



From Nutrition to Exercise: A Comprehensive Guide to a Healthy Life



of the grading system ensures that the next goal is always realistic and achievable with effort. Swimming is a sport where a person propels his/her body through the water with his/her arms, called strokes, and legs kick and move progressively through water. Swimming is sometimes used for physical rehabilitation of people recovering from injuries because it is a non-weight bearing exercise. It is also a good recreational activity. Swimming was included in the first modern Olympic Games at Athens in 1896. The first Olympic Champion was Alfred Hajos from Hungary. Diving events were added in 1904. The women's competitions were recognised in 1912. Federation Internationale de Natations Aquatics (FINA) was formed at London Olympic Games in 1908. In freestyle events, a swimmer can swim in any manner. It is also called crawl because the swimmer uses alternate stroking of the arms over the water surface with up and down kick action of legs. In turning after finishing one length, some body part of the swimmer should touch the wall. The swimmer lies flat on his/her stomach with both arms stretched out in front, passing by the side of ears and the water level is at hair line. Both legs are extended to the back with toes pointed. The arms are pulled alternately from front to back inside the water and recovered from outside the water. While one arm is pulling and pushing, the other arm is recovering. The legs move alternately up and down. While one leg kicks downward, the other leg recovers upward. The knees are flexed with toes pointed during the down beat and are kept straight with toes relaxed during the up beat. The swimmer takes the breath through the mouth by turning the head to the side of the pushing arm at the beginning of recovery. Soon the face goes back into the water and the swimmer breathes out more through the mouth and only a small portion through the nose. The back stroke consists of alternate action of arms with up and down kicking of legs while the swimmer is on the back. During a turn, the swimmer should bend from the stomach and take flip turn. Some body part of the swimmer should touch the wall and he/she should finish in the back position only. The basic body position for the back stroke is the supine position. The swimmer lies flat on his/her back with both arms stretched out back over head, passing by the side of ears. Face is out of the water and both legs are extended forward with toes pointed. Hips are just below the water surface. The arms are pulled alternately from back to front inside the water and recovered from outside the water with straight arm over the body. While one arm is pulling and pushing, the other arm is recovering. The legs move alternately up and down. The leg movement originates from the hip joint. While one leg kicks downward, the other leg recovers upward. The knees are flexed with toes pointed during the up beat and are kept straight with toes relaxed during the down beat. Breathing in back stroke is very easy, as the mouth and nose are usually over the water. The swimmer breathes once in every arm cycle. The breast stroke involves simultaneous horizontal movements of the arms in heart shape to propel the body forward by pushing the water. The kicking action is in circular motion similar to that of frog. During turn and finish, swimmer must touch the wall with both hands. Breast stroke involves lying on the chest, with the arms only breaking the surface of the water and legs always underwater, while the head is underwater for the second half of the stroke. Both hands, thumbs together, reach forward, fully extending the arm at the elbow. The arms will stay in this position until the kick is completed by the feet. Arms continue to flex at the elbow. Leg kick starts to push back to continue the forward movement. The legs flex at the knee and hips to prepare for the kick. Breathing is usually done in the beginning of the insweep phase of the arms, and the swimmer breathes through the mouth. In this stroke, the swimmer must keep both the legs together and she/he should not use breast stroke. During a "turn" and "finish" both hands must touch the wall simultaneously. The butterfly technique with the dolphin kick consists of arm movement with a leg kick. Both arms break the water simultaneously, hands and forearms first, the arms swing outwards, elbows slightly flexed as they both continue to swing, take a round and meet in front of the head, thumb and

fingers entering the water first. As the hands come close to the body, they then press towards the feet, fully extending the arms at the elbow in preparation for the quick “flick” out of the water for recovery. The shoulders are brought above the water surface by a strong up and medium down kick. The breathing process begins when the swimmer presses both hands downward, and the swimmer breathes in through the mouth and nose, but with a white border line, 2 cm (3/4 inch.) wide, along each 2.74m (9 feet.) edge and a white end line as shown below.

Net Assembly : which consists of upright post, height adjuster, horizontal part of the net post and attaching system (clamp). The net is suspended by a cord attached at each end to an upright post 15.25 cm high. The colour of net assembly should be of dark green, dark blue or black and have a white top not more than 15 mm wide.

• **Ball:** the ball is spherical, orange or white in colour.

Strokes are generally offensive and defensive: while performing a stroke the player should stand close to the table and take a stance facing the line of play. Now using a short stroke the racket arm should move from the elbow in a horizontal plane while the free arm should move upward. The strokes can be played with a backhand push and forehand push. There are two Olympic styles of wrestling, Freestyle and GrecoRoman. With one key exception, the rules of the two styles are identical. In Greco-Roman, a wrestler may not attack his opponent's legs, nor use his own legs to trip, lift or execute other moves. In freestyle, both the arms and legs may be used to execute holds or to defend against attack. This style was introduced in 1904 at St. Louis Olympic Games. After a century, women free style wrestling was introduced in Athens Olympics in 2004. In addition to the above one more style of wrestling is played in India which is called the Indian style of wrestling or otherwise known as Pehlwani or Kushti. This kind of wrestling takes place in a clay or a mud pit. Traditional Indian wrestling isn't just a sport, it's an ancient sub-culture where wrestlers live and train together. The sport of wrestling is played in different weight categories for both boys and girls. The weight categories are provided to minimise the chance of injuries and also to provide an equal platform for applying strength and force for all the wrestlers. The weight categories are different for junior level, senior level, open championships, world championships, Olympic championships and so on. The changes in weight categories are done by the Federations from time to time. As an example, weight categories for men and women are given below. Once the offensive wrestler has taken a leg, this is when wrestling starts. If the offensive wrestler scores in this position, wrestling is stopped and this wrestler wins the period. If the attacking wrestler does not score in this position at the end of this 30-second-period, the defending wrestler is awarded one point and wins that round of wrestling.

While in the neutral (standing) position, some wrestlers prefer a square stance (Fig. 6.25) and others prefer a staggered stance (Fig 6.26). Either stance can work equally well. The wrestler should not stand straight up or leave herself/ himself open to a takedown from the opponent. An effective stance always prepares the wrestler for a quick attack and proper defence. Wrestling involves a tremendous amount of motion. Wrestler may circle their opponent. The wrestler may attack their opponent with a take down attempt. They may also snap the opponent to the mat and spin around behind him/her. The wrestler may also sprawl to defend against a take down and need to learn to move fluidly and quickly. All the movements need to be explosive and crisp. Before a wrestler shoots a take down, he/she must lower his/her level. This is accomplished by lowering his/her hips. When a wrestler sprawls to counter a take down he/she is also using level change. In addition, a wrestler may lower and raise his/her level to force a reaction from his/her opponent. A wrestler needs to be able to maintain good posture while changing levels. For instance, a wrestler sometime overextends when shooting a take down because he/she forgot to lower his/her level first. A wrestler should always bend at the knees, not at the waist.

Penetration When a wrestler shoots for a take down on his/her opponent, he/she does not merely reach for the opponent's legs or dive wildly for the opponent's legs. He/she makes sure to be close

enough to the opponent and then takes a deep penetration step, keeping the back straight and head up. Lower the level and penetrate deeply. Always make it sure to keep the hips forward and lower the shoulders, while driving through the opponent. Lifting A wrestler often lifts his opponent off the mat when executing a take down as shown in fig. 6.30. He/she may also lift an opponent who has performed a stand up from the bottom position. The wrestler lifts his/ her opponent and returns to the mat. The legs and the hips are most important when lifting. For instance, when a wrestler shoots a double leg, he/she does not lift with the back. He/she gets the hips squarely down and then uses the leg and hip strength to lift the opponent off the mat. When a wrestler has been lifted off the mat, he/she is in a very vulnerable position, lacking support and balance. A team game is an activity in which players of the same team work together to achieve the goal. Team games help us to work together for winning vis-a-vis respect for each other. Team games are also good for new learners as these games can help in building self-esteem and team cohesion. For a good team in any game, the players have to stay together for progress and work together for success. Below are mentioned some of the team games. You may have played basketball or have seen this game being played. Basketball is one of the world's most popular game. It is a fast, free-flowing, high-scoring team game. The players throw a ball in a basket horizontally positioned to score points while following a set of rules. Two teams play on a marked rectangular court with a basket at each end. The rules allow all players to move freely around the court and occupy any position on the court. All players get an equal opportunity to score basket. The way in which the game is re-started after a point is scored or a rule infringement makes it a fast game with few breaks in between regulation timing. To play this game, students should learn and practise the basic skills of ball dribbling, passing, receiving and shooting. Game of basketball involves neuromuscular coordination and often tall players are preferred. training should be planned, systematic and scientific and to achieve same, different means and methods are used. These means and methods are constantly modified and used in different conditions. Sports, training is a continuous process for optimum development and perfection of sports persons. Sports training is basically an educational process and it develops all the aspects of personality. High performance is not possible without developing the personality because both aspects are inter-related and interdependent of sports training. The training helps in observing and assessing the performance level of the player at any given moment. While doing so the hidden talent in a sportsperson is identified. This talent is systematically nurtured through the required specific training inputs. It involves maximum intensity work with intervals. This intensity work is alternated with periods of rest or low activity so that the body adjusts to work and rest. This method involves more of cardiovascular activities of individual. refers to training in different ways to improve the overall performance. Cross training uses different methods collectively to improve fitness and increases effectiveness of the training process for every human The game of basketball was originated at the Springfield College of Physical Education Massachusetts, USA in 1891 by Dr James Naismith. In 1894 Naismith drew up the first 13 rules, which still form the basis of modern basketball rules. In India, the YMCA at Kolkata introduced basketball some 80 years ago. Later the YMCA established at Chennai in 1920 played an important role in the development of this game. Now-a-days basketball is one of the most favourite games in many schools and colleges. The game is played by both men and women of all ages and abilities. In order to promote the sport nationally and internationally and organise sports events related to basketball, Basketball Federation of India (BFI) was set up in Basketball is played on a rectangular court, which could be an indoor wooden court or an outdoor concrete court. Basketball court dimensions are 28x 15 metres. The court is divided into two sections, called half-courts, by the mid-court line, where the game starts with a jumpball. A jumpball is when a referee throws the ball up at centre circle to determine which team gets possession. Two players from opposing teams jump up to tip the ball, in the hope that one of them will secure the ball. • The duration of

the game of each quarter is ten minutes with 2 minute rest between first and second quarters and third and fourth quarters. Between second and third quarters the rest is 15 minutes. The duration of extra time is five minutes. Teams exchange courts in each quarter. The clock is stopped while the play is not active. A team may consist of not more than twelve members, including a captain. But only five players from each team are on the court at one time. Substitutions are unlimited but can only be done when play is stopped. The team with the ball, attempting to score is called 'on offense'. The team defending from scoring is called 'on defense'. The ball is moved in two ways: dribbling and passing to teammates. If the ball goes out of bounds, due to the offensive player/team, the possession is given back to the defensive team. This is a form of penalty, which results in the loss of a possession of ball. Both men and women wear, a standard uniform consists of a pair of shorts and a jersey vest with a clearly visible number, printed on both the front and back. Players wear high top sneakers that provide extra ankle support. The game is monitored by the officials consisting of the referee, one or two umpires and five table officials. The table officials are responsible for keeping track of each team scoring, timekeeping, and individual and team fouls, player substitutions, alternating possession arrow, and stop-and-go clock. It has been observed that players bounce the ball between the dribbling hand and playing surface. This action of continuous bouncing is called dribbling. If dribbling is done on the spot, it is called stationary dribbling. You might have also noticed that players perform varied actions while dribbling. The variations are cross over dribbling that is changing of dribbling hand at the front side, reverse dribbling that is taking 180 degree turn from rear side and changing the direction, behind the back dribbling that is taking the ball from back side and bounce it on another side. While playing a basketball game, you need to transfer the ball from one player to another. Transfer of possession of the ball is called passing and a player who receives the ball is known as receiver. There are different types of passing namely—chest pass, overhead pass, bounce pass, baseball pass, hook pass and behind the back pass etc. It has been observed that a player has to throw the ball into basket of the opponent team to win the game. Therefore, each team should make an attempt to score by throwing the ball in different forms of shooting such as two-hand set shot, one-hand set shot, lay up shot, jump shot and hook shot etc. While playing basketball if a team loses the possession of the ball, immediately player has to turn to individual defence. For a good defence, following factors are important (i) location of the player (ii) guarding distance (iii) movement (iv) vision and (v) footwork. You might have seen a cricket match being played in your school or on the television. Also you might have yourself played this game with your friends. This is a bat and ball game played between two teams on a field. In the centre of the field is a rectangular pitch. One team bats, trying to defend the wicket and scoring as many runs as possible. The other team bowls and fields, trying to dismiss the batsmen and thus limiting the runs scored by the batting team. Run can be scored by the striking batsman hitting the ball with the bat, running to the opposite end of the pitch and touching the crease there without being dismissed. The teams switch between batting and fielding at the end of an inning. In general this game is very popular. The origin of the game of Cricket was gradual. The Hambledon Club which was founded in about 1750 had played a significant part in the evolution of the game. It was superseded by the Marylebone Cricket Club (M.C.C) with its headquarters at Lords, London. Cricket became an international game with the formation of the Imperial Cricket Conference (I.C.C) in 1909. The name of Imperial Cricket Conference was changed to International Cricket Conference (later, Council) to enable countries outside the Commonwealth to become its members. Earlier only test matches were played where each team played two innings in five or lesser days. First One day International match was played in 1971 with limitations of overs per inning. The governing International Cricket Council (ICC) saw its potential and staged the first limited over Cricket World Cup in 1975. In the 21st century, a

new limited over form, Twenty20 and more recently IPL (Indian Premier League), has made an immediate impact. Cricket was brought to India by the British. An England team toured India in 1902-03. An All-India team went on a tour of England in 1911 under Maharaja Bhupinder Singh of Patiala. The Indian Cricket Control Board came into being towards the end of 1928. India entered the international arena and played its first official Test against England in 1932. Meanwhile Prince Ranjit Singh of Nawanagar who had gone to England for further studies, made a remarkable name for himself in the game of cricket. He is generally acknowledged as the Father of Indian Cricket although he played only in England. He will always be remembered through the National Cricket Championship known as Ranji Trophy. All eleven members of the fielding team take the field, but only two members of the batting team are on the field at any given time. The fielding team's eleven members stand outside the pitch, spread out across the field.

- Behind each batsman is a target called a wicket. One designated member of the fielding team, called the bowler, is given a ball, and he attempts to deliver (bowl) the ball. If the bowler succeeds in hitting the wicket (Fig. 7.9), or if the ball, after being struck by the batsman, is caught by the fielding team before it touches the ground, the batsman is out.
- If the batsman is successful in striking the ball and the ball is not caught before it hits the ground, the two batsmen may then try to score runs for their team by running across the pitch. Each crossing and grounding by both batsmen is worth one run. The batsmen may attempt multiple runs or select not to run at all.
- If the batsman hits the bowled ball over the field boundary without the ball touching the field, the batting team scores six runs. If the ball touches the ground and then reaches the boundary, the batting team scores four runs. The inning is complete when 10 of the 11 members of the batting team have been dismissed, one always remaining "not out", or when a set number of "overs" has been played.
- Field with positions in cricket are shown in Fig. The pitch is at the centre of the field. It is the area of the ground between the bowling creases one on both sides and it is 3.05m in width and 20.12m in length. The pitch shall not be changed during a match unless it becomes unfit for play.
- The ball will be leather skinned and its weight must not be less than 155.9 gms and not more than 163 gms. The circumference of the ball must be in between 22.4cm and 22.9 cm.
- A wooden bat should be 10.8 cm in width and 96.5 cm in length including the handle. Each wicket is 22.80 cm in width and consists of three wooden stumps with two wooden bails on the top. The wickets should be pitched opposite and parallel to each other at a distance of 20.12 m between the centre of the two middle stumps. The stumps stand 70 cm tall and each bail is 11.1cm in length.
- The bowling crease is marked in line with the stumps at each end and is 2.64 m in length.
- The bowler bowls the ball in sets of six deliveries (or "balls") and each set of six balls is called an "over". When six balls have been bowled, another bowler is deployed at the other end, and the fielding side changes ends while the batsmen do not. A bowler cannot bowl two successive overs, although a bowler can bowl unchanged at the same end for several overs. With your friends you might have played football. Do you know the history of the game? Let us study some important information about football. Football was played in many countries in some form or the other. Federation Internationale de Football Association (FIFA), the world body to govern football was founded in Paris in 1904. In India, this game is governed by the All India Football Federation (AIFF). According to FIFA (Federation Internationale de Football Association), the very earliest form of the game for which there is scientific evidence was an exercise, a military manual dating back to the second and third centuries BC in China. In India, football began its journey during the British rulers and in no time it became popular among the masses. The first recorded game took place between the 'Calcutta Club of Civilians' and the 'Gentlemen of Barrackpore' in 1854. The first football association, "The Indian Football Association" (IFA) was established

in Kolkata in 1893. It was later on replaced by All India Football Federation (AIFF). The decade of 1951 to 1962 is known as the golden era in the history of Indian football, as the country put up commendable performances in a number of international competitions. India won gold medals in 1951 and 1962 Asian Games, held at New Delhi and Jakarta respectively. India became the first Asian nation to reach the Olympic football semi finals in the 1956 Melbourne Olympics. The AIFF had joined the Federation Internationale de Football Association (FIFA) in 1948. The duration of the match of football is of 90 minutes divided into two equal halves of 45 minutes each with an interval of 10 – 15 minutes.

- In each team there are eleven players one of whom is the goalkeeper and six substitute players. To start a game, a team requires at least seven players.
- A coin is tossed and the team that wins the toss has the option to decide either of two goals they decide to attack in the first half of the game or to opt “KICK OFF” to start the match from center line. The option unchosen by the toss winner has to be opted by the toss loser. Team which has not started with kick off, starts in second half with changed ends with a kick off.
- A goal is scored when the ball fully crosses over the goal line. The ball has also to go between the goal posts and under the crossbar. Without any rule violation or break or without committing foul.
- Penalty of direct kick is given to the team for acts or attempt to act like kicks, trips and jumps during scoring.
- An indirect free kick is given to the opposing team in case a goalkeeper inside his/her own penalty area control the ball more than six seconds with his/her hands or touches the ball again with hands after release.
- For direct or indirect free kicks, the ball must be stationary when the kick is taken and the kicker do not touch the ball a second time, until it has been played by another player.
- A penalty kick is given against a team that commits one of the ten offences. A goal may be scored directly from a penalty kick.
- A goal cannot be scored directly from a Throw-in. A throw is given when the ball passes over the touchline, either on the ground or in the air. The throw will be taken from the point where it has crossed the touchline, by the opponents who last touched the ball.
- A corner kick is awarded when the whole of the ball, passes over the goal line under the cross bar, either on the ground or in the air, having last touched a player of the defending team, and a goal is not scored in accordance with the relevant law Fig. 7.13) – This is the most important skill in the game. The ball is dribbled on the ground with gentle strokes of the feet and moving in a specific direction with control. In dribbling, the player can use either the inside or the outside of the feet. Player should have made contact with the forehead in general otherwise any part of the head can be used. Sometimes the player may use the top of his head on a long pass or throw in. It is important for the player to keep eyes open and fixed on the ball and the body be positioned in line. The ball is kicked by keeping the toe pointed out and ankle locked, strike the ball with laces part (in step) of the foot. Knees should be kept slightly bent and the ball should be kicked straight up into the air. The kicking leg should keep on swinging forward and upward direction in the direction of kicking. You might have seen a Hockey match either in your school or on the television. Let us know more about this game by getting familiar with its history. Hockey as a game had been brought into India by the British servicemen and the first Hockey club was formed in Kolkata in 1885. The Hockey Association was founded in 1886. The first international tournament took place in 1895 and the International Rules Board was founded in 1900. The International Hockey Federation is the global governing body of field hockey founded on 7th January 1924 in Paris. India won all five Olympic Games from 1928 until 1956 and then again won in 1964 and 1980. In 1976 Montreal Olympics, artificial turf was used for the first time and that resulted in development of new tactics and techniques and

also modification in rules Hockey sticks are made of wood or composite material and it should pass through two inch ring. (Fig.7.18) • The weight of the ball is between 156 gms to 163 gms with circumference of between 224 mm to 235 mm.(Fig.7.18) • A goalkeeper must wear a helmet, leg guards and kickers. Usually she/he wears extensive additional protective equipment including chest guard, padded shorts, heavily padded hand protectors, groin protector, neck guard and arm guards. A match is played between two teams of 11 players each, including a goalkeeper. • The duration of the game is two halves, 35 minutes, each in collegiate and international play. The rest is of 10 minutes. • The ball must be passed or dribbled down the field with the flat side of the stick. • A goal is scored when an attacker strikes the ball into the goal from within the striking circle, even if the ball touches the defender and goes into the goal (Own Goal). • If the score is tied after the stipulated time, extra time of two 7½-minute periods is played during which the golden goal rule applies. Even then if the score remains a tie then each team selects five players to decide the winner by tie breaker rule. • A foul is called when any player shields, obstructs, plays the ball with rounded side of the stick, interferes in the game, charges, hits or trips an opponent, uses the foot or leg, raises the stick, stops the ball in the air, hits, etc. • If a defensive player commits foul within the shooting circle, the attacking team is awarded a penalty corner. • A penalty corner takes place, at least 10 m from the nearest goal post. The attacking player pushes or hits the ball to his/her teammate standing just outside the striking circle line. One player pushes the ball into the striking circle and the teammate hits into the goal post. During the hit only five defensive players will remain on self back line and rest of the players will remain on the centre line. • A penalty stroke is awarded for any intentional violation by the defensive player in the circle for preventing a sure goal by foul means. • During the penalty stroke, the goalkeeper must stand with both feet on the goal line and may not move either foot until the ball has been played. The offensive player may push, flick or scoop the ball from the penalty spot. • When the attacking team plays the ball over the goal line, apart within goal post, the defense receives a 16- yard hit. The free hit is taken 16 yards from the spot where the ball crossed the backline. • A push-in or hit-in is awarded to the opponents if a player hits the ball wholly over the sideline. All other opponents and their sticks must be at least 5 m away from the spot where the ball is put into play The knees are flexed, upper body bending forward and feet shoulder width apart. The ball is placed in front of the right leg 8–12 inches away. The ball is tapped from the plain surface of the middle of the blade towards the left and then tapping the ball from the reverse stick in front of the left foot towards the right. This tapping movement continues from right to left and left to right The grip is the same as for dribbling. A 'V' shape is formed by the index finger and the thumb of the right hand which shall be on the inner edge pointing downwards. The index finger of the right hand points downwards for better control. A sideward stance is taken where the left shoulder faces the target and the ball is placed in front of the left foot in line with the right shoulder. Knees are slightly bent while executing this skill. The stick is placed just behind the ball and it is pushed along the ground towards the target wherein the left hand is pushing the stick backwards and the right hand is pushing the stick forward. You may be familiar with Kabaddi game. Kabaddi is one of the Indian games that demands agility, power and neuro muscular coordination. It also needs breath-holding capacity, quick response and a great deal of presence of mind. The game can be played on a plain and soft surface. The first known framework of the rules of Kabaddi as an indigenous sport of India was prepared in Maharashtra in the year 1921. The modern Kabaddi game was played all over India and some parts of South Asia from 1930. The All India Kabaddi Federation was formed in the year 1950. The new