Meta title: Field Hockey Ball: Size, Weight, Types, Rules, and Specifications
Meta description: Learn all about a field hockey ball, including official size and weight, materials, colours, smooth vs dimpled balls, types, and tips for choosing the right one.
Slug: field-hockey-ball
Focus keyword: Hockey ball

All You Need to Know About the Field Hockey Ball

Field hockey is one of the fastest and most skill-intensive team sports, with players constantly passing, dribbling, receiving and striking the ball at high speed. While the hockey stick gets much of the attention when players choose their equipment, the field hockey ball is equally important.

The ball may look simple, but its size, weight, hardness and surface all influence how it behaves on the pitch. A regulation hockey ball has to meet specific requirements set by the International Hockey Federation (FIH) so that players can compete with equipment that has consistent characteristics.

Whether you are a beginner learning field hockey, a parent buying equipment, or an experienced player looking to understand hockey equipment better, knowing the basics of the field hockey ball can help you choose the right one.

What is a Field Hockey Ball?

A field hockey ball is a small, hard, spherical ball used in outdoor field hockey. Players use their sticks to control and move the ball, including through passes, hits, pushes, flicks and shots on goal.

Unlike balls used in sports such as football or tennis, a field hockey ball is hard and designed to withstand repeated impacts from hockey sticks. It is also relatively heavy for its size, allowing it to travel quickly across the playing surface.

The FIH regulates the specifications of the ball used in hockey. Under the FIH Rules of Hockey, the ball must be spherical, have a circumference of 224 to 235 mm, weigh 156 to 163 grams, be made from any material, and be hard with a smooth surface. Indentations on the surface are permitted.

Field Hockey Ball Size and Weight

The official dimensions of a field hockey ball are important because even small differences can affect how the ball behaves during play. According to the FIH specifications:

Field Hockey Ball Specification	Official Requirement
Shape	Spherical
Circumference	224–235 mm
Weight	156–163 g
Material	Any suitable material
Surface	Hard and smooth; indentations permitted
Colour	White or an agreed contrasting colour

The official circumference of 224–235 mm works out to an approximate diameter of 71.3–74.8 mm when calculated from the circumference. However, the FIH specification itself defines the ball using circumference rather than a diameter range.

The permitted weight is 156–163 grams, or approximately 5.5–5.75 ounces.

These specifications provide a consistent baseline for competitive hockey and help ensure that the ball has predictable characteristics when players pass, receive or strike it.

What is a Field Hockey Ball Made Of?

The FIH rules do not prescribe one specific material for the ball. Instead, they state that the ball can be **made of any material**, provided that it meets the other requirements, including being spherical, hard and within the specified weight and circumference ranges.

Modern field hockey balls are generally manufactured from durable synthetic materials and plastics. Manufacturers can use different internal constructions and materials depending on the ball's intended performance, durability and price.

Some hockey balls are designed with a solid construction, while others may use different core materials or layered construction. These variations are part of the manufacturer's design rather than a universal FIH requirement.

The important point for players is that a competition ball should meet the applicable FIH requirements and, where required by a competition, carry the appropriate approval.

Why Is a Field Hockey Ball So Hard?

A field hockey ball needs to withstand repeated contact with hockey sticks, including powerful hits and drag flicks. A soft or highly compressible ball would behave very differently and would not provide the consistency required for the sport.

Its hard construction also means that the ball can travel at considerable speed. This is one reason why players use protective equipment such as shin guards and mouthguards, while goalkeepers wear substantially more protective equipment.

The FIH rules also prohibit players from playing the ball dangerously, reinforcing the importance of controlling how the ball is struck and played.

Smooth vs. Dimpled Field Hockey Balls

One of the most noticeable differences between hockey balls is their surface. Some have a completely smooth appearance, while others feature small indentations or dimples.

The FIH rules allow indentations on the ball's otherwise smooth surface. However, it is important not to confuse this rule with a universal FIH requirement that one specific surface pattern must be used on every particular type of pitch. The rules establish the permitted ball characteristics; manufacturers can develop different surface designs for different playing conditions.

Smooth Hockey Balls

Smooth balls have an uninterrupted outer surface and are commonly used for training and match play depending on the ball and playing conditions.

They can be particularly suitable for surfaces where the ball's interaction with the pitch already provides sufficient consistency and speed.

Dimpled Hockey Balls

Dimpled hockey balls have small indentations across their outer surface. These designs are particularly common in modern high-level hockey equipment.

The purpose of surface indentations is related to how the ball interacts with the playing surface, especially under wet conditions. A ball's surface texture can affect its movement and interaction with water and artificial turf.

However, the exact performance characteristics vary between manufacturers and ball models. Therefore, when choosing between a smooth and dimpled ball, it is better to follow the manufacturer's recommendation for the surface you play on and the competition's equipment requirements rather than assuming that one design is universally mandatory.

Why Do Some Hockey Balls Have Dimples?

The dimples on a hockey ball are not simply decorative. Surface indentations can alter the way the ball interacts with the pitch and water.

Modern hockey is predominantly played on synthetic surfaces, and some elite pitches are irrigated to create a fast and consistent playing surface. On a wet pitch, the interaction between the ball, water and turf can influence how smoothly the ball travels.

A textured surface can change the way water moves around the ball and can influence rolling behaviour. This is one reason manufacturers develop different ball-surface designs for particular playing environments.

However, claims that FIH universally requires a specific number of dimples or that every water-based pitch must use a dimpled ball should be treated cautiously. The official FIH ball specification simply states that the ball must have a smooth surface, **with indentations permitted**.

What Colour Is a Field Hockey Ball?

The traditional field hockey ball is white, but the FIH rules allow another colour when it provides suitable contrast with the playing surface.

The official requirement states that the ball is to be **white or an agreed colour that contrasts with the playing surface**.

Visibility is especially important because players must be able to track a ball travelling quickly across the pitch. The colour used in a particular competition can therefore depend on the playing surface and event requirements.

How Fast Can a Field Hockey Ball Travel?

A field hockey ball can reach very high speeds when struck by skilled players. The speed depends on several factors, including the player's technique, stick speed, angle of contact, type of shot and playing conditions.

Penalty corners are particularly associated with high-speed shots and drag flicks. Professional players can generate extremely high ball speeds, which is one reason the sport requires players to understand safe techniques and use appropriate protective equipment.

It is important, however, to distinguish between **measured performance records or commonly reported speeds** and official FIH specifications. The FIH rules do not define a single maximum speed for a field hockey ball during normal match play.

FIH equipment testing does include ball-speed-related testing for hockey sticks. In that laboratory test, ball speed is assessed using FIH-approved hockey balls and a specified testing procedure.

Field Hockey Ball vs. Tennis Ball

A tennis ball should not be used as a substitute for a regulation field hockey ball.

The two balls differ considerably in size, weight, construction and behaviour.

A standard tennis ball weighs only **56.0–59.4 grams**, whereas a regulation field hockey ball weighs **156–163 grams**. A tennis ball also has a felt-covered, pressurised construction, while a field hockey ball is hard.

This difference affects everything from rolling speed and bounce to receiving and striking technique. Practising with a tennis ball may be useful for certain drills, but it will not accurately replicate the feel and behaviour of a regulation hockey ball.

For players learning proper passing, receiving and ball control, using an appropriately sized hockey ball is therefore preferable.

Types of Field Hockey Balls

Field hockey balls can broadly be grouped according to their intended use.

1. Match Balls

Match balls are designed for competitive play and are manufactured to meet the required specifications. If you are playing in a tournament or organised competition, check the event regulations to determine whether an FIH-approved ball is required.

2. Training Balls

Training balls are designed for repeated practice sessions. Depending on the model, they may be manufactured with different materials or construction characteristics to suit particular drills and levels of play.

Always check the manufacturer's specifications rather than assuming that every training ball has exactly the same characteristics as a competition ball.

3. Indoor Hockey Balls

Indoor hockey is played on a different type of playing surface and has its own rules and equipment requirements. FIH indoor hockey rules also specify a spherical, hard ball with a

224–235 mm circumference and **156–163 gram weight range**, with a smooth surface and permitted indentations.

Because indoor hockey is played on a smooth indoor surface, players may prefer balls designed specifically for indoor conditions.

How to Choose the Right Field Hockey Ball

Choosing the right hockey ball depends on how and where you play.

1. Check the specifications

If you need a regulation ball, check that it falls within the FIH requirements of **156–163 grams** and **224–235 mm circumference**.

2. Consider your playing surface

Think about whether you normally play on a dry synthetic pitch, watered artificial turf or an indoor surface. Select a ball designed for the conditions in which you regularly play.

3. Match the ball to your level

Beginners and recreational players can generally start with a suitable training ball. Competitive players should look for a match-quality ball that meets the requirements of their league or tournament.

4. Look for FIH approval when required

If you are buying a ball for high-level competition, check whether the competition requires an FIH-approved ball. Do not assume that every ball labelled "match" or "professional" is automatically approved for every competition.

5. Prioritise visibility

Choose a ball colour that is easy to see against your playing surface. White is traditional, but another contrasting colour may be more appropriate in certain conditions.

How to Maintain a Field Hockey Ball

A hockey ball is built to withstand considerable impact, but proper care can extend its usable life.

After playing, clean off mud, dirt and turf debris. If you play on a wet surface, dry the ball before storing it. Keep it away from unnecessary exposure to extreme heat and prolonged direct sunlight.

You should also inspect the ball regularly. Replace it if it develops significant cracks, deep damage, deformation or an uneven rolling pattern.

A damaged ball may not travel predictably and can affect the quality of training or competitive play.

Conclusion

The **field hockey ball** is a small but highly engineered piece of equipment that plays a central role in the speed, control and consistency of the game.

Under the FIH Rules of Hockey, a regulation ball is **spherical**, has a circumference of **224–235 mm**, weighs **156–163 grams**, can be made from any material, and must be hard with a smooth surface. Indentations are permitted, while the ball must be white or another agreed colour that contrasts with the playing surface.

When choosing a hockey ball, don't focus only on its appearance or price. Consider its specifications, construction, surface design, intended use and the type of pitch on which you play. If you compete, also check whether your league or tournament requires an FIH-approved ball.

Understanding the field hockey ball may seem like a small part of learning the sport, but using the right equipment can make training more consistent and help players develop better control, passing and shooting skills.

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Frequently Asked Questions

1. What is the official size of a field hockey ball?

An official field hockey ball has a circumference of **224–235 mm**. Based on that circumference, its approximate diameter is **71.3–74.8 mm**. The FIH officially specifies circumference rather than diameter.

2. How much does a field hockey ball weigh?

A regulation field hockey ball weighs between **156 and 163 grams**.

3. Is a field hockey ball hard?

Yes. FIH rules specify that the ball must be **hard** and have a smooth surface, although indentations are permitted.

4. What is a field hockey ball made of?

FIH rules allow the ball to be made from **any material**, provided it meets the required specifications. Modern hockey balls are commonly made using durable synthetic materials and plastics.

5. Why do some field hockey balls have dimples?

Indentations can affect the ball's interaction with the playing surface and water, which is why manufacturers use different surface designs. FIH rules permit indentations on the ball's otherwise smooth surface.

6. Can you use a tennis ball for field hockey?

A tennis ball can be used for certain training drills, but it should not be treated as a substitute for a regulation hockey ball. It is significantly lighter and has a completely different construction and playing behaviour.

7. What colour is a field hockey ball?

A hockey ball is generally white, but the FIH rules permit an agreed colour that contrasts with the playing surface.

8. How long does a field hockey ball last?

There is no fixed lifespan for a hockey ball. Its durability depends on its quality, frequency of use, playing surface and impact it receives. Replace a ball if it becomes cracked, badly damaged, deformed or no longer rolls consistently.

9. Can you use a dimpled hockey ball on a dry pitch?

A dimpled ball may be usable on a dry pitch, but the most suitable ball depends on the ball's design, playing surface and competition requirements. Always follow the manufacturer's recommendation and the rules of the competition rather than assuming that one surface type is universally required.

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Read More: [Hockey Field Dimensions]

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The official rules also prohibit players from playing the ball dangerously, reinforcing the importance of controlling how the ball is struck and played.

Smooth vs. Dimpled Field Hockey Balls

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A textured surface can change the way water moves around the ball and can influence rolling behaviour. This is one reason manufacturers develop different ball-surface designs for particular playing environments.

However, claims that the governing body universally requires a specific number of dimples or that every water-based pitch must use a dimpled ball should be treated cautiously. The official ball specification simply states that the ball must have a smooth surface, with indentations permitted.

What Colour is a Field Hockey Ball?

The traditional field hockey ball is white, but the official rules allow another colour when it provides suitable contrast with the playing surface. The official requirement states that the ball is to be white or an agreed colour that contrasts with the playing surface.

Visibility is especially important because players must be able to track a ball travelling quickly across the pitch. The colour used in a particular competition can therefore depend on the playing surface and event requirements.

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Always check the manufacturer's specifications rather than assuming that every training ball has exactly the same characteristics as a competition ball.

3. Indoor Hockey Balls

Indoor hockey is played on a different type of playing surface and has its own rules and equipment requirements. Official indoor hockey rules also specify a spherical, hard ball with a 224–235 mm circumference and 156–163 gram weight range, with a smooth surface and permitted indentations.

Because indoor hockey is played on a smooth indoor surface, players may prefer balls designed specifically for indoor conditions.

How to Choose the Right Field Hockey Ball

Choosing the right hockey ball depends on how and where you play. Keep these factors in mind:

- **Check the specifications:** For a regulation ball, ensure it meets the official requirements of 156–163 grams in weight and 224–235 mm in circumference.
- **Consider your playing surface:** Choose a ball suited to the surface you play on, whether it is a dry synthetic pitch, watered artificial turf or an indoor court.
- **Match the ball to your level:** Beginners and recreational players can opt for a suitable training ball, while competitive players should choose a match-quality ball that meets their league or tournament requirements.
- **Look for official approval:** If you are buying a ball for competitive play, check whether your league or tournament requires an approved ball. A "match" or "professional" label does not automatically mean a ball is approved for every competition.
- **Prioritise visibility:** Choose a ball that contrasts clearly with the playing surface. White is traditional, but another contrasting colour may be more suitable in certain conditions.

How to Maintain a Field Hockey Ball

A hockey ball is built to withstand considerable impact, but proper care can extend its usable life. After playing, clean off mud, dirt and turf debris. If you play on a wet surface, dry the ball before storing it. Keep it away from unnecessary exposure to extreme heat and prolonged direct sunlight.

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Conclusion

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