

The Case Against Weighted Balls?

© By Ron Wolforth

The baseball world is much like the rest of the world -- trends and fads abound. And, as we know, trends and fads come and go.

Today, “weighted balls” and velocity enhancement programs are in vogue. Even as I travel around the world to places like Italy, The Netherlands and Australia, I see weighted ball programs coupled with promises of fantastic jumps in velocity. If you are a relative newcomer to competitive baseball, it may surprise you to learn that this was not always the case.

In 1993, I started my first instructional academy in Langley, British Columbia, Canada. For the next 10 years or so, weighted balls were decidedly not mainstream. Although a couple of unique places did use over-weighted implements, the baseball universe was decidedly *against* the use of anything other than a regulation baseball for throwing. The process of throwing balls weighing more or less than a regulation baseball was

almost universally thought of as crazy and at an exponentially high risk of injury.

Today, weighted-ball velocity enhancement programs are common on the internet, in high schools and colleges, and in instructional academies. Today it seems everybody has a velocity enhancement process. That represents a significant change in the training culture in just 25 years. That's great news, right?

Well, yes and no. We've obviously come a long way in reducing our irrational fear of weighted balls as a tool. That's a good thing.

On the other hand, hardly a week goes by that we don't get an email or a phone call at the Texas Baseball Ranch® saying something along the lines of, "Our son has never had arm trouble before and this last off-season/month/week etc. his trainer/coach put him on a weighted ball program... and now he is hurt/out and needs surgery. **We heard you are the 'weighted ball/arm health' people. Why is this happening? What should we do?"**

Randy Sullivan at the Florida Baseball Ranch® also gets many such questions.

As we know, for every call or email you get, many more people with similar questions are not calling or are calling someone else. Suffice to say, with all the new velocity enhancement programs out there, arm injuries are on the increase and weighted balls are, in our opinion, often getting an unfair bad rap.

Sullivan says: "We field 3-5 calls per week from parents of players ranging in age from 12-24 who most often have tried a mail-ordered, one-size-fits-all weighted ball program and are now experiencing arm pain. It's sad. For many, it was their first attempt at improving their ability to throw and they often regret trying the cheapest, simplest way. One-size-fits-all is often a dangerous shortcut."

But there is a solution.

My goal with this report is to show how a well-designed weighted ball program can benefit arm health, durability and performance. Because ...

**Weighted Balls Are Simply A Tool.
They Are NOT A Panacea Or Quick Fix.
They Can Be Helpful Or Harmful**

Let me start with a short history of the Baseball Ranch's use of weighted balls ...

In The Beginning

In 2002, inspired by the work and research on weighted baseball bats by Dr. Coop DeRenne, we began using underload and overload principles in the training of our throwers. In other words, we began using weighted balls. We started with 3 weights: a one-pound ball (16 oz), 1/2-pound ball (8 oz) and an underload ball (4 oz). The balls we used were called "D-Balls" They were a hollow yellow rubber ball and filled with a type of black graphite with a black cork stopper. I'm not even sure if they make them anymore. The balls simply were not suitable for the punishment we put them through.

Eventually, Robert Oates of Oates Specialties worked with us to customize the balls to withstand the rigors of our training. That partnership in innovation between Oates Specialties and the Baseball Ranch remains in place today.

It is important to point out that even in 2002, the baseball world was much different from today. In 2002, we at the Ranch were viewed as heretics ... crazy ... and

irresponsible in using weighted balls in any manner, shape or form. We were excoriated on websites, message boards and blog posts for our “reckless” behavior and for placing athletes in our care at “unnecessary risk just to gain a few miles per hour.”

In hindsight, this criticism was a blessing in disguise. Every day, as we went to work, we knew the whole world was watching, just waiting to pounce on our “dangerous” training methods.

Several times, I was pulled aside in private by influential baseball people, who asked, “Ron, just between you and me... off the record... how many TJs did you have at the Ranch?” **Apparently, many people thought it impossible that we could do both -- arm health/durability AND performance enhancement.** The baseball universe at that time thought it was impossible to thread the needle between those two outcomes.

Ah Ha #1: Prehab Vs. Rehab

The first thing we did was make weighted balls the cornerstone of our **Arm Care Program**. We didn't race to velocity

enhancement initially because, quite frankly, we didn't know what we were going to find. So we started slowly, with arm care.

At that time (2002), I had attended several ASMI *Injuries in Baseball* conferences in Birmingham, Alabama. The symposiums were exceptional on the topic of rehabilitation. Strangely enough, in the area of "rehab" there appeared to be widespread acceptance on the use of weighted poly balls and rebounders.

It occurred to me that THIS was exactly where we would begin with weighted implements. Weighted balls would be utilized first as a prehab/arm care tool, allowing our athletes' soft tissue to become accustomed to the stimulus/load ... and then, after a period of assessment, see where we would go.

Ah Ha #2: The Reformation, The Engineer, And Pushing The Performance Envelope

In 2003, we invited Paul Nyman to speak at our Coaches Boot Camp. He was an *engineer* ... with a background in *track* ... but a love of baseball. He gave two presentations that fundamentally and forever changed how

we trained at our facility. For years, we had been searching for a training process that rejected conventional paradigms and antiquated, ineffective training methods. In Paul Nyman we found exactly that.

Paul Nyman gave us a new paradigm and a new perspective. We referred to our personal iteration of Nyman's dynamic systems paradigms as "The Athletic Pitcher Program." Even publicly, I have long described Nyman's work as essentially the "Reformation" in baseball training. Today, Nyman remains the single greatest outside influence on the Ranch and its fundamental training processes.

In 2003, Nyman proposed the unthinkable. He offered a structured, incremental weighted ball throwing program, coupled with radar as objective feedback. To Nyman and his engineering/track background, it was common sense. To the baseball elite, it was heresy.

Ah Ha #3: Deceleration Is As Important As Acceleration

In 1974, Dr. Mike Marshall won the National League Cy Young Award and set a Major League record for most appearances by a

relief pitcher, throwing in a mind-blowing 106 games. He holds two Major League records, both of which he set in 1974: most appearances (games pitched) in a season (106), and most consecutive games with a relief appearance (13). In that record-setting season, he pitched 208.3 innings, all of them in relief.

Those statistics alone should force any logical trainer/coach/athlete to sit up and take notice. Dr. Marshall endorses a unique movement pattern that in many ways is the antithesis of current orthodoxy. Many people simply could not grasp his unconventional approach and/or Dr. Marshall's often acerbic manner.

We brought Dr. Marshall in as a keynote presenter to our annual Coaches Symposium and, as advertised, he challenged the status quo. He spoke with absolute disdain about contemporary methods of pitcher development. Dr. Marshall made a compelling argument that, not only were current training processes ineffective, they were in fact complicit in the increase of injuries and surgical interventions.

While Dr. Marshall had few complimentary things to say about our training or our

approach, we learned a great deal from him about the importance of systematically preparing soft tissue for the rigors of pitching in competition, as well as the often-overlooked nature of the efficiency of an athlete's pattern of deceleration.

Dr. Marshall was the first person we ever heard articulate the connection between deceleration and acceleration: "The body and arm will only accelerate itself as efficiently as it can decelerate itself."

So, from Dr. Marshall, we took two key pieces for our current training protocols:

#1) Our process of preparing athletes' soft tissue for throwing needed to be far more robust than our previous methods.

#2) The efficiency of deceleration patterns is not only important for health, durability and recovery. It also influences velocity enhancement.

In other words, if soft tissue isn't sufficiently prepared for the push ... or if the pattern of dissipating energy and slowing down the arm is inefficient ... a velocity enhancement program almost certainly must be postponed until those areas are adequately addressed.

If not, injury is often the result. At the very least, any efforts at velocity enhancement will be hampered if these areas are deficient.

Unfortunately, inadequate preparation of soft tissue and/or inefficient patterns of deceleration is all too common. It's yet another reason why young men are injured when embarking on a velocity building program. In our opinion, weighted balls are too often a distraction from the root contributors of injury.

Ah Ha #4: Start With The Pain, Then Hyper-Personalize

Fresh off the presentations of Paul Nyman and Mike Marshall, we began to experiment with weighted balls as a velocity enhancement tool. However, we did so with two important prerequisites:

1. The athlete currently did not have arm/shoulder/elbow issues
2. The athlete had a minimum of 6 weeks throwing weighted balls in our arm care process

If the athlete met those two criteria, they were eligible for our initial velocity

enhancement process. We referred to this process as “Start with the Pain™.”

As an important side note, every single session ends with an arm health self-re-assessment. When each athlete finishes a session, we immediately check with them on the status of their arm. If they rate their discomfort as a 4 or higher, they are automatically withheld from the next session until their arm health returns to normal. If, at any time during the session, their arm discomfort rises above a 4 on a 0-10 scale or anything feels odd or strange, they are to immediately suspend their training session.

This remains our standard operating procedure almost 15 years later.

First, always prepare the soft tissue for 4-6 weeks prior to the initial push.

Second, closely monitor every athlete’s arm health each session and adjust their processes based upon the individual.

Third, never hesitate to delay or suspend the process if the arm is not responding well. Learn to train your pitchers to be intimate with their arm and understand that sometimes, it is simply time to shut it down and fight another day. In other words, if you’re

“not feeling it” today, many times the right call is to suspend your push and come at it again later this week or next. Injury will certainly cause a REAL delay in your development. It is never a good idea to push to the point you become injured.

Ah Ha #5: Mechanical Efficiency (Connection) Matters -- A Lot

In 2005, I watched a sports medicine TV program about an orthopedic doctor who specializes in treating world class long-distance runners. His comments about injuries in this specific population of athletes really resonated with me.

He basically said that most doctors treat injuries to elite long-distance runners from the wrong perspective. That was the gist of his comments.

Of course, world-class distance runners have incredibly high workloads. That's why they are world class. So, if your instinct is to treat the injury simply by reducing workload, you will be of little practical use to your athletes. They run a great deal and that's why they are elite.

Instead he urged doctors to look deeper. Elite long-distance runners are far from normal. Therefore, he concluded, a “normal” approach to injury reduction for the general population will not typically benefit an elite long-distance runner.

If, he argued, the elite runner has an inefficiency in his running form or their shoes do not fully support their feet, under any considerable workload, injuries will, of course, result. Therefore, he proposed that, in many cases, workload was only a symptom or an ancillary contributor to injury -- not the cause itself.

For example, if a runner actually ran on the side of their feet, would managing their workload be a solution? No. Reducing workload may delay the final breakdown, but it offers NOTHING in the way of a solution. The only solution is to improve the efficiency of their running.

That made perfect sense to me. Applying this doctor’s logic to throwing athletes, it became obvious to us at the Ranch that mechanical efficiency really matters when it came to deciding who should take part in our velocity enhancement programs. Over the past 12 years we have identified 12 primary

movement pattern disconnections that have the potential to add stress to soft tissue.

So, when we initially assess athletes and find a significant level of one or more of the 12 disconnections, coupled with arm pain or difficulty recovering from throwing sessions, that tells us we must first reduce the disconnection, reduce the discomfort of the arm, and increase their ability to recover and bounce back *before* we throw them into a velocity enhancement program.

To us at the Ranch, this is simply common sense. If I have arm discomfort on a regular basis ... and I want to really ramp up the stress, load and intensity ... why should I be surprised when injury or shutdown is the result?

Bottom line: In our opinion, this is one of the key reasons so many young arms are injured from weighted balls and velocity enhancement programs. If they're already on the verge of injury, a weighted ball is simply the straw that breaks the camel's back.

Ah Ha #6: Holism -- Everything Matters

The Search For Simplicity On The Far Side Of Complexity

Many players and their parents desperately want development and performance enhancement to be simple. They want coaches or instructors/trainers to explain the incredible complexity of human performance with catchy phrases, shortcuts, or one-size-fits-all recipes.

Bluntly, that's like chasing a mirage.

Need velocity? Just go on the internet and buy a weighted ball program.

Need arm health? Just go on YouTube and watch an arm care video.

Need command? Just throw more bullpens.

Need better secondary stuff? Just ask your instructor/coach for a new grip. Maybe find out how Clayton Kershaw holds it.

In our estimation, these suggestions are not bad in and of themselves. They are just symptomatic of a bigger problem. Most people underestimate the complexity and difficulty of consistently performing well at the highest levels of competition. At the Texas

Baseball Ranch® we have run headfirst into that reality again and again over the past 15 years.

In 2010, to give our team at the Texas Baseball Ranch® a foundation to understand and deal with that complexity, I created a chart to guide us. It has since been edited and improved, but the foundation remains unchanged over the years. It's still a fixture in our core philosophy.

The chart (next page) is a reminder to myself and my staff to continually recognize and appreciate the complexity of high performance, to refrain from the constant lure of trying to explain the unexplainable to an athlete, and yet create a sensible foundation from which we could make sound decisions and judgments.

Here's the chart ...

The 6 Primary Contributors To Substandard Performance:

What is keeping you from having a healthy, durable, electric arm?

Type I Contributors: *Structural Related*

- Physical misalignments, asymmetries, strength imbalances, constraints in mobility/flexibility and/or strength/stability

Type II Contributors: *Movement Pattern Related*

- The movements related to actually throwing the ball; the mechanical efficiency of the athlete's movement pattern

Type III Contributors: *Preparation Related*

- Wake-up warm-up, pretraining, pregame, postgame, ramp up to season or to session/game

Type IV Contributors: *Training Related*

- How your training processes affect your abilities (strength program, mobility/flexibility program, conditioning program, throwing program)

Type V Contributors: *Internal Systemic Related*

- Sleep, nutrition, hydration

Type VI Contributors: *Workload/Recovery Related*

- How much, how long, how often, how many per inning, how quickly you return to full speed

Why is that chart so important? What does it have to do with the efficacy of a weighted ball program?

The answer is simple: Everything matters.

To illustrate, one of our beliefs at the Ranch consortium is this:

If the athlete's physical structure, alignment, strength, balance, mobility/flexibility or stability is considerably limited, constrained, compromised or deficient, a weighted ball velocity enhancement program is contraindicated and will have to wait until those issues are addressed.

If the athlete's mechanical efficiency is questionable or marginal and has manifested abject pain or difficulties in recovery, then a weighted ball velocity enhancement program is contraindicated and will have to wait until those issues are addressed.

If the athlete hasn't built a minimum of a 6-week foundation of preparation for their soft tissue, a weighted ball velocity enhancement program is contraindicated and will have to wait until those issues are addressed.

We take flak from some critics who claim that we focus too much on pain. Others

complain about our “overzealous need” for multiple assessments before engaging in a velocity program. We don’t mind the criticism. Everyone is entitled to their opinion. However, that doesn’t make their opinion correct.

As I alluded to previously, we have been threading the needle between arm health/durability and performance for the past 16 years. In that time, we have found two things that we want to share with the rest of the baseball universe ...

Two Important Discoveries

Discovery #1: We have found that, if we can simply help each athlete reduce or eliminate regular discomfort in his elbow or shoulder ... and/or significantly improve his ability to recover/bounce back ... he will almost always (85% of the time) experience an uptick of 1-3 mph in velocity within 4 weeks.

It just makes sense. If the athlete’s arm feels better ... he will naturally “step on the accelerator.” If his arm is more durable, he can throw more often and for longer stretches of time. Do those behaviors appear to support enhanced velocity? The answer is, of course, yes!

Discovery #2: We have found that, as the athlete improves his mechanical efficiency and builds his throwing foundation, any weighted ball program we put him on will be far more effective.

Final Comments

People often forget that ALL balls are “weighted.”

Every ball ever created has weight. The term “weighted ball” implies something heavier than a 5¼ ounce regulation baseball. Coop DeRenne used the terms “overload” and “underload” to further clarify his program. We, influenced by the work of DeRenne and Nyman, use similar language.

I believe it is foolish and antiquated to think that a 5¼ ounce ball is a “safe” weight ... but 3 ounces or 7 ounces are dangerous!

We suggest viewing the weight and size of balls in your training as a specific type of stimulus. Just as dosage/time/frequency in medicine matter, so does the specific stimulus in training. Sometimes the individual is

ready for and indeed should have “more.” Other times, “more” would be dangerous.

It takes customization, communication, testing, assessment and constant monitoring to maximize the effects and minimize the risks of weighted balls. One thing is certain -- the one-size-fits-all processes I see out there now do none of that. They are simple, but they are often far from benign.

The baseball community has come a long way since the 1990s in terms of its perspective on weighted balls. That’s a great thing. However, until and unless people move past the desire for a universal, “catchall” weighted ball throwing program, we will continue to see inappropriate and misapplied training, with injury and surgical intervention as the all-too frequent outcomes.

Weighted balls are not the problem. The problem is how they are utilized. As my late father frequently reminded me when I complained about my equipment, “It’s rarely the bow that’s the problem. It’s the skill of the warrior using it that matters.”

Indeed.

This final quote, from Steven Covey, is a perfect way to end our discussion of weighted ball training: "If there is no gardener, there is no garden."

When it comes to weighted balls and velocity enhancement programs, our advice at the Ranch Consortium is this: Become the gardener. It's the difference maker.

What's Next For You?

As a **player**, it's critical for **YOU** to become your own best pitching coach.

Here's why....

Less than 25% of all pitching coaches would be categorized as really good (based on their knowledge and training protocols) and less than 10% are truly exceptional.

Yet, the trend is for most pitchers and their parents to believe that simply getting a pitching coach, any pitching coach, is beneficial.

Well, That Trend is a Dangerous One.

A trend which could result in you failing to develop your full potential... and failing to get to the next level.

We're Here To Help You...

At The Texas Baseball Ranch, my coaches and I all BELIEVE without a doubt that every kid can reach 90mph.

We have seen it happen time and time again (by kids who were told they would NEVER reach 80mph, much less 90mph). All you need to become a great pitcher is the right information, the right training and the right work ethic.

If you – or your son - have the dedication and the desire to become an unstoppable pitcher, then our Elite Pitchers Boot Camp will supply you with the knowledge and the training you need to reach any pitching goal.

Why is This a “Must-Attend” Event

Because our goal is NOT to give you a “one size fits all” approach to pitching... We all know a one-size solution doesn’t work.

The first thing that makes a Texas Baseball Ranch Elite Pitchers Bootcamp different is that we start by doing a thorough set of assessments, including a video analysis, a movement screen, a pain audit and a secondary measurement (curveball/slider/change-up) to determine your individual constraints.

You see, we can't prescribe a solution to a problem unless we have all the information.

Your challenge is not, nor will it ever be, exactly the same as the next pitcher, so the assessment is critical. Then, once we know you're current constraints, we can help you design your own hyper-personalized plan.

It’s a way to shave weeks, months, even years off your learning curve.

**But Don't Just Take My Word For It!
Here's what some recent attendees had to
say...**

"We came here last year to catch up with his peers on velocity. We not only caught but surpassed them and now he is entertaining D1 offers and meeting his baseball goals and dreams. The staff genuinely cares first about health then simplifies the throwing motion so that the boys can understand what can increase their chance to improve. He loves the camp, the vibe, and being with others that feel the same."

- Jeff Akers, Father, MO

"If you want your son to be an excellent pitcher, TBR is the answer. They hit our Big 3 items of improvement - 1. Velo 2. Arm Health 3. Command. The staff is excellent and they have a passion for these boys and their baseball futures"

- Ken Bryant, Father, KY

"As a former college pitching coach and current head high school coach, I have had knowledge of Ron's program. A current player asked what was the best thing he could do to enhance his pitching ability. I suggested the Ranch. When he committed to come I told him I would come with him. I am amazed at the knowledge and understanding my player and I are walking away with. The absolute best thing any pitcher could do!"

- Jame Woods, Johns Creek, GA

With over 120 of our athletes drafted since 2003, I have learned something that changed my life (and the lives of the pitchers I coach)

I have learned that in order to get Life-Changing Results, you have to think outside the box and do things a little differently. This is why I designed the Elite Pitchers Boot Camp to be a completely different type of Pitching Camp. Here, the focus is on the individual player.

We will assess your strengths, identify your weaknesses and then you will discover what areas you need to focus on to develop a plan of action that WILL transform you into a stronger, more mental, more powerful pitcher.

I have held over 250 Elite Pitchers Boot Camps and worked with thousands of pitchers... including dozens of professional players including Justing Verlander, Trevor Bauer and Scott Kamiz and I can promise you this...

We are the Gold Standard of pitching camps and the only one of its kind dedicated 100% to one goal: Developing the elite throwing athlete.

WARNING:

The Elite Pitchers Boot Camp is NOT for 90% of the People Reading This Page.

- The Ranch is far more intense than anything most pitchers have ever experienced.
- The Ranch is not air conditioned for comfort and doesn't have shiny new equipment or state-of-the-art machines because we KNOW *it's the right information – not the right equipment* - that will take you to the next level.
- **The Ranch isn't a nanny.** We won't force anything upon the athlete. We give you freedom to develop what works best for you.
- The Ranch doesn't clone, cookie cut, choreograph or give you a one-size-fits-all system for you to follow.
- The Ranch doesn't talk down to you, arrogantly assume we know what is best for you, or dictate your every move and thought.

The only things at The Ranch that are "cutting edge" are the most important... the information, the approach and the teachers.

Of course, there are a few things that are expected from you (and a few principles that we expect our pitchers to embrace)...

- We expect your absolute best - no exceptions

- We hold you accountable for your movements, thoughts and behaviors

- We guide, support, inspire and paint a picture of the possible

- We are completely different from the traditional or conventional and we make no excuses or apologies for our uniqueness

- We believe God is great and through Him... absolutely anything is possible. There is no place on Earth more optimistic and positive with regards to developing the throwing athlete than the Texas Baseball Club.

If this excites you, I encourage you to learn more or register now by

Going to:

**www.TexasBaseballRanch.com/events
or call our office at (936) 588-6762.**