your gait, or walking. Lower body flexibility is important for maintaining an active, independent lifestyle.

Equipment: Chair, Ruler

Test Steps:

Place the chair against a wall so it will be stable.

Slide forward in your chair until you are able to straighten one of your legs. The ankle of your straight leg should be flexed at about a 90-degree angle. Your other foot should be flat on the floor.

Place one of your hands directly on top of the other so that they are stacked with your fingers extended.

Exhale as you bend forward at the hip and try to reach your toes. If the extended leg begins to bend, move back in your chair until the leg is straight.

Hold the stretch for at least 2 seconds and Do Not Bounce or jerk as you reach. Take two practice reaches on each leg. Determine which side is more flexible.

You will measure and record only your most flexible side on your scorecard.

Be sure you have a stable chair so that the chair will not tip forward as you reach for your toes.

After you have completed the practice reaches, your test partner will hold a ruler across the toe of your shoe. The centre of the toe of your shoe is considered to be a measurement of "0".

Reach forward toward your toes. Mark your score to the nearest half-inch If you reach past this "0" point at the middle of your toe, you receive a positive score of as many inches as you reach past it, measured to the nearest half-inch. If you cannot reach your toes, you receive a negative score of as many inches as you are short of the "0" point at the middle of the toe of your shoe, measured to the nearest half-inch.

Try the reach twice and record the better of the two measurements.

Risk Zone: Men: Minus (-) 4" or more; Women: Minus (-) 2" or more.

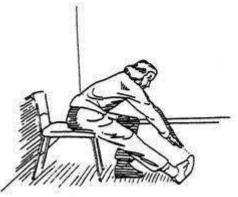


Fig:- Chair Sit and Reach test

BACK SCRATCH TEST - Upper Body Flexibility Test

Daily Benefit: Upper body flexibility affects your ability to reach for items that may be high on a shelf, change a light bulb, or do any activity that requires arm and/or shoulder movement.

Maintaining flexibility in your upper body will assist you in continuing to live independently.

Equipment: Ruler

Test Steps:

Place your left arm straight up in the air above your left shoulder.

Bend your left arm at the elbow to reach toward your back, with your fingers extended. Your elbow pointed toward the ceiling.

Place your right hand behind your back with your palm out and your fingers extended up.

Reach up as far as possible and attempt to touch the fingers of your two hands together. Some people are not able to touch at all, while others' fingers may overlap.

Take two practice stretches with each arm, determining which side is more flexible.

You will be measuring and recording only your most flexible side.

You are now ready to be measured. Perform the stretch as outlined above.

Without shifting your hands, your test partner will position your fingers so that they are pointing toward each other.

The distance between the fingertips of one hand and the other is measured to the nearest half inch. If your fingers overlap, the amount of the overlap will be measured.

Fingertips just touching receive a score of "0".

If your fingers do not touch, you receive a negative score of the distance between your fingers, measured to the nearest .5 or half inch.

You receive a positive score if your fingers overlap, measuring the overlap to the nearest .5 or half inch.

If you are able to touch your fingers together, do not grab your fingers together and pull, as this will affect the accuracy of your score.

Do the stretch twice, recording the best score and remember to indicate if the score was positive or negative.

Risk Zone: Men: Minus (-) 4" or more; Women: Minus (-) 2" or more.



Fig:- Back Scratch test

8-FOOT UP AND GO TEST - Speed, Agility & Balance Test

Daily Benefit: Important for activities such as walking through crowds, moving in unfamiliar environments & across changing terrain, & crossing the street before the light changes. The better your balance is, the more confident you will be traveling outside your home & living an active life. Your speed & balance directly affect your self-assurance as you go about your daily activities.

Equipment: Chair, Cone (or another marker), Stopwatch

Test Steps:

Sit in the chair with your hands on your thighs, your feet flat on the floor with one foot slightly ahead of the other.

Your test partner will hold the stopwatch and stand near the place where you will walk around the marker on the floor.

Your test partner will signal, "go" and start the watch. For test accuracy, your test partner must start the watch on the signal, "go." Do not wait to start the watch after the participant has started to move.

The test is timed to the nearest tenth (.1) of a second, so it is important to be as accurate as possible when starting and stopping the watch.

Upon the signal "go" rise from the chair and walk as quickly as possible out to the marker. You may press off your thighs of the chair when you rise. Do not run. Walk around the outside of the marker and return to your seat as quickly as possible, being sure to be safe in your movements.

As soon as you are fully seated again your test partner will stop the watch and record your time to the nearest tenth of a second.

If you would like to take a practice test before testing for a score you may. You may then take the test twice, recording your best score.

Remember to record the score to the nearest tenth, for example 4.9 seconds or 8.9 seconds.

Risk Zone: More than 9 seconds.

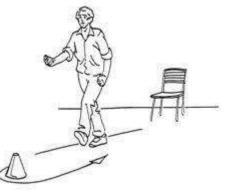


Fig:- 8 Foot Up and Go test

<u>WALK TEST (6 MINUTES) & STEP IN PLACE TEST (2 MINUTES)*</u> – Physical Stamina/Endurance Test

Daily Benefit: Endurance is important for activities such as shopping, walking for a distance, and traveling. The more physical stamina you have, the more energy you will have to do the things you enjoy. You will also be able to do more with less fatigue. Your endurance affects your ability to perform many of your daily activities and to maintain your independence.

Equipment: Stop Watch, Measuring Tape, Visible Tape (i.e. masking tape or painter's tape)

Set Up:

Begin by setting the minimum knee or stepping height for each participant. This is at the level even with the midway point between the kneecap and the front hipbone (Iliac crest). It can be determined using a tape measure or by stretching a cord from the middle of the kneecap (patella) to the hipbone. Then you can fold it over and mark this point on the thigh with a piece of tape.

Test Steps:

Your test partner will tell you when to begin and will time you for two full minutes using the stopwatch.

Begin stepping, being careful to lift your knees to the appropriate height each time so that your knee is level with the tape mark on the wall. Your entire foot must touch the ground on each step to ensure that you are not jogging, you need to "step".

Your test partner will count each time you raise your right knee, counting each full stepping cycle. A full step cycle is when both the right and the left foot have lifted off the floor and come back down.

Your test partner should alert you at each 30 second interval to allow you to gauge how you feel. If you cannot complete the full 2 minutes that is fine, just complete as much time as you can comfortably complete.

If you wish to rest during the test you may stop stepping, rest and then resume the test. The stopwatch will continue to run and you may start stepping again as long as you are still within the two-minute test period.

Risk Zone: Walk Test: Less than 350 yards for men & women; Step Test: Less than 65 steps for men & women.

*The Walk Test is used to assess aerobic fitness unless the person uses orthopaedic devices when walking or has difficulty balancing, in which case they do the Step in Place Test Fitness is very important for those in their senior years. Older adults need to have adequate strength, flexibility, and endurance to accomplish everyday tasks. Assessing these components of fitness can detect weaknesses which can be treated before causing serious functional limitations.



Fig:- 6 mins Walk test



Fig:- Step in place test

TABLE FOR SENIOR CITIZEN FITNESS TEST FOR 10 ELDERLY PERSONS:-

Sl. No.	Name	Age (in years)	Chair Stand (no. of stands)	Curl	6-min walk test (in yards)	min	Chair Sit and Reach test (in inches)	Back Scratch (in inches)	8 foot up and go step (in seconds)
1.	Anup Roy(M)	63	18	20	629	102	1.2	-4.0	5.2
2.	Rupa Ghosh(F)	65	13	12	620	75	3.5	0.1	5.9
3.	Ankit Sharma(M)	72	15	15	590	83	-1.6	-3.0	5.1

4.	Arundhati Sen(F)	76	10	15	495	72	-0.9	-3.1	5.2
5.	Raman Kumar(M)	81	10	13	562	84	0.3	-1.2	6.8
6.	Roshni Sinha(F)	85	8	10	402	63	2.0	-3.0	9.6
7.	Varun Kapoor(M)	92	7	11	400	52	-6.5	-10.5	9.1
8.	Shilpa Ghosh(F)	77	15	11	486	71	0.2	-4.4	7.3
9.	Santu Ghosh(M)	60	18	21	709	110	3.9	0.0	3.9
10	Rupsha Ganguly(F)	82	9	13	421	75	1.0	0.0	7.0

FOOTBALL:-INTRODUCTION:-

Football is a family of team sports that involve, to varying degrees, kicking a ball with the foot to score a goal. Unqualified, the word football is understood to refer to whichever form of football is the most popular in the regional context in which the word appears. Sports commonly called 'football' in certain places include: association football (known as soccer in some countries); gridiron football (specifically American football or Canadian football); Australian rules football; rugby football (either rugby league or rugby union); and Gaelic football. These different variations of football are known as football codes.

Various forms of football can be identified in history, often as popular peasant games. Contemporary codes of football can be traced back to the codification of these games at English public schools during the nineteenth century. The expanse of the British Empire allowed these rules of football to spread to areas of British influence outside the directly controlled Empire. By the end of the nineteenth century, distinct regional codes were already developing: Gaelic football, for example, deliberately incorporated the rules of local traditional football games in order to maintain their heritage. In 1888, The Football League was founded in England, becoming the first of many professional football competitions. During the twentieth century, several of the various kinds of football grew to become some of the most popular team sports in the world.

Common elements

The various codes of football share certain common elements: Players in American football, Canadian football, rugby union and rugby league take up positions in a limited area of the field at the start of the game. They tend to use throwing and running as the main ways of moving the ball, and only kick on certain limited occasions. Body tackling is a major skill, and games typically involve short passages of play of 5–90 seconds.

Association football and Gaelic football tend to use kicking to move the ball around the pitch, with handling more limited. Body tackles are less

central to the game, and players are freer to move around the field (offside laws are typically less strict).

Common rules among the sports include:

Two teams of usually between 11 and 18 players; some variations that have fewer players (five or more per team) are also popular.

A clearly defined area in which to play the game.

Scoring goals or points by moving the ball to an opposing team's end of the field and either into a goal area, or over a line.

Goals or points resulting from players putting the ball between two goalposts.

The goal or line being defended by the opposing team.

Players being required to move the ball—depending on the code—by kicking, carrying, or hand-passing the ball.

Players using only their body to move the ball.

In all codes, common skills include passing, tackling, evasion of tackles, catching and kicking. In most codes, there are rules restricting the movement of players offside, and players scoring a goal must put the ball either under or over a crossbar between the goalposts.

Etymology

Main article: Football (word)

There are conflicting explanations of the origin of the word "football". It is widely assumed that the word "football" (or the phrase "foot ball") refers to the action of the foot kicking a ball. There is an alternative explanation, which is that football originally referred to a variety of games in medieval Europe, which were played on foot. There is no conclusive evidence for either explanation.

Early history

Ancient games

A painting depicting Emperor Taizu of Song playing cuju (i.e. Chinese football) with his prime minister Zhao Pu (趙普) and other ministers, by the Yuan dynasty artist Qian Xuan (1235–1305)

The Ancient Greeks and Romans are known to have played many ball games, some of which involved the use of the feet. The Roman game

harpastum is believed to have been adapted from a Greek team game known as " $\dot{\epsilon}\pi$ i $\sigma\kappa$ upo ς " (Episkyros) or " $\phi\alpha$ u $\dot{v}\delta\alpha$ " (phaininda), which is mentioned by a Greek playwright, Antiphanes (388–311 BC) and later referred to by the Christian theologian Clement of Alexandria (c. 150 – c. 215 AD). These games appear to have resembled rugby football. The Roman politician Cicero (106–43 BC) describes the case of a man who was killed whilst having a shave when a ball was kicked into a barber's shop. Roman ball games already knew the air-filled ball, the follis. Episkyros is recognised as an early form of football by FIFA.

A Chinese game called Cuju (蹴鞠), Tsu' Chu, or Zuqiu (足球) has been recognised by FIFA as the first version of the game with regular rules. It existed during the Han dynasty, the second and third centuries BC.[citation needed] The Japanese version of cuju is kemari (蹴鞠), and was developed during the Asuka period. This is known to have been played within the Japanese imperial court in Kyoto from about 600 AD. In kemari several people stand in a circle and kick a ball to each other, trying not to let the ball drop to the ground (much like keepie uppie). The game appears to have died out sometime before the mid-19th century. It was revived in 1903 and is now played at a number of festivals.[citation needed]

There are a number of references to traditional, ancient, or prehistoric ball games, played by indigenous peoples in many different parts of the world. For example, in 1586, men from a ship commanded by an English explorer named John Davis, went ashore to play a form of football with Inuit (Eskimo) people in Greenland. There are later accounts of an Inuit game played on ice, called Agsagtuk. Each match began with two teams facing each other in parallel lines, before attempting to kick the ball through each other team's line and then at a goal. In 1610, William Strachey, a colonist at Jamestown, Virginia recorded a game played by Native Americans, called Pahsaheman.[citation needed] On the Australian continent several tribes of indigenous people played kicking and catching games with stuffed balls which have been generalised by historians as Marn Grook (Djab Wurrung for "game ball"). The earliest historical account is an anecdote from the 1878 book by Robert Brough-Smyth, The Aborigines of Victoria, in which a man called Richard Thomas is quoted as saying, in about 1841 in Victoria, Australia, that he

had witnessed Aboriginal people playing the game: "Mr Thomas describes how the foremost player will drop kick a ball made from the skin of a possum and how other players leap into the air in order to catch it." Some historians have theorised that Marn Grook was one of the origins of Australian rules football.

The Māori in New Zealand played a game called Ki-o-rahi consisting of teams of seven players play on a circular field divided into zones, and score points by touching the 'pou' (boundary markers) and hitting a central 'tupu' or target.[citation needed]

Games played in Mesoamerica with rubber balls by indigenous peoples are also well-documented as existing since before this time, but these had more similarities to basketball or volleyball, and no links have been found between such games and modern football sports. Northeastern American Indians, especially the Iroquois Confederation, played a game which made use of net racquets to throw and catch a small ball; however, although it is a ball-goal foot game, lacrosse (as its modern descendant is called) is likewise not usually classed as a form of "football."[citation needed]

These games and others may well go far back into antiquity. However, the main sources of modern football codes appear to lie in western Europe, especially England.

Ancient Greek football player balancing the ball. Depiction on an Attic Lekythos, Piraeus, 400-375 BC.

A Song dynasty painting by Su Hanchen (c. 1130-1160), depicting Chinese children playing cuju.

Paint of a Mesoamerican ballgame player of the Tepantitla murals in Teotihuacan.

A revived version of kemari being played at the Tanzan Shrine, Japan. An illustration from the 1850s of Australian Aboriginal hunter gatherers. File:Children in the background are playing a football game, possibly Woggabaliri.

A group of aborigines playing football in Guiana.



RULES OF THE GAME:-

International rules football (Irish: Peil na rialacha idirnáisiunta; also known as inter rules in Australia and compromise rules in Ireland) is a team sport consisting of a hybrid of football codes, which was developed to facilitate international representative matches between Australian rules football players and Gaelic football players.

The first tour, known as the Australian Football World Tour, took place in 1967, with matches played in Ireland, the United Kingdom, and the United States. The following year, games were played between Australia and a touring County Meath Gaelic football team, Meath being the reigning All-Ireland senior football champions. Following intermittent international tests between Australia and Ireland, the International Rules Series between the senior Australian international rules football team and Ireland international rules football team has been played intermittently since 1984, and has generally been a closely matched contest. The sport has raised interest and exposure in developing markets for Gaelic and Australian football and has been considered a development tool by governing bodies of both codes, particularly by the AFL Commission.

International rules football does not have any dedicated clubs or leagues. It is currently played by men's, women's, and junior teams only in tournaments or Test matches.

Rules:-

The rules are designed to provide a compromise or combine between those of the two codes, with Gaelic football players being advantaged by the use of a round ball and a rectangular field measured about 160 yards long by 98 yards wide (Australian rules uses an oval ball and field), while the Australian rules football players benefit from the opportunity to tackle by grabbing between the shoulders and thighs and pulling to the ground, something banned in Gaelic football. The game also introduces the concept of the mark, from Australian rules football, with a free kick awarded for a ball caught from a kick of over 15 metres, where the kick must be in the forward direction if originating from a teammate.

A player must bounce, solo or touch the ball on the ground once every 10 metres or six steps. A maximum of two bounces per possession are allowed, while players can solo the ball as often as they wish on a possession. Unlike in Gaelic football, the ball may be lifted directly off the ground, without putting a foot underneath it first. Players however cannot scoop the ball off the ground to a team-mate, nor pick up the ball if they are on their knees or on the ground. If a foul is committed, a free kick will be awarded, referees (called umpires in Australian Rules) can give the fouled player advantage to play on at their discretion.

Scoring in International rules football

The game uses two large posts usually sets 6.5 metres apart, and connect 2.5 metres above the ground by a crossbar with goal net that could extend behind the goalposts and attached to the crossbar and lower goalposts, as in Gaelic football. A further 6.5 metres apart on either side of those and did not connected by a crossbar are 2 small post, known as behind post, as in Australian rules football.

Points are scored as follows:

Under the crossbar and into the goal net (a goal): 6 points, umpire waves green flag and raises both index fingers. Over the crossbar and between the two large posts (an over): 3 points, umpire waves red flag and raises one arm above his head.

Between either of large posts and small posts (a behind): 1 point, umpire waves white flag and raises one index finger.

Scores are written so as to clarify how many of each type of score were made as well as, like Australian football, giving the total points score for each team; for example, if a team scores one goal, four overs and 10 behinds, the score is written as 1-4-10(28), meaning one goal (six points) plus 4 overs ($4 \times 3 = 12$ points) plus 10 behinds ($10 \times 1 = 10$ points), for a total score of 28 points.

An international rules match lasts for 72 minutes (divided into four quarters of 18 minutes each). Inter-county Gaelic football matches go on for 70 minutes, divided into two halves, and Australian rules matches consists of four 20 minutes quarters of game time, although with the addition of stoppage time, most quarters actually last between 25 and 30 minutes.

As in Gaelic football, teams consist of fifteen players, including a goalkeeper, whereas eighteen are used in Australian rules (with no keeper).

2006 rule changes

A number of rule changes were introduced before the 2006 International **Rules Series:**

per quarter was reduced from 20 minutes to 18 minutes

A player who received a red card is to be sent off and no replacement is allowed; in addition to this a penalty is awarded regardless of where the incident takes place (Previously a replacement was allowed and a penalty was only awarded if the incident happened in the penalty area) A yellow card now means a 15-minute sin bin for the offending player, who will be sent off if he receives a second card

2008 rule changes

Maximum of 10 interchanges per quarter

Teams are allowed only four consecutive hand passes (ball must then be kicked)

Match time reduced from 80 minutes to 72 minutes (18 minutes per quarter)

Goalkeeper can no longer kick the ball to himself from the kick-out[2] Suspensions may carry over to GAA and AFL matches if The Match Review Panel sees fit

A dangerous "slinging" tackle will be an automatic red card

A front-on bump (known as a shirtfront in Australian football)

endangering the head will result in a red card

Physical intimidation can result in a yellow card

Keeper can not be tackled or touched when the keeper is charging An independent referee can cite players for reportable offences from the stands

Yellow card sin bin reduced to 10 minutes

2014 rule changes

Maximum number of interchanges per quarter increased from 10 to 16 Unlimited number of interchanges allowed at quarter and half-time breaks

Number of consecutive hand-passes teams are allowed increased from 4 to 6

Marks will not be paid for backwards kicks caught by a teammate Goalkeepers required to kick the ball out beyond the 45m line after all wides, behinds and overs

Failure of a goalkeeper to kick over the 45m line will result in a free kick to the opposition (from the 45m line)

About the ball:-

A football is a ball inflated with air that is used to play one of the various sports known as football. In these games, with some exceptions, goals or points are scored only when the ball enters one of two designated goal-scoring areas; football games involve the two teams each trying to move the ball in opposite directions along the field of play.

The first balls were made of natural materials, such as an inflated pig bladder, later put inside a leather cover, which has given rise to the American slang-term "pigskin". Modern balls are designed by teams of engineers to exacting specifications, with rubber or plastic bladders, and often with plastic covers. Various leagues and games use different balls, though they all have one of the following basic shapes:

a sphere: used in Association football and Gaelic football a prolate spheroid

either with rounded ends: used in the rugby codes and Australian football

or with more pointed ends: used in American football and Canadian football

The precise shape and construction of footballs is typically specified as part of the rules and regulations.

The oldest football still in existence, which is thought to have been made circa 1550, was discovered in the roof of Stirling Castle, Scotland, in 1981. The ball is made of leather (possibly from a deer) and a pig's bladder. It has a diameter of between 14–16 cm (5.5–6.3 in), weighs 125 g (4.4 oz) and is currently on display at the Smith Art Gallery and Museum in Stirling.



Fig:- Football

About the field:-

In American football, the standard field dimensions are 120 yards long and 53 1/3 yards wide. The last 10 yards of length on either end of the field are considered "end zones" in which a player scores. These dimensions are consistent for football played at the high school, college and professional (NFL) level.

Length of a Football Field Football Field Dimensions

The total length of a football field is 120 yards. The playing field is 100 yards (360 feet) long, and each end zone is 10 yards (30 feet) deep. The field is marked with a yard line every 5 yards, and every 10 yards is marked by a field number. The hash marks are 1 yard apart, used to mark each down when the ball is between the yard lines.

RELATED: 4 Football Conditioning Drills That Work

Width of a Football Field

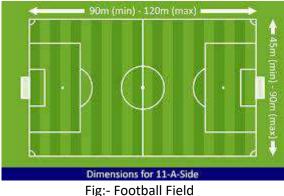
The standard football field is 53 1/3 yards, or 160 feet, wide. The primary difference among different levels of play is the space between the two sets of hash marks:

High School — 53 feet, 4 inches College — 40 feet NFL — 18 feet, 6 inches All plays begin on or between the hash marks, depending on where the previous play ended. For example, if the previous play ended along the right sideline, the ball will be placed on the right hash mark.

RELATED: How Football Sizes Change at Each Level of the Sport

Goal Dimensions Football Goal Post Dimensions

The football goal crossbar is 10 feet high, and the posts are an additional 20 feet high, for a total height of 30 feet. NFL and NCAA goal posts are 18 feet, 6 inches wide. High school goal posts are 23 feet, 4 inches wide.



<u>Skills:-</u>

The importance of a skill depends to an extent on the player's position on the field. Overall, football skills can be divided into four main areas, namely outfield technical, physical, mental and goalkeeping technical abilities.

Physical skills:

Pace Agility Sprinting Stamina Power Endurance Jumping Balance Strength Strength to resist tackles Resistance

Mental skills

As the last line of defence, goalkeepers must be able to make quick, athletic saves. Here, the skill of England's Gordon Banks robs Brazil's Pele of a good scoring opportunity in their legendary confrontation. Mexico, 1970

Intelligence (game understanding)

Vision (ability to see build-up play ahead to others or ability to see a pass or awareness of players around you)

Composure (ability to control the game at any critical situation in the match)

Leadership (able to guide the youngsters in the field and be able to motivate and inspire others)

Communication (can be considered a mental ability)

Decision-making (determine in advance what to do)

Goalkeeping skills

Jumping (can be considered a physical ability)

Agility (can be considered a physical ability)

Balance (can be considered a physical ability)

Communication (can be considered a mental ability)

Goal kicker (can be considered a technical ability)

Handling (can be considered a technical ability)

Positioning

Reflexes (can be considered a mental ability)

Distribution (ex; Throwing, punting) (can be considered a physical ability) One on ones

SOME NATIONAL AND INTERNATIONAL MATCHES:-

🝘 Premier League



English Football League



🝘 La Liga



🗑 FIFA



UEFA Champions League





Indian Super League



Santosh Trophy



I-League



Federation Cup



Where Pride Meets Passion

Calcutta Football League



SOME NATIONAL AND INTERNATIONAL STADIUMS:-

Wembley Stadium, London, capacity 90,000 With construction costs of a whopping £757m and complaints about a lack of atmosphere, Wembley has had its critics. But look at it, it is big



Rose Bowl in Pasadena, California, USA, capacity 93,420 The former home of LA Galaxy still hosts occasional USA international matches and was the venue of the 1994 World Cup final



FNB stadium Soccer City Stadium in Soweto, Johannesburg, South Africa, capacity 94,736 The host stadium for the World Cup final in 2010 and also the home of the South African team Kaizer Chiefs



The Camp Nou in Barcelona, capacity 99,345 The Catalan club wants to update its home since 1957 to include a roof and extra seats that would increase its capacity to 105,000 and maintain its status as the biggest football stadium in Europe. Directors may even vote to build a new ground



The Azteca Stadium Mexico City, Mexico, capacity 105,064 First opened in 1966, the Azteca was the venue of Diego Maradona's 'Hand of God' goal and then his sublime second against England at the 1986 World Cup



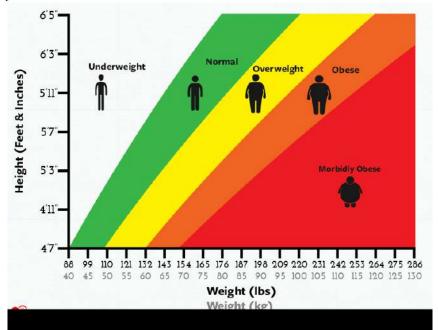
The Salt Lake Stadium aka Yuva Bharati Krirangan in Kolkata, India, capacity 120,000 Built in 1984, the stadium has been home to Mohun Bagan AC, Mohammedan Sporting Club, East Bengal FC and the India national football team



BMI INTRODUCTION:-

The BMI is a statistical measurement derived from your height and weight. Although it is considered to be a useful way to estimate healthy body weight, it does not measure the percentage of body fat. The BMI measurement can sometimes be misleading a muscleman may have a high BMI but have much less fat than an unfit person whose BMI is lower. However, in general, the BMI measurement can be a useful indicator for the 'average person'. BMI equation (BMI = Body Mass Index) was originally framed by Adolphe Quetelet, a Belgium mathematician and scientist, between 1830 and 1850. Adolphe was the first person to think of relating weight to height in a statistical, expressible manner.

While the BMI tool is fairly reliable, it is only one tool that physicians use in evaluating a person's health status. It is important to take other measures like blood pressure, cardiac health, physical inactivity and abdominal girth. Also keep in mind that BMI does not distinguish between muscle mass and fat mass. A particularly athletic person whose weight is higher due to muscle may have a BMI that indicates that they are overweight, when their weight is simply higher due to muscle mass. We can find out the BMI by using the formula: BMI = WEIGHT (in kilograms).



BMIMeaningBelow 18.5-Underweight18.5 to 24.9-Healthy weight25 to 29.9-Above ideal range30 and above-Obese

BMI TABLE FOR 10 PERSONS:-

Sl. No.	Name	Height(in m)	Weight(in kg)	BMI	Remarks
1.	Ravi Sharma	2.0	70	17.5	Underweight
2.	Rena Biswas	1.6	65	25.3	Over Weight
3.	Rishika	1.4	59	30.1	Obesity
	Kumari				
4.	Karan Vir	2.0	71	17.7	Underweight
	Singh				
5.	Sayan Sen	1.9	60	16.6	Underweight
6.	Dharm	2.0	58	14.4	Underweight
	Kumar				
7.	Dhawal	2.0	63	15.7	Underweight
	Thakur				
8.	Deepak	1.6	61	23.8	Normal
	Thakur				
9.	Tanushree	1.8	66	20.3	Normal
	Ghosh				
10.	Malini Sinha	1.5	59	26.2	Over Weight

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