

# The Impact of Speed Sticks, Smash-bag, and Orange Whip Training on Distance, Launch Angle, and Smash Factor in the Golf Swing

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## Introduction

Almost all golfers, regardless of age, gender, or skill level, have a desire to hit a golf ball farther in hopes that it will lower their golf score. This study investigated improvement in club head speed, distance, launch angle, and smash factor in three middle-aged golfers, ages 43, 43, and 60, following specialized swing training. More specifically, the study measured the impact of speed stick, impact bag, and orange whip training.

## Methods

Participants for this project were three adult males. Subject 1 was 43 years old, 5'8" tall, and weighted 150 pounds. His average golf score is about 100 and he plays golf about once a week. Subject 2 was 60 years old, 5'10" tall, and weighted 170 pounds. His average golf score is about 100 and he plays golf about two times a week. Subject 3 was 43 years old, 5' 11" tall, and weighted 190 pounds. His average golf score is about 100 and he plays golf twice a week. Two subjects trained for 14 weeks while one trained for six weeks. Baseline data were collected 2 and 3 days prior to the beginning of the swing training using Swing Caddie. Equipment used in this study included a Swing Caddie SC 300i launch monitor, three differently weighted (20% lighter than a normal driver, 10% lighter than a normal driver, 5% heavier than a normal driver) super speed sticks, a smash bag, and an orange whip with a 47" flexible shaft attached to a 1.75 lbs. weighted orange ball. The Swing Caddie was used to track golf metrics that included distance, club head speed, ball speed, launch angle, apex, smash factor, and spin. Upon University Institutional Review Board approval, subjects were recruited for the study.

## Results and Discussion

Subject 1 increased his total driving distance by 21 yards (11%), subject 2 by 13 yards (9.4%), and subject 3 by 17 yards (9.2%). Subject 1 increased his 5-iron distance by 10 yards (9.4%), subject 2 increased from baseline to level 1 testing but then decreased from the end of level 1 testing to final testing. During final testing he was suffering from a sore back. Subject 3 increased his 5-iron distance by 16 yards (9.1%). Subject 1 increased his 9-iron distance by 3 yards (approximately 1%), subject 2 again increased from baseline to level 1 testing but then decreased from the end of level 1 testing to final testing. Subject 3 increased his 9-iron distance by 25 yards (23%). Subjects 1 and 3 increased their club head speed by 2 and 4mph, respectively, while subject 2 appeared to maintain his club head speed. The launch angle increased with the driver for subjects 1 and 2 and decreased with the 5 and 9 irons. The launch angle for golfer 3 decreased with his driver and increased with the 5 and 9 iron. The apex for all three subjects moved closer to the desired 90'. Smash factor improved for subjects 1 and 2 but not for subject 3. There were variable changes in spin rate for all three clubs. Subjects increased their total driving distance by 11%, 9.4%, and 9.2%. Subjects 1 and 3 increased their club head speed by 2 and 4mph, respectively, while subject 2 appeared to maintain his club head speed. The launch angle increased with the driver for subjects 1 and 2 and decreased with the 5 and 9 irons. The launch angle for golfer 3 decreased with his driver and increased with the 5 and 9 iron. Further research should involve experimental studies in which a control group along with experimental groups are trained.

## Significance

Many golf training aids are little researched, but still accepted as effective training tools, mostly through anecdotal evidence. As mentioned in the introduction, speed sticks, the orange whip, and smash bags have been determined to be three of the best golf training aids. Previous research (Barba, 2019, 2020; Chaney, 2020) has shown, and these current findings concur, that speed stick training will result in greater club head speed, and as a result, greater hitting distance. Not researched however, is the impact that orange whip and smash bag training might have on golf swing metrics. In the present study, club head speed increased but so did smash factor. Was the smash factor increase a result of the speed stick training or the smash bag training or the orange whip training? Or was it the result of a combination of these training aids? Similarly, launch angle decreased with the 5 and 9 irons, was that the result of the smash bag training? Further research should involve experimental studies in which a control group along with experimental groups are trained. The experimental groups could be speed stick training only, speed sticks and smash ball only, speed sticks and orange whip only, and orange whip and smash bag only.

## References

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