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YOU DON'T KNOW SQUAT

CrossFit athletes sometimes look to squat programs to increase strength—but are they effectively targeting weaknesses or merely feeding the ego and sacrificing general physical preparedness?

BY HILARY ACHAUER



Courtesy of Zach Even-Esh

Former wrestler and bodybuilder Zach Even-Esh warns against jumping into just any squat program. His advice is to find the one that suits your specific needs.

The first squat program Aaron Straker tried was the three-week Smolov Jr. cycle in March 2014. His goal was to build strength after an Achilles rupture.

The cycle was so successful Straker decided to try the full 13-week Smolov cycle later that same year.

“It just buried me,” said Straker, who has been doing CrossFit since 2010 and competed on a team at the 2014 Southern California Regional.

“It gets really, really heavy, and that just ruined my knees. My knees were killing me. My hips felt shitty. It was very hard to keep up with,” he said.

The 6-foot, 200-lb., 27-year-old Straker didn’t finish the cycle.

“The weights got too heavy,” he said.

Squatting is an essential exercise and the foundation of many movements in CrossFit. However, as with most things in life, more is not always better.

Ultra-intense squat cycles like Smolov have a specific purpose, they’re designed for a certain level of athlete, and they aren’t one-size-fits-all solutions. For CrossFit athletes—whose goal is improved health and fitness—a thoughtfully designed, constantly varied program and good coaching are enough to ensure athletes are increasing strength while maintaining other elements of fitness such as cardiovascular endurance, stamina, balance, coordination and agility. This has been proven countless times around the world as athletes improve 1-rep-max numbers while reducing times on benchmark workouts such as Helen and Nancy.

Squat programs, with their promise of massive gains, are always tempting. But are they worth it? What type of athlete can benefit from a squat program and who should avoid them?

Expert coaches from a variety of disciplines—Olympic weightlifting, powerlifting, strength and conditioning, and CrossFit—weigh in on the squat-cycle trend and offer their analysis.

Form First

If you’ve spent any time in a CrossFit gym, you’ve probably seen them off in a corner, plates piled on the bar, squatting and grunting. Or maybe you’ve seen someone on social media talking about the gains he or she made following a [Hatch cycle](#), a [Wendler 5-3-1](#) or even the [13-week Smolov program](#).

There’s nothing wrong with any of these programs, but they each have a specific purpose and—more importantly—they are not for everybody.

A former wrestler and bodybuilder, Zach Even-Esh is the founder and owner of [Underground Strength Gym](#), with two locations in New Jersey. Most of the members are high-school wrestlers, swimmers, fencers, soccer players, baseball players and martial artists. He’s also the head strength-and-conditioning coach for the wrestling team at Lehigh University in Bethlehem, Pennsylvania.

“The best program is the one that’s matching what you need biomechanically, physiologically and psychologically or emotionally. There are so many variables to it,” Even-Esh said. “I don’t like telling people, ‘You must follow this program,’ because it’s so hard unless I see you in person and watch you move.”

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matching what you need biomechanically,
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—Zach Even-Esh

Even-Esh said he assesses every athlete who comes through the gym, noting mobility, mindset and goals. It’s only then he feels comfortable prescribing a program.

He believes squatting is essential, but first everyone must learn how to squat correctly.

“It is amazing how many 12-, 13-, 15-, 18-year-olds can’t do a body-weight squat without their knees collapsing, without their feet collapsing, without their lower back collapsing,” Even-Esh said.

“What the fuck are you doing? You look like you’re 90 years old squatting. That person cannot go on any Smolov, Westside, squat every day—none of that shit is going to work with that kid. What that person has to do is work body-weight squats of various positions because your spine is not going to blow out with your lower back rounded with a body-weight squat,” he said.

Even-Esh points out that many high-level athletes spend a great deal of time on mobility. For the rest of the population, whose hips and backs are tight from sitting at a desk all day, a heavy squat program might do more harm than good.

“We need to give them different squat variations that fit their body that eventually allow them to perform a squat below parallel with a neutral spine and all that good stuff,” Even-Esh said.

Some squat variations he likes—as alternatives to straight-bar squats—are safety-bar squats, Zercher squats, goblet squats with a kettlebell, squatting with a sandbag or squatting with various foot positions.

“Everybody is not capable of doing that one style of squat. We have to do things that are better for one person rather than fitting everyone in the same thing,” Even-Esh said.

Mike Robertson owns [Robertson Training Systems](#) and Indianapolis Fitness and Sports Training in Indianapolis, Indiana, where he trains everyone from office workers to professional athletes.

His philosophy is to use the simplest program until it’s no longer effective.

“If you follow a Wendler (program) ... he only squats once or twice a week. I’ve seen people get strong on that for years,” Robertson said.

Indeed, it’s likely many of those who gravitate toward squat programs are not truly stalled but rather looking for faster gains or a different style of training. Some need bands and chains, and others clearly don’t.



Mike Burgener of the CrossFit Weightlifting Trainer Course advises athletes to pay attention to their bodies and not get married to percentages calculated from a 1-rep max.

Stacey Pryce

Robertson said an aggressive squat program would be for a high-level intermediate athlete who has stalled out or an advanced athlete who needs that volume to continue to see improvement. Robertson has coached a handful of people who have had success with some of the base-level [Sheiko programs](#). He's also worked with two or three people who have dabbled in Smolov, and they saw success as well.

However, Robertson said if he had never seen an athlete move, he would "absolutely not" prescribe a squat program for someone.

"So many people need almost like a clean-up period, where we get them squatting and moving well before we start introducing more volume and intensity and more frequency into their programming," Robertson said.

He often takes three to six months to get a person moving the way he wants. Although they were held back at first, many of his athletes find rapid improvement when they do ramp up the weights because their body is so much more efficient.

"They aren't fighting themselves to complete the movement," Robertson said.

That's not to say athletes shouldn't squat until form is absolutely perfect. But athletes who want to ramp things up significantly need to ensure a foundation is in place. That progression of mechanics-consistency-intensity has always been part of the CrossFit progression, and it's unlikely any athlete—powerlifters included—can ignore it when planning to hit multiple sets of 4 reps at 95 percent of a 1RM, as the Smolov program prescribes at certain times.

Olympic Lifting and Powerlifting

There are athletes for whom squat cycles are important and effective. A specialist in Olympic weightlifting must have strong legs and hips, and one of the best ways to build those muscles is through squatting.

Specialization is very different than training for general physical preparedness, though the latter provides a great foundation for the former. But when an athlete makes a decision to specialize—focusing exclusively on the clean and jerk and snatch, for example—he or she must realize other aspects of overall fitness will suffer. And that's fine, as long as the athlete is making that decision consciously. For those specializing in lifting heavy barbells, squat cycles are all about timing, top coaches said.

"The type of squatting—back squat, front squat, overhead squat—really depends on the athlete and the time of the year that the athlete is going to be training," said Senior International Weightlifting Coach [Mike Burgener](#), head coach of the [CrossFit Weightlifting](#) program.

"The type of squatting—back squat, front squat, overhead squat—really depends on the athlete and the time of the year that the athlete is going to be training."

—Mike Burgener

"If an athlete needs to gain a lot of weight, and he's in the offseason, I don't hesitate at all to follow Gayle Hatch's squat program. I think that's an outstanding program. It's a back squat, front squat—it's basically two days a week," Burgener said.

Olympic weightlifters are training to perform single reps at the heaviest load possible, so Burgener said he doesn't like to have his athletes do more than 3 reps in training sets.

He likes 10 sets of 3 reps of front and back squats, about twice a week, increasing the weight gradually.

"I'm getting a lot of sets and reps. By the time you're getting to the eighth and ninth set, you're seeing the white buffalo in the sky," Burgener said, referencing how intense effort sometimes makes weightlifters "see stars."

"Once we get up to that 83 or 84 percent level, we start bringing down the sets. But I can run that program for eight to 10 weeks, and for me I've probably had the best success for that kid that needs to get strong with that program," he said.

One mistake Burgener sees frequently from CrossFit athletes is they get too tied into building percentages off their PR numbers. He thinks CrossFit athletes need to take into account how their body is feeling on a particular day and make sure their squatting percentages reflect that.

“(If) you’ve just had your ass handed to you by doing Grace, or doing other exercises, ... that 80 percent today might only be 55 or 60 percent. And you’ve got to know that and live with that and be smart with that,” Burgener said.

He said the CrossFit Games athletes he’s worked with are in tune with how they’re feeling on any day, which is what separates them from their competition.

Burgener said that’s the beauty of working with a coach.

“People call me up and say, ‘Can you write me a program?’ I can pull programs out of my rear end. I could put 10 people in a line, put them on the same program, and that program might work for one. Everybody has a different need. Everybody has different requirements,” Burgener said.

“Every athlete has a different requirement, and if you have a coach who is there with eyes on and hands on, you are in a better situation.”

[A.J. Roberts](#) knows a few things about squatting. A two-time world-record holder in powerlifting—with a 1,205-lb. squat, a 910-lb. bench and an 815-lb. deadlift—Roberts is now part of the [CrossFit Powerlifting Trainer Course](#) staff.

“Squatting multiple times a week, there’s an immediate benefit in strength gains, but when they return to their regular programming, those strength gains don’t tend to last,” Roberts said.

“If you wanted to get your squat up, you would have to accept that everything else is going to suffer because of it,” he said. Roberts said there are exceptions to the rule, such as four-time CrossFit Games champion Rich Froning, who has an exceptional ability to recover.

“(For) the majority of people, squatting every day is going to tear them apart. Their body won’t be able to handle it ... and if they do, it’s a short period of time. (Their) squat will go up, and (their) conditioning will go down, and then they will get the conditioning up and their squat will go down,” Roberts said.

After retiring from powerlifting, Roberts turned to CrossFit. Once Roberts focused on overall fitness, he improved his mobility, slept better, lost weight and had more energy. He could no longer squat 1,000 lb., but he didn’t have to take naps to get through the day. (Read more in the [CrossFit Journal](#) article “C2B for A.J.”)



Courtesy of A.J. Roberts

If you focus on your squat, other areas of your fitness will suffer, said A.J. Roberts of the CrossFit Powerlifting Trainer

Roberts said hardcore squat programs remind him of the Bulgarian system, in which all athletes endure the same brutal training regime. Those who survive go to the Olympics. Most get injured or drop out.

Roberts, now powerlifting again, follows the Westside Barbell Conjugate Method, which, like CrossFit, is based around the idea of varied movements. In the conjugate system, athletes are constantly rotating the lifts they emphasize during certain periods. All the while, they’re applying different stimuli designed to eliminate the weak links in the chain and drive maximum numbers up. The Conjugate Method was developed for absolute strength in powerlifting, but it’s not dissimilar to CrossFit principles that allow athletes to achieve impressive levels of overall fitness.

“To me, constantly varied means you avoid injury to the ... exact same area of the body. I believe getting strong from head to toe is key, and that transfers over to performance a lot better than just focusing on one lift,” Roberts said of the Conjugate Method.

Westside lifters squat regularly, and while their training is organized into a program, variety is key. Lifters will perform a number of variations of the standard barbell back squat: They’ll squat to boxes of varying heights—or they won’t—using a host of different bars and forms of resistance (including bands and chains, aka “accommodating resistance”). Reps and sets and percentages are programmed to achieve the desired results. The list of combinations is endless, and movement selection is determined by individual needs: “Select exercises that address your particular problems,” Westside Barbell founder Louie Simmons wrote in “The Westside Barbell Book of Methods.”

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—A.J. Roberts



Courtesy of Power Keg CrossFit

At Power Keg CrossFit, owner Adam Babin (right) began incorporating a squat cycle into regular programming.

When Roberts was training for his 1,205-lb. squat, he did a squat cycle, and he recommends one for anyone wanting to hit a certain number on the squat. But, he cautions, the gains are not sustainable.

Roberts said Simmons—who created the Conjugate Method—often says, “Why start something you are going to have to change?”

“You master the movement by mastering mobility, flexibility and getting stronger,” Roberts said.

“That’s a more long-term solution. Yes, you can get stronger quicker, but it doesn’t last in my experience,” he said.

Squat Cycles and CrossFit

Although squat cycles don’t make sense for most average CrossFit athletes who need a broad approach to overall fitness, Eric O’Connor, a CrossFit Level 1 Certificate Course leader, a Level 4 CrossFit coach and head coach at [CrossFit Park City](#), said there is one very important reason for a CrossFit athlete to undertake a squat program on top of regular programming.

“Let’s face it—it’s fun,” O’Connor said.

O’Connor said almost no average CrossFit athlete needs to go on a specific squat program; however, if someone in his gym approaches him about doing a squat program, he’ll first ask why.

“If the answer is, ‘I want to get stronger and it’s fun and I want to do it,’ then I’d rather ... help them out with that than them try to do it on their own, because at least then I can modify and moderate the volume,” O’Connor said.

He said he has noticed an increase in the number of people who approach him about wanting to embark on a squat program.

“I think people see the high-level Games athletes, they see the kinds of weights they are throwing up on social media, and I think they think that’s something that needs to be done. For most people that’s not true,” O’Connor said.

“I do think a squat program can help with the Olympic lifts, but only if your technique is solid. For most people, (if) they make improvements in technique, they see improvements in lifts and met-cons and everywhere else,” he said.

He said he’s seen people going through a squat program, and although their squat gets heavier, he doesn’t often see those numbers maintained once they come off the program, much as Roberts said.

There is a difference between bias and targeting. A bias is when an athlete focuses on one aspect of fitness at the expense of general physical preparedness (GPP). Targeting allows an athlete to focus on a weakness until it isn’t an issue anymore and he or she can target another weakness. With a bias, the focus will continue regardless of improvements.

“There’s nothing wrong with bias,” Chris Spealler said in a [Coaches Prep Course video](#). “The problem occurs when people start to confuse biasing with being superior to GPP.”

Specializing, or having a bias in your training, will impact overall fitness. A squat program, which by its very nature demands a focus on strength, will have a negative impact on other areas of fitness.

Targeting is focusing on weaknesses within the constantly varied framework of CrossFit. For example, if your weakness is strength, you might choose to load up the barbell during a conditioning workout. If running is a weakness, you might go to the track once a week. However, good programming, with a mix of heavy days, gymnastics and conditioning, can eliminate the need for targeting in most athletes.

“If you program well ... no one in your gym is ever going to have to target or bias,” Spealler said in the video.

“If someone is looking to increase their fitness, to increase their overall work capacity,” O’Connor said, “we just have this set-in-stone standpoint that doing constantly varied functional movement at high intensity helps increase strength along with everything else.”

“The problem occurs when people start to confuse biasing with being superior to GPP.”

—Chris Spealler

An athlete could certainly choose to specialize by focusing on a squat or strength program, but any type of specialization will affect overall fitness for CrossFit athletes. Anyone embarking on a squat program should be aware of the tradeoff.



Eric O’Connor said the average affiliate member does not need a squat program, but some high-level athletes will benefit from focused strength work.

Some CrossFit affiliates, such as [Power Keg CrossFit](#) in San Diego, California, have found success incorporating a squat program into their programming.

Adam Babin, owner of Power Keg, said coaches programmed a Smolov Jr. cycle before the CrossFit Games Open.

For three weeks, members deadlifted and front-squatted four days a week, followed by a conditioning workout. Babin said people started feeling burnt out after only a week of this routine, but knowing there were only two weeks left, they kept working.

“Everybody gained an inch and half on their quads,” Aaron Prenger, one of the coaches at Power Keg said, joking.

“Some girls had to buy new pants,” Babin said.

Babin said he thought the most important benefits were psychological.

“I think people learn to push themselves even further (because of the cycle) when they might not have before, because they got so comfortable doing it,” Babin said.

Without a basis for comparison, it’s impossible to know if the program worked better than any other, and without extensive data, we can’t determine exactly how the focus affected overall fitness. But it’s clear that affiliate owners who choose to experiment should always evaluate and learn from the results of their programming, as detailed in the CrossFit Journal article [“Tinkering Trainers.”](#)

Ray Regno is owner of [CrossFit Stronghold](#) in San Diego, California, and part of the [CrossFit Mobility Trainer Course](#) staff.

He said the biggest problem he sees is when athletes add on a squat program in addition to their gym’s programming.

“I’ve seen people overtrain at good gyms with good programming because they are adding in other stuff and not recovering,” Regno said.

This can happen even without any weights.



Alicia Anthony

CrossFit Stronghold owner Ray Regno said regular CrossFit programming is more than enough for the average Joe.

He had one member of his gym embark on a 30-day air-squat program. The program starts with 50 squats the first day and increases until the last day, which peaks at 250 body-weight squats.

“I had one lady—she was the only one who finished the challenge over the month—and her squats looked really great until Week 3, and after that ... she was wrecked for months, just from body weight,” Regno said.

“A lot of people are limited more by their skill than their actual strength. For the average Joe, CrossFit is more than enough to get them stronger and more functional.”

Consult a Coach

While some CrossFit affiliates address the need to squat through constantly varied programming that includes heavy squats regularly, other affiliates work a strength cycle into their programming, sometimes for fun, sometimes to target a general deficiency in their athletes. Front squats and back squats build overall strength and help with more explosive Olympic weightlifting movements. Squatting is difficult and incredibly effective—when used correctly.

Coaches from all areas of strength and conditioning and fitness agree any athlete considering starting an extracurricular squat program should consult with a qualified, hands-on coach who can evaluate the athlete’s individual needs. Embarking on an



Alicia Anthony

Ray Regno said he sees athletes make the mistake of layering a squat program onto their affiliate’s program. This can lead to burnout, he said.

aggressive squat program on your own, without the watchful eyes of an experienced coach, can lead to overtraining, injury or dramatic decreases in overall fitness.

In CrossFit, the goal is general physical preparedness. This means not training for a 4-minute mile or an 800-lb. back squat but rather the best of both worlds: a 5-minute mile and a 500-lb. back squat. While only some of us will achieve any of these numbers, the concept is the same, and the latter combination—representative of truly elite overall fitness—is more attainable than anyone ever thought.

Specialization has a price, and improved performance overall is best achieved by paying attention to all areas of fitness. ■

About the Author

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