



Ten – Pin Bowling



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About the Tutorial

Ten-pin bowling is a competitive sport where players roll a bowling ball on a wooden or synthetic lane towards the 10 pins placed at the end of the lane. It is quite a famous sport all around the world and played by millions. This tutorial will let you know the basics of ten-pin bowling and how it is played.

Audience

As the game is quite famous all over the world mostly as a leisure sport, most people have at least a little bit of idea about the game. This is a sport with simple rules which makes it more popular as a leisure sport.

This tutorial is meant for all those readers who want to learn ten-pin bowling.

Prerequisites

Even though it is a leisure sport, still certain level of pre-preparation is needed before playing this game. Players need to have proper hand-eye coordination, good physical fitness as well as good aerobic skills in order to excel in this game.

Players need to be flexible with good upper body power which is helpful in carrying the heavy ball and rolling it as heavier the ball is, the better will be the control over it. A lot of physical endurance is needed in order to reduce fatigue during the game. Body flexibility reduces the chances of muscle strain during the game.

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1. Ten-Pin Bowling – Overview

Ten-pin bowling is a sport where players try to hit 10 pins placed at the end of a wooden lane using a bowling ball. The pins at the end of the lane are arranged in a triangular shape by an automated machine. Based on the number of pins used or the type of bowling ball used, different countries have different variants of the game.



In this game, the players try to score points by knocking down as many pins as possible using the bowling ball. The players need to hold the ball using the three finger drills on the ball. Based on the number of pins knocked out, the player gets points. At the end of ten rounds, the player who scores maximum points becomes the winner.

A Little History of Bowling

The origin of bowling games is still obscure. British Anthropologists have discovered bowling balls in Egyptian graves dating around 3200 BC. Some historians also claim that it was originated in Germany in around 300 A.D. The first written reference of the game signals to 1366. King Edward III of England banned this game so that the troops concentrate more on archery practice.

A place in Southampton, England claims to be the oldest bowling lawn since 1299 which is still in operation. Nine-pin bowling was introduced to United States by the Europeans during the colonial era. Later on, it became very popular and is also called **Bowl on the green**. The first indoor bowling alley was made in New York City in 1840.



In 1895, prominent bowling leaders gathered at New York City to form the American Bowling Congress (ABC) and it started standardizing rules for the bowling game. In 1916, Women's International Bowling Congress (WIBC) was also formed. During the 1950s, the sport's popularity went sky high and the number of members in both ABC and WIBC increased gradually during that phase.

Night clubs as well as restaurants started introducing indoor bowling clubs all around the world. Around the mid-1960s, there were almost 12000 bowling alleys in United States.

Participating Countries

Both as a sport and as entertainment, bowling is quite popular all over the world. It is also the second highest sport around the world in which the players participate. Today there are more than 100 million bowlers in over 90 countries around the world. There is also an active movement to make bowling a part of Olympic sports. It has been enlisted in the eight shortlisted sports to be included at 2020 Olympics in Tokyo.

Some of the countries where bowling is famous both as a sport and entertainment include England, USA, Finland, Australia, Sweden, Denmark, Canada, Germany, Colombia, and Korea.

2. Ten-Pin Bowling – Playing Environment

Ten-Pin bowling is played on a smooth, narrow surface called **lane**. A **foul line** is there at the beginning of the lane which shouldn't be crossed by the players while bowling. At the end of the lane, pins are arranged in a triangular manner. The length between the pins and the foul line is 60 feet. About 15 feet from the foul line, a set of guide lines are there.

On the other side of the lane, gutters are there. If the ball drops off the lane, it falls into the gutter and gets carried past the pins. The approach area is 15 feet long and ends at the foul line. Here the player holds the ball and rolls it in the lane while making a proper balance. The width of the lane is 41.5 inches and consists of 39 woods.



At the end of the lane, the pins are arranged in four rows with one pin in the first row, two pins in the second row, three pins in the third and four pins in the last row. The pins are not numbered but the positions in which they are placed are numbered. The lane is protected by 18 millimetres of oil which starts 4 inches from the foul line and is applied 38 feet down the lane from that point.

3. Ten-Pin Bowling – Equipment

Ten-Pin bowling is a game in which two main equipment are used. These equipment include a ball and ten pins. The player has to hit the pins with the ball.

Bowling Ball

A bowling ball is one of the basic bowling equipment which is used to hit the bowling pins in the game. Previously, around the 1960s, hard rubber balls were used in the game which were replaced with polyester made balls around the 1970s.

In the 1980s, polyurethane was introduced to make the balls. In modern bowling, reactive resin made balls and particle balls are being used.

The way finger holes are arranged on the ball that decide the movement of the ball down the lane. There are three finger drills on a bowling ball to carry the ball using your fingers. In United States, players prefer balls with drills meant for their middle and ring fingers as well as thumb with which they will throw the ball.



The ball used is typically not shallow inside. The diameter of a ten-pin bowling ball is 8.5 inches with a circumference not more than 27 inches. The ball's weight should be below a maximum of 16 pounds. Except the grills, the ball has a smooth surface.

Bowling Pins

The pins are used as the target in the bowling game. The height of a bowling pin is 16 inches and width is 4.7 inches. The weight of the bowling pin should be between 3 pounds 6 ounces and 3 pounds 10 ounces. In case of a set of pins, the weight of a single pin shouldn't cross more than 4 ounces if wood or plastic coatings are there. For a synthetic pin, weight should be 2 ounces.

The top part of a pin shall have a uniform arc with a radius of $1.273 \pm \frac{1}{32}$ inch. Every bowling pin is allowed only 2 voids in the belly area. The voids are needed in order to balance the narrower top part with the wider bottom part else the pin would be too heavy to fall properly.



The pins are usually made of maple woods with stocks of rock glued to its bottom part. The outside part is coated with a plastic material. In some cases, synthetic materials are also used instead of wood. Synthetic pins are not allowed in case of ten-pin bowling.

4. Ten-Pin Bowling – How to Play?

The game consists of 10 rounds which are called **frames**. In a single frame, each player is given two chances to knock down all the pins that are arranged at the end of the lane. In a 10 pin bowling game, there are total 10 pins. At the end of the game, the final score is calculated while taking all 10 frames into consideration.

Strike

The player starts the game by bowling the ball as the first chance of a single frame. If in a single chance, he successfully knocks down all ten pins, it is called a **strike** and the frame is completed. After the first ball, if still there are some pins which were not knocked down, a second chance is given to the player. Those pins which are knocked down first are counted and removed.

Spare

Once the knocked down pins are removed, the player rolls the ball for the second time and if he successfully knocks down all the pins in the second chance, it is called a **spare**. If there are multiple players scheduled on the lane, then the game passes to the next player until all players have finished bowling.

The ten pins are automatically arranged by a machine in an equilateral triangle shape at the end of the lane. Each pin is 30cm apart from the other. The distance is measured from center to center. The pins are numbered based on their position and the pin at the first position is called the **head pin**. The numbering goes on backward in right direction.

Pin Scatter

Because of large spacing among the balls as well as the small size of the ball, it is impossible to knock down all pins by means of contacting with the ball. So players choose different tactics in their shots which would result in a chain reaction among the pins making all of them fall down.

- For a right-handed bowler, if the ball contacts just the 1st, 3rd, 5th and 9th pin, chain reaction occurs and it may knock down all pins.
- For left-handed bowler, pins at 2nd, 4th, 6th and 8th positions are ideal for a complete knock down.

The process of each pins falling down because of a chain reaction is also called **pin scatter**.

Brooklyn

Brooklyn is a special kind of strike in which a player obtains a strike by hitting the pins in the opposite pocket from which he/she has thrown the ball. In case of right-handed bowler, Brooklyn occurs when the ball crosses over to 1-2 pocket and in case of left-handed bowler the ball crosses 1-3 pocket. This strike is also known as **jersey side**.

After the knock, if a pin is found to be wobbling or the automatic machine picks up a pin while it is still wobbling, it is considered as standing and no points are given because of that pin. Similarly, if a pin is moved from its position, it doesn't change its designation.

Ball Releasing Tricks

Players opt for different tricks while releasing the ball on the lane in order to get a perfect strike. Mostly there are two types of releasing styles. Players can either release the ball straight or they can release the ball with a hook. Mostly new players try for straight techniques whereas experienced players opt for hooks.



In case of straight releases, the right-handed players target for 1-3 pocket, whereas the left-handed players target for 1-2 pocket which is ideal for a chain reaction among the pins. In case of hook, the ball first travels straight but gradually it turns towards the opposite pocket. Players use different techniques to hook a ball.

There are mostly two ways to produce a hook. In the first way, players first let go of their thumb and then their middle finger and ring finger simultaneously while releasing the ball on the lane. This gives the ball the required spin that is needed for a perfect hook.

In case of a right-handed player, the perfect time to let go off the thumb is at 10 o' clock position. That means while moving his hand at similar to 12 to 10 position of a clock, he needs to release the ball for a perfect hook. For a left-handed bowler, the ideal position is 2 o' clock.

From players to players, techniques and positioning of thumb to get a hook varies. The second way to generate a hook is to hold the ball without any thumb in the thumb hole. In this case, bowlers usually use two of their fingers to generate a hook.

Researches show that ideal shots enter into the pin pockets at an angle of 6 degree. So players usually throw the ball at one side of the lane near the gutter. In some cases, players use one of their hands to use their fingers, whereas the other hand is placed on the top of the ball in order to release it in the form of a **shovel-pitch** from the side.

Granny Style

In case of extremely young or physically handicapped players, they are allowed to hold the ball in two hands and swing it forward in between their legs. Usually in this kind of release style, players have to release the ball close to the foul line. This is also called **granny style**.

Presently the **shovel style hook** release is gaining more popularity among the players because of more revolutions as well as speed it generates to knock down the pins.

Bounce Pass

Another technique is called **bounce pass** where players throw the ball from their chest towards the pins. This style is prohibited by many bowling communities as it causes damages to both the lane as well as pins.

Backup Style

Another style of bowling is called **backup style** where bowlers flick their wrist either clockwise (for right-handed) or anti clockwise (for left-handed) direction. This is very much similar to hook release where the ball moves in a curved path rather than in a straight line.



A right-handed backup follows a left-hander conventional path, whereas a left-handed backup follows a right-handed conventional path. It is a trick which is harder for newcomers to learn. It can also cause injuries to wrist areas in case of heavier balls.

Spinner

Typically, a bowling ball rolls vertically. If the thumb and the finger holes are drilled at proper places, the ball hooks perfectly. In Asian countries, where the oil conditions are difficult and the lane maintenance is very poor, it's really hard to hook the ball on the lane. In those places, spinner UFO releases are more popular.

In case of spinner release, a ball will always slide on the lane instead of rolling vertically regardless of the oil conditions of the lane. The ball mostly takes an unconventional path through the pins creating a domino effect to knock down the pins which is quite rare in conventional releases.

Spinner release is performed by rotating the ball counter clock wise until the hand is on the top of the ball; two fingers are at 12 o' clock position and the thumb at 6 o' clock position. While releasing the ball, all fingers come out of the ball simultaneously. Spinning is harder to master and if not performed correctly might cause injury. Players from Taiwan and Hong Kong mostly follow this type of release.

5. Ten-Pin Bowling – Scoring

In case of knocking down pins, a player scores one point for every knocked-down pin. As there are two chances in a single frame, the combined score of both the chances are the final score of that frame. In case, a player fails to knock down all ten pins even after the two chances of a frame, the frame is called an **open frame**.

If all the ten pins are knocked down in a single frame, bonuses are awarded to the player based on the number of chances taken by him to knock down all pins. If all ten pins are knocked down by the player in the first chance itself, it is considered as a strike. A strike is specified with a "X" symbol in the score sheet.



	1	2	3	4	5	6	7	8	9	10	HDCP
JACO	6-0/32	8/X	63	7-63	9-SX	81					
	6	19	24	44	63	72	79	88	97	116	116
BETH	06	7-X	0-	36	09	04	3-X	53			
	6	13	23	23	32	41	45	48	66	74	74
ALISON	X	9-	8-	6-	8/X	9-	3-	8-X	71		
	19	28	36	42	61	70	73	81	99	107	107
BRETT	81	63	7-	9/X	9/X	9-	34	6-S7	1S8-		
	9	18	25	44	63	72	79	85	93	101	101
TESSA	17	9/X	8-	9-	9-	51	9-S1-	9-	27		
	8	26	34	43	52	58	67	68	77	86	86
JOBBY	0-	5/X	1-	9-	X	S71	6/X	7-X	XXX		
	0	11	12	21	39	47	64	71	101	131	131

In case of a player scoring a strike, he gets 10 points for the knocked down pins plus whatever is scored in the next two balls as bonus point. In this way, the points scored in the next two frames of the strike are counted twice. The bowler gets a chance to play two extra balls in case of achieving a strike in the first ball of the 10th frame and one extra ball in case of scoring a spare in the second chance.

For example, if in the first frame the player hits a strike and in the second frame's first chance he scores 5 and in the second chance of the same frame, he score 3, his total score for the first frame will be $10+5+3=18$ and for the second frame, his score will be $5+3=8$ thus making a total score of $18+8=26$.

Double

In case of two consecutive strikes in two consecutive frames, a player scores a **double**. In case of a double, the scoring of the player can be explained through an example. Suppose Frame 1= 10 (Strike) and frame 2=10 (Strike), then in frame 3, if the player hits three pins in the first chance and four pins in the second chance, the total will be calculated as follows.

- Frame 1 Total= $10+10+3=23$
- Frame 2 Total= $10+3+4=17$
- Frame 3 Total= $3+4=7$
- Total score from 3 frames are $23+17+7=47$

Triple

If a player scores three consecutive strikes in three frames, he scores a **Turkey** or **Triple**. In case of a turkey, the total scoring is explained below. Suppose Frame 1= 10 (Strike), frame 2=10(Strike) and frame 3=10(Strike) then in frame 4 if the player hits three pins in the first chance and four pins in the second chance. Then the totals will be:

- Frame1 Total= $10+10+10=30$
- Frame2 Total= $10+10+3=23$
- Frame3 Total= $10+3+4=17$
- Frame4 Total= $3+4=7$
- Total score will be $30+23+17+7=77$

Long Consecutive Strikes

The longer consecutive strikes are called by various names like **Llama** (4 consecutive), **pack** (6 consecutive) mostly by local languages. Six strikes in a row are referred as **wild turkeys**, whereas nine strikes in a row are referred as **golden turkeys**. A game with 12 strikes is rare and is called a **perfect game**. It is also referred as **thanksgiving turkey**.

Clean Game

A **clean game** is a game in which a player shots at least one strike or spare in each frame. The maximum points that can be scored from a strike is 30. In case of the 10th frame, if the player scores a strike, he/she will be awarded two more chances. If he again scores two strikes, for that frame he will be awarded 30 points which is also called **striking out**.

In case of a spare, when the player knocks out all pins in the 2nd chance of a frame, the player will be awarded 10 points plus the points scored in the next chance as a bonus. For example, in the first chance of frame, a player hits six pins and in second chance he hits four pins, then he has scored a spare. Now in frame two if the player hits three pins in the first chance and four pins in the second chance, the totals will be:

- Frame 1 total=6+4+3=13
- Frame 2 total=3+4=7
- The total score will be 13+7=20 for the two frames.

The maximum score that can be scored in a single game is 300 with 12 consecutive strikes which is also called a perfect game. In the bowling score machine, different symbols are shown for different instances. Here "X" stands for a strike, "/" stands for a spare. A – (**dash**) symbol signifies no pins were knocked down in that frame whereas **F** indicates a foul.

6. Ten-Pin Bowling – Rules

Fouls

When a player crosses the foul line and touches the lane during the bowling, a foul is awarded to the player. In case of a foul, even if some pins are knocked down, those are not counted. A foul will be counted as a ball with zero score. If the player knocks down all pins in the second chance after the foul, it will be considered as a spare.

If less than 10 pins are knocked down in the second chance after a foul, it will be considered as an **error**. In case of a player scoring a foul in the second chance of a frame, only the score that has been scored in the first chance will be considered as the total score for that specific frame.

If a player scores a foul in the first chance of the 10th frame and then knocks down all 10 pins in the second chance, it will be considered as a spare and he/she will be given a third chance to play. The spare will be calculated from the last two balls. In case of a foul in the third ball of the 10th frame, only the scores of the first two balls of the 10th frame will be considered while totalling the score.

Based on the game rules, no appeal is allowed once the automatic machine signals for a foul or the judge declares a foul. If the automatic machine stops working, a human judge will be appointed by the officials to check the fouls. In league games, opponent captains can act as a judge or can appoint anyone else to check the fouls.



Dead Ball

In case of a dead ball, the chance is not counted and the player is given another chance to bowl. Cases where a ball is considered dead are:

- While delivering the ball, if the player notices that some of the pins are missing from the set-up.
- If a human pin setter interferes and removes any of the pins before player has rolled the ball or before the ball reaches the pins.
- If a player bowls on the wrong lane out of turn.
- If a player gets interfered with any pinsetter, moving objects or by any spectator before the rolling or during the delivery, he can ask for a re-spot of the pins.
- When the ball comes in contact with any foreign obstacle.



While playing, a player has to follow some basic bowling etiquettes like stop lofting excessively on the lane and refraining from using abusive languages or obscene gestures during the game. Wet shoes are not allowed as it damages the playing area. Players should be ready before their approach and shouldn't delay the game while getting the set-up.

7. Ten-Pin Bowling – Champions

In case of ten-pin bowling, there are two world organizations who govern the sport and its rules. These organizations are BTBA (British Tenpin Bowling Association) and USBC (United States Bowling Congress). In England, all ten-pin bowling events are sanctioned and governed by BTBA where as USBC works as the governing body in United States.

Some of the ten-pin bowling tournaments that are played worldwide are:

- World Tenpin Bowling Championships
- PBA World Championship
- European Bowling Tour
- BTBA National Championships
- WTBA World Championships
- Commonwealth Tenpin Bowling Championships

Ten-Pin bowling is a sport where the bowler has to hit all the ten pins in order to get good scores. Let us now discuss some of the champions of ten-pin bowling and their careers.

Chris Barnes

Chris Barnes is an American bowler who has won the PBA Rookie of the year in 1998 and PBA Player of the Year in 2007-2008 season. He is also the winner of Triple Crown by winning US Open, PBA World Championship, and Tournament of Champions.

In his full career, he has won 18 PBA Tour Titles. In 2005 and 2006, he won Motel 6 Roll to Riches Tournament. In the later years, he performed in many tournaments but either got the second or third rank. In 2014, he won Qubica AMF World Cup.



Bill O'Neil

Bill O'Neil is a ten-pin bowler from North America. He has won gold medals in World Championships in 2010 and 2013. In 2005-06 season, he won PBA Rookie of the Year. In 2009, he won first PBA tour title by winning PBA Chameleon Championship in which he defeated Ronnie Russel. In the same year, he won second PBA title by winning Lumber Liquidators US Open.

In 2010, he won his third PBA title by winning Pepsi Viper Championship. In 2012, he was the winner of



Aka Seltzer Plus Cold Cheetah Championship. In 2014, he won his fifth PBA Title by winning Lucas Oil PBA Badger Open. In 2015 he won his sixth PBA title by winning PBA Oklahoma Open.

Jason Belmonte

Jason Belmonte is a ten-pin bowler from Australia who uses two-handed shovel style to shoot the pins. He has won PBA Player of the Year three times and is also winner of 12 PBA titles. He started taking part in the competition at the age of three and won the first event at the age four.

As far as titles are concerned, he has won European Bowling Tour, World Tenpin Masters Championships in 2007. In 2010, he won Korea Cup. In 2009, he won his first PBA title and in the season of 2011-2012, he won three PBA Titles. Along with this, he has also taken part in Commonwealth games in which he won one gold, one silver, and two bronzes.



Tommy Jones

Tommy Jones is a ten-pin bowler from America who has won PBA Rookie of the Year in 2001-02 season. He joined PBA in 2000 and till now he is the owner of 16 PBA titles. In 2004-2005 season, he won 20 out of 21 events but could not win Player of the Year.

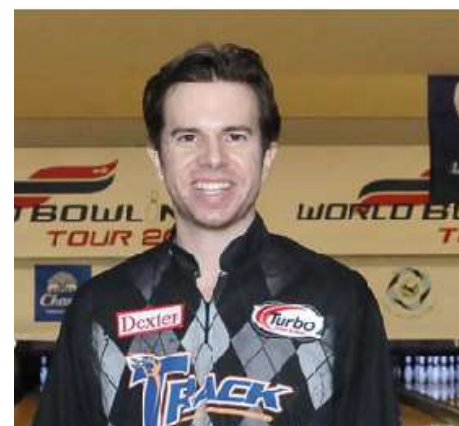
In 2005-06 season, he won 20 out of 21 events, won TV finals six times and four titles. He won two PBA titles in 2006-07 season. In the seasons further, he won PBA titles and in 2012-13 season, he won WBT International title. In 2015, he won the PBA title 16th time.



Mike Fagan

Mike Fagan is a ten-pin bowler from America who takes part in PBA, WBT, and EBT events. He has also taken part in many international events while being a part of USA team. His PBA career was started in 2002 and till now he has won five PBA titles of which two are major.

He got his first PBA title in 2007 when he won PBA Exempt Doubles Classic. In 2010, he won his first singles title in One-a-Day Dick Weber Open. In 2012, he won Brunswick Euro Challenge which was his third PBA title. He won his fifth PBA Title in PBA World Championships.



Kelly Kulick

Kelly Kulick is an American ten-pin bowler who is the winner of professional women's bowling titles three times, and a PBA title. She has the honour of being the first woman to win Professional Bowlers Associations title. She started her career in 2001 and won Rookie of the Year award.

In 2003, she won US Women's Open. PBA women membership was started in 2004 and in 2006, Kulick won PBA Tour Exemption due to which she was able to participate in 2006-07 PBA season. Kulick has won many other competitions like PBA Senior Ladies and Legends in 2008, PBA Women's World Championships in 2009, USBC Queens in 2010 and many others.



Shannon O'Keefe

Shannon O'Keefe is a ten-pin bowler from US who has become world champion five times. She became a member of Team USA for the first time in 2005 and has won many gold, silver, and bronze medals in international competitions.

She has won New York State Queens Title two times and Rochester New York Queens Title three times. In 2011, 2012, and 2014, she won Texas Bluebonnet Queens Title. In 2007, she participated in US Women's Open and was the runner-up and in 2012 she earned a third place in US Women's Open.



Liz Johnson

Liz Johnson is a professional ten-pin bowler from America who has won Professional Women's Bowling Association tour 11 times. In 2004, she became a member of Professional Bowlers Association (PBA). She became the first woman to qualify for PBA tour event. In 2005, she got the PBA title by winning East Region Kingpin Lanes Open. In 2007, she won US Women's Open.

She won her first PBA title in Don and Paula Mixed Doubles event. Her first Singles title came in 2009 when she won PBA Women's Series. In 2011, she won gold medal in WTBA World Women's Championship by being a part of USA team. In 2015, she won USBC Queens Tournament.



Danielle McEwan

Danielle McEwan is a ten-pin bowler from America who became the member of team USA in 2012. In 2015, she became a part of Professional Women's Bowling Association and won Smithfield PWBA Tour Championship. In the same year, she was the winner of South Point PBA West Challenge.

She also won gold medal with her partner Kelly Kulick in Women's World Bowling Championships. She was a part of USA team that won gold medal in WBC Team Competition. In Masters Competition, she won a bronze medal. In March 2016, she won PBA WBT H.H. Emir Cup.

