

6 Physical Attributes of Elite Hitters

Sept 2015 - Eric Cressey, Cressey Performance

In light of Bobby Tewksbary's great resource, [Elite Swing Mechanics](#), I've been thinking about the characteristics of elite hitters. Just as Bobby breaks down swing mechanics to identify growth areas, I'm always looking to find physical limitations that might interfere with an athlete's ability to best "acquire" the swing mechanics guys like Bobby are seeking. Here are six physical attributes I've noticed in most elite hitters.

1. Sufficient Hip Mobility

You don't have to look any further than the rise in hip injuries over the past decade to recognize just how aggressive the hip rotation is during the baseball swing. In particular, it's essential for hitters to have sufficient hip internal rotation and extension. Unfortunately, these ranges of motion are usually the first to go in the dysfunctional lumbopelvic



(hip/lower back) postural presentations we see. As the pelvis dumps forward into anterior tilt, it blocks off internal rotation - and the athlete will preferentially extend through the lower back instead of the hip. This leads to not only limited hip function, but also an increased risk of injury. The athlete may develop bony overgrowth (femoroacetabular impingement; [read more here](#)) on the head of the femur or the hip socket, a torn labrum, a sports hernia, or a number of other hip issues. There may also be extension-based lower back pain, including stress fractures and disc injuries. This loss in hip motion is generally related to point #2...

2. Sufficient Core Control

Many of the hip mobility restrictions we see in these athletes aren't just because muscles are actually short, or bony blocks have developed to restrict range of motion. Rather, they may be in place because the athlete's core control is so out-of-whack that alignment issues actually limit range of motion. Imagine driving a car that's out of alignment; turning to one side will ultimately wind up being more difficult. The good news about this scenario is that it's often possible to get quick changes in an athlete's hip mobility just by modifying posture, incorporating positional breathing, and doing a bit of activation work. I've seen athletes gain more than 30 degrees of hip internal rotation in a matter of 30 seconds without manual therapy or stretching, so adding some core control in the right places can definitely be a powerful thing.

Remember, the research clearly demonstrates that the core works to transfer - not develop - force during the baseball swing. Its job is to take the force developed in the lower extremity and make sure that it is delivered to the upper extremity and, ultimately, the bat. This function should be reflected in the exercise selection we use, as we gravitate toward rotational medicine ball variations and chops/lifts rather than sit-ups, crunches, and side bends.

3. Sufficient Thoracic (Upper Back) Mobility

One of the key points Bobby made in his [article](#) earlier this week was that Pujols - like all elite hitters - gets his hips moving forward while his hands are still held back and up (and actually moving further back and up). To do this, you need three things. We've covered the first two: hip mobility and core stability. However, you also need sufficient mobility through your upper back to allow this "separation" to occur. Even if the hip and core components are ideal, if the upper back isn't sufficiently mobile, the hands can't stay back to allow a) force transfer without "energy leaks" and b) the right timing for this transfer. As Bobby also noted, if the hands can't stay back long enough, the hitter has less time to see and react/adjust to the pitch that's thrown. In short, a physical limitation can quickly become a mechanical issue. I should note that while thoracic rotation (transverse plane) is predominantly what we're seeking, you can't have sufficient rotation if you're stuck in a rounded upper back posture (flexion/sagittal plane). If you look like this, you'll need to get your extension back to help unlock the rotation you seek.



4. The Ability to Hip Hinge

This point really goes hand-in-hand with #1 from above, but I think it's important to distinguish the hip hinge (hip flexion with a neutral spine) as pre-loading, whereas the extension and internal rotation that takes place is actually unloading. In other words, the former stores the elastic energy we need, while the latter releases it over a sufficient range of motion. Candidly, I'm shocked at how many young athletes have lost the ability to hip hinge correctly. You'll see it quite a bit in more advanced hitters as well, and they're usually the higher-level guys who have hip and lower back problems. If you can't effectively pre-load your hips, you'll have to go elsewhere to get your power - or you just won't create it. A detailed review of what a good hip hinge is and how to train for it could be (and is) a full-

day seminar. Basically, this is as much a stability limitation and patterning problem as it is an actual flexibility deficit. Put these three components together, and you have your "mobility" potential.

Without getting too sidetracked, here's a quick rule with respect to the hip hinge: players need to be able to touch their toes without a huge knee bend (greater than 30 degrees) or hyperextension of the knees. Sure, we need to consider how much posterior hip shift their is, whether they can reverse the lumbar curve, and whether they return from the toe touch with predominantly hip or lower back motion, but I think the quick screening rule from above is a good place to start.

5. Lower Body Strength/Power

You don't have to be an elite powerlifter or Olympic lifter to hit home runs. However, you do need enough strength and - just as importantly - the ability to display that force quickly. On the strength side, I seriously doubt you'll find many hitters in the big leagues who aren't capable of deadlifting at least 1.5 times their body weight, and if you do find some, they're probably guys who have been around for quite some time and gotten much more efficient with their patterning to use every bit of force they have in the tank. Or, they're just carrying too much body fat. On the power side, it's not good enough to just be a weight room rockstar. It's also important to be able to take that strength and apply it quickly in more sport-specific contexts with drills like rotational medicine ball throws, sprinting, jumping and, of course, hitting and throwing. Once you've got the foundation of strength, your power training can really take off - and that includes your swing mechanics. Until you're able to put more force into the ground, it's going to be difficult to generate more bat speed unless you have glaring deficiencies in your swing mechanics that can be cleaned up.

6. Great Sports Vision

You can't hit what you can't see - and elite hitters almost always have elite vision. Some of this is outside your control, but I always encourage all our baseball guys to get thorough yearly eye exams. I'm a bit biased because my wife is an optometrist, but I've seen players for whom vision corrections with contact lenses and glasses has been a complete game-changer.

Wrap-up

This is certainly not an exhaustive list of physical attributes of high-level hitters, but it's a good start. Building on this point, as examples, you'll notice I didn't say "tremendous forearm strength" or "a huge bench press." Some guys might have these "proficiencies," but that doesn't mean they're absolutely essential for high-level hitting. Many hitters might develop appreciable forearm strength from the act of hitting over many years, but that doesn't mean they had to specifically train it to make that advancement. And, on the bench press front, there may be guys who've trained the bench press heavily, but never recognized that it might not have had much of an impact on their hitting performance. This is why we have to look at the big picture and see what ALL elite hitters are doing to be successful.