



HISTORICAL CONTEXT

The game of soccer, or a soccer-like game, dates back as far as 1697. Of course, during this time the game and its equipment differed from today's game. For example, the first games played in China supposedly used "a leather ball stuffed with animal hair and cork". Likewise, Japanese played a comparable game called "kemari" around the same time. And eventually, North Africa would delve into the game by the seventh century B.C. – or at least a game along the lines of soccer.

The games equipment was much different than today; the use of animal body parts such as their bladders and heads were common practice. Yet by the 1300s, the game had progressed significantly – by this time called "football" – throughout Britain among service men of the Army. However, due to the roughness of the game, King Edward II banned the game.

The Greeks and Romans began their run at the game around this same time – also known as "espiskyros (Greeks) and "follis" (Romans); a similar game widespread amongst Roman Soldiers was known as "harpastum", which was much more aggressive, as players attempted to tackle the person with the ball – a lot like Rugby or American Football. Soon after, the game became well-liked across Italy and the Roman Empire. Ultimately, shifting to England.

By the eighteenth century, soccer was still played in England and became quite popular in public schools and at the collegiate level by the nineteenth century. Interestingly, participating schools had their own set of rules, which would lead to a formal set of rules by 1862 to establish uniformity for those who would continue to play beyond school. Accordingly, the English Football Association was established in 1863. This would essentially create the separation of rugby and soccer. In other words, no more use of the hands, arms, and upper body to violently shove and tackle players.

The segmentation of soccer from rugby created a game not only well-received throughout most of Europe, but across the globe by the early twentieth century. By the end of the twentieth century to present day, it is the most popular sport on the planet.

MATERIALS

As referenced above, the game's equipment was much different than present day. Today, soccer uses a ball made of synthetic leather; typically, polyurethane or polyvinyl chloride, which acts as an outer shell to the ball's core of inflated rubber or rubber-like bladder. The shell is stitched to retain and protect the core or bladder of the ball. This composition differs from earlier models of the soccer ball, as it was comprised of genuine leather and held



together with cotton laces. However, these fabrics breakdown much easier than today's ball. The following steps summarize the manufacturing process and quality of today's soccer ball:

Source: <http://www.madehow.com/Volume-5/Soccer-Ball.html#ixzz5tCi6fTBt>

- 1) *Lining the cover material: Sheets of synthetic leather are backed with several layers of cloth, to strengthen the material. The sheets are fed through a press that applies a latex adhesive and attaches the cloth. Material for a cheaper ball will receive a two-layer backing. A sturdier, more expensive ball will have four layers of cloth attached.*
- 2) *Cutting the panels: After the adhesive is fully dried, the sheets of synthetic leather are passed to a die-cutting machine. Workers load the cloth into the die cutter, which cuts the hexagonal panels, punching the stitch holes at the same time.*
- 3) *Imprinting the panels: Some of the cut panels are next taken to a screening area. Workers silkscreen the panels individually, imprinting them with the manufacturer's logo. This is done with a specialty fast-drying paint.*
- 4) *Making the bladder: The bladder can be made from either natural or synthetic rubber. The raw material is gently heated and forced into a mold, where it forms a balloon. As the material cools, it wrinkles. Next, workers remove the bladders and partially inflate them to smooth them out.*
- 5) *Stitching and final assembly:*
 - *Now the balls are ready to be assembled. The 32 panels and the bladder are packed in a kit for the stitcher. The stitcher uses a pattern to guide him or her in assembling the panels in the proper order. The stitcher sews the panels together by hand.*
 - *When the cover is sewed, the stitcher inserts the bladder and sews the final seams. The ball is complete. In order to ensure that the bladder has not been punctured by a needle during stitching, a worker pumps up the ball. The ball may also be weighed and measured at this point. Then, the finished ball is deflated again and packed for shipping.*

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