

The researchers then try to scale the size of a football pitch to account for those anthropometric differences. A pitch that was the same relative size for women as it is for men would, they say, be 93 metres long and 61 metres wide, down from the current recommended dimensions of 105 metres x 68 metres (see table).

Nor is it just the pitch. Shorter female keepers can cover a smaller part of the goal than a man can. To achieve parity between the sexes, the women's goal, say the researchers, should be shrunk from 7.32 metres wide and 2.44 metres high to 6.76 metres across and 2.25 metres high. Even the ball would change: taking account of women's lower leg strength would require a ball weighing 287 grams, rather than the 430-grams of a standard male ball (though that would alter how the ball behaves in flight). Put another way, say the researchers, expecting women to play with a men's ball is a bit like asking men to kick a 623-gram basketball-sized sphere around.

Admittedly, the maths are rough-and-ready. And the researchers are quick to say they are not arguing that the rules should actually be changed (such discussions, they say, are for the game's administrators). But although football expects men and women to play by the same rules, many other sports try to account for sex differences. In athletics, women put lighter shots, throw lighter discuses and leap over lower hurdles than men do. The WNBA, a women's professional basketball league in America, uses a lighter ball. Volleyball uses a lower net. Indeed, women's football used lighter balls until the 1990s.

But changing the rules of a sport is as much about culture as it is about science. World Rugby, the international governing body for rugby union, is planning tests of a ball sized for women's smaller hands. The response from the players themselves is said to have been mixed. Some are keen on the idea. Others worry that, after fighting for so long to be taken seriously, making the women's game even slightly easier might damage its reputation.

Designing for women is less controversial when it comes to kit. In the past, women's football boots were derived from shoes designed for a man's weight, foot size and biomechanics. Boots made specifically for women are beginning to appear. A firm called Ida Sports sells a boot that is wider around the toes, narrower at the heel and gives more support round the arch,