

# The Ripple Sole Controversy

Ripple soles on golf shoes seem to be stirring up about as much argument as golf cars did before extensive use of cars was accepted.

Seemingly the soles are comfortable or there wouldn't be enough of them worn to cause debate. There have been no arguments about the protection the soles give against accidents that occur in the clubhouse or about their convenience in clubhouse areas where spiked shoe traffic is not allowed.

But what they do — or don't do — to the greens has been a subject of controversy. Some supts. maintain that Ripple soles, if they do ripple greens, don't do it any more than spikes, ball marks or nicks around the hole when the putter is used as a crutch.

The USGA recently polled green chmn. on Ripple soles. Of 214 who replied, 136 considered Ripple soles most damaging to putting green surface, 50 thought rubber lug soles did the damage and 46 rated spikes the worst offenders.

Nearly all of the responding chmn. thought any damage by soles is only temporary. Some suggested that Ripple, lug or spike marks made convenient alibis for missing putts. One chairman replied: "Some players just don't know how to walk."

The debate is getting scientific. Here we print a study on the physical and psychological effects of Ripple soles. — Editor

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Golf shoes with flexible Ripple soles have been shown to be significantly less injurious to turf greens than shoes with spikes or lugs. Ripple sole prints placed on the green diagonally across the path of the ball do not deflect its flight.<sup>1</sup> In order to further evaluate the effects of Ripple sole marks on putting performance two experiments were designed.

Using a mechanical putting device shown in Fig. 1, ten new golf balls were

<sup>1</sup>Ferguson, M. H.: "Effects of Golf-Shoe Soles On Putting Green Turf" (covering tests by Gipsen, C. E., and Potts, R. K.), *USGA Journal and Turf Management*, November, 1958.



Fig. 1 — Mechanical putting test.



Fig. 2 — The flat level test.

TABLE I — Psychological Effects of Bowling Spots and Ripple Sole Marks on Putting Performance (Number Out of 21 Trials Which Went Into the Cup)

Subject	Unmarked Surface	Bowling Spots on Surface	Ripple Sole Marks on Surface
1	11	9	9
2	12	7	12
3	7	4	7
4	10	10	8
5	4	7	11
6	13	12	14
7	9	7	7
8	9	11	7
9	4	8	7
10	6	4	11
11	6	3	9
12	10	7	10
Totals	101	89	114

TABLE II — Physical Effects of Ripple Sole and Spike and Sole Marks on Putting Performance  
(Number Out of 10 Trials Which Went Into the Cup)

POSITION OF FOOTPRINTS	Turf Undisturbed	RIPPLE SOLE		Turf Undisturbed	SPIKE SOLE	
		Immediately After Prints	5 Minutes After Prints		Immediately After Prints	5 Minutes After Prints
Perpendicular to Path of Ball	8	9	8	9	10	9
Parallel to Path of Ball	10	10	10	9	5	9
45° Clockwise to Path of Ball	7	7	9	8	5	9
45° Counter-Clockwise to Path of Ball	7	8	5	8	8	7
Average Score	8	8.5	8	8.5	7	8.5

delivered one at a time across an undisturbed level green a distance of seven feet toward a cup. The number of balls which went into the hole were scored. A 160 pound golfer wearing Ripple soled shoes then stepped between the device and the hole and left rib prints in position perpendicular to the path of the ball. Immediately, 10 balls were delivered across this Ripple sole mark and the number of balls

which fell into the cup were scored.

Five minutes later the performance was repeated. The same regimen was repeated with prints made parallel to the path of the ball, again with prints 45 degs., clockwise to the path of the ball, and finally with prints 45 degs. counter-clockwise to the path of the ball. The whole series was repeated using shoes with spike soles. The results shown in Table 1 show slightly im-

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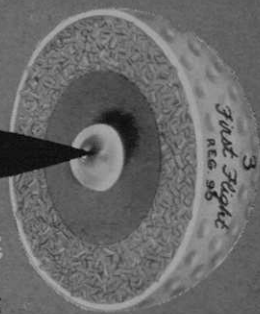
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proved average scores when Ripple sole prints are made immediately before putting. These results concur with those in the previous study, which revealed that on undisturbed turf, 17 out of 25 went into the cup; when crossing the diagonal Ripple sole print, 20 out of 25 went into the cup. Thus, Ripple soles seem to have a beneficial physical effect on putting, perhaps a result of tamping the ground and leveling it. This advantage is not present five minutes after the Ripple sole print has been made. Spike soles slightly deteriorate average putting scores immediately after the print is made, but the turf appears to recover five minutes afterward.

#### Psychological Effect

To test the psychological effect of Ripple sole marks on putting performance, 12 subjects each made 21 putts on three different eight-foot flat level experimental putting surfaces; one a plain white surface, one a white surface with spots similar to those found on bowling allays, and one a white surface with black Ripple sole marks made by stepping on an inked pad

and then walking in all directions between the "tee" mark and the target eight feet away representing the cup.

#### Extensive Test

Four subjects started on each course and rotated seven times around all three surfaces putting three balls on each trail. The first ball putted on each course was considered a practice putt, so the total of 20 putts was considered in computing each subject's score on each course. To score a successful putt the ball had to pass through an arch the size of a golf cup. The experimental arrangement is shown in Fig. 2. Results shown in Table 2 reveal that superior scores were made on the course marked with Ripple sole prints. Eight of the twelve subjects made their best scores on the Ripple sole marked course.

These two studies show that Ripple sole marks aid both physically and psychologically in golf putting performance.

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