

Performance

CENTER

EDITED BY DAVID DeNUNZIO

Powered by the Top 100 Teachers in America



CLUBFITTING

TAPE-MEASURE TEE SHOTS!

» Adding just 10 yards to your typical drive can transform your game, leaving you with shorter approaches and boosting your confidence. Sure, you can get longer tee shots with hours of practice—or you can simply switch to a shaft that fits you like a tailored suit. Thanks to new research by PGA of Canada teaching professional Liam Mucklow (above), the founder of Golf Lab, near Toronto, getting your hands on the right driver-shaft model is easier than ever. His **four fitting secrets** are based on 20 years analyzing 40,000 swings by pros and amateurs. He's taken the *error* out of clubfitting trial and error. Golfers like you can now get hard evidence to prove which length, weight and flex work best. So turn the page for bigger drives, better control and more fun.

29

Proven Ways
to Shoot Your
Best Score Ever!

Photography by PATRICK JAMES MILLER

The correct shaft length increases ball speed. Most golfers fare better with longer-than-standard lengths.

» I've fitted more than a thousand golfers since I first laced up my coaching spikes. Of those, only about 100 used a driver that I couldn't improve with the tools in my fitting kit. They're the lucky 10 percent—players whose swings match the off-the-rack specs found on most drivers. That means that there's a 90 percent chance you're *not* one of them, and it's costing you yards and accuracy. For you, a custom-fit driver is a necessity.

The problem is that traditional clubfitting methods (including some that I've used) rely heavily on trial and error, which means there's always a chance for, well, error. Thanks to a new research study, however, those days are gone. My team of experts and I had 30 golfers (ages 16–66, handicaps 0–26) test the same driver head, which was fitted to shafts of varying weights and lengths. We recorded each swing and the corresponding ball data using a launch monitor, then compared the results to a standard set of static body measurements (height, wingspan, etc.). The result? The first evidence-based approach to driver fitting. Even if you don't have plans to get fit—and you should!—this data reveals where and how you're losing yards. Get out your tape measure. It's time to go deep.

1 LONGER IS BETTER

» **IT'S NOT COMPLICATED:** To max out driving distance, you need to max out ball speed off the face. How? By swinging the club as fast as you can while making contact on the sweet spot. You can't do that consistently if your shaft is too short or too long. As for the ideal length, **67 percent of the testers in our study achieved the highest ball speed with a shaft longer than 45 inches, the standard, off-the-rack length.** (See table, below.) One surprising finding concerned forearm length. So try this: Measure the length of your left forearm from your elbow to the first knuckle of your middle finger (photo, previous page), then measure the distance from your elbow to the top of your left shoulder. If the first measurement is smaller than the second, you'll probably produce the highest ball speeds with a shaft of 46 or 47 inches. If the second measurement is smaller, you're a candidate for a 44-inch shaft. Either way, it's evidence that an off-the-rack club is costing you yards.



CARRY A LONG STICK

For bigger drives, swing the longest shaft you can control.

TESTERS' DATA

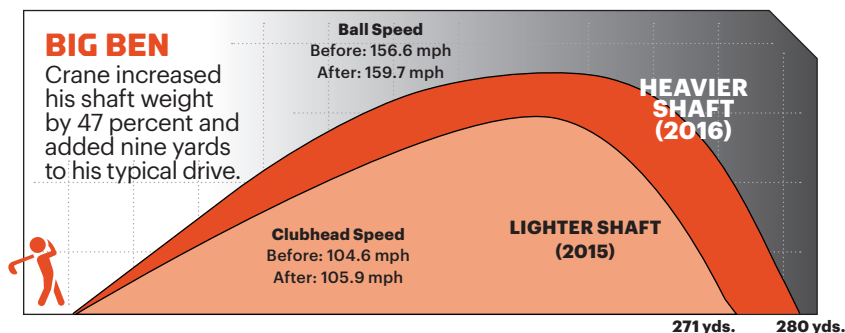
SHAFT LENGTH	% WITH FASTEST BALL SPEED
43"	6.7
44"	3.3
45"	23.3
46"	30.0
47"	36.7

2 HEAVIER IS FASTER

The correct shaft weight makes it easier to swing the same clubhead with more pace.

» **WITH SHAFT WEIGHT**, the goal is simple: Find the gram value that redlines your clubhead speed. For years we thought lighter was faster, which is why stock shaft weights have dropped to as low as 55 grams. (Lighter shafts offset today's lighter titanium drivers, or you wouldn't feel the clubhead.) But lighter *isn't* always faster and more controllable; weight gives your muscles the resistance you need to "put up a fight," making you more athletic. (Imagine trying to shoot 3-pointers with a volleyball.) **More than 70 percent of our testers swung faster with heavier shaft weights, while only 10 percent swung faster when we decreased weight.**

Your takeaway? Test a heavier shaft. In 2016, I convinced five-time Tour winner Ben Crane to switch from a 53-gram model to one that tipped the scales at 73 grams, and he added 9.3 yards to his driving distance average in a single season (see graphic, left).



MASS APPEAL

In our study, the heavier shaft weights tended to shift our subjects' swing planes from out-to-in (slice!) to in-to-out (draw!), a finding supported by other researchers. Conversely, if your worst miss is a snap hook, switching to a lighter shaft can nix your overly in-to-out motion and bring you back toward the fairway.



ILLUSTRATION: PETER PERRON

SHAZAM
This Photo
to access the
Launch Doctor.
See page 11.

3 LEAVE LOFT TO US



How much loft to use? A free app tells you for sure.

» **DIALING IN YOUR** shaft length and weight is important, but so is fine-tuning your driver's loft. It's tricky, because not everyone launches (or wants to launch) the ball the same way. Making matters trickier, most modern drivers let you adjust loft—but which setting to use?! To find out, get on a launch monitor and learn your “dynamic loft,” the amount of loft on your clubface at impact. Next, download the Launch Doctor (the free app that my Golf Lab team created) and enter your clubhead specs and your average swing speed. Like magic, **the app will reveal your “target dynamic loft”—the ideal loft conditions at impact, whether your goal is distance, accuracy or a bit of both.** (The example at right uses the average clubhead speed from the 40,000 swings I've studied). So if your dynamic loft is 12 degrees, and the app says you need 14 degrees of loft, simply add 2 degrees...and it's bombs away! (Visit mygolfclub.ca/golfmag or Shazam the photo above.)



IDEAL LAUNCH, 92-MPH SWING

MAX DISTANCE	CONTROL & DISTANCE	MAX CONTROL
Delivery Angle of Attack 2.1°	Delivery Angle of Attack -1.66°	Delivery Angle of Attack -5.42°
Dynamic Loft 15.55°	Dynamic Loft 13.86°	Dynamic Loft 12.17°
Result Launch Angle 14°	Result Launch Angle 12°	Result Launch Angle 10°
Spin Rate 2,000 RPM	Spin Rate 2,400 RPM	Spin Rate 2,800 RPM

A softer flex can offer a faster swinger as much help as it gives those with slower swing speeds.



4 FIND YOUR FLEX

» WE LIMITED OUR STUDY to shaft length and weight, but let me briefly talk flex. Simply put, **flex is all about personal preference, making it tough to quantify.**

A softer flex can benefit a fast swinger as easily as a slower one. It's simply a matter of how you square the clubhead at impact. Dustin Johnson and Sergio Garcia have identical clubhead speeds, but they turn the face over in completely different ways. Consult the table at right—then go “flex” some muscle on the tee box.

BEND TRENDS

	MORE FLEX	LESS FLEX
Transition Speed*	Slow (think Fred Couples)	Fast (think Nick Price)
Release Action**	Passive (Quiet hands, or the tendency to “hold off” your release)	Aggressive (Active hands, rolling right over left)

*Butt-section flex; **Tip-section flex

FIT PAYDIRT

Unless you know you've nailed your driver specs, go get fit. You're probably leaving yards on the table. You can add up to 2.75 yards of distance for every 1 mph of speed you tack onto your swing. I've mentioned how one of my clients, Ben Crane, added nine yards to his distance average by increasing the weight of his clubshaft. Another Tour client, Colt Knost, entered his clubhead speed numbers into the Launch Doctor app and was able to drop his spin rate by more than 300 RPM—and went on to lead the Tour in driving accuracy in 2016 with 73.4 percent of fairways hit (the Tour average is 60 percent).

The best part? You're armed to be your very own fitter. If you can't visit one of our Golf Lab locations in the U.S. or Canada, I recommend you experiment on your own. Swing as many shafts as possible. Use the clues I've provided—if your left forearm is longer than your left upper arm, start with longer shafts. If you tend to swing out-to-in, give a heavy shaft a whirl. And if you do consult a fitter, ask questions and discuss what you've learned on these pages. The more you're involved, the better your fitting (and game) will be. Get the length and weight down first, then fine-tune by adjusting loft and flex. The research proves it: There's power in numbers. So get your numbers, and find your power.