

# Beware of Those Dangerously High Workloads for Pitchers

## Three Simple Approaches to Minimize the Risk of Injury

By Baseball Performance Coach, Bill Mooney, of the BioForce Baseball Academy

As a pitching performance instructor, one of the most popular questions I get is about pitching workloads, or innings pitched.

How many innings should I pitch?

How many innings is too much?

Boy, my arm hurt after only pitching 3 innings the other night. What should I do?

### **What Causes Arm Problems?**

Well, that's a pretty complicated question. I don't feel you can eliminate them. I feel you can manage your work and minimize the risk of injury.

I like to tell folks there are three areas that are most likely to increase the risk of arm problems for pitchers.

- Inefficient Pitching Mechanics
- Too high of a workload for that pitcher
- Improper or lack of conditioning specific to pitching

I believe there is also a genetic factor to this whole pitching injury thing. We are all built a little differently, so some of us are more prone to problems than others.

### **Inefficient Pitching Mechanics**

Throwing a baseball down a mound at max effort certainly puts a lot of stress and strain on all the joints in the body. Especially the shoulder and elbow.

It only makes sense that we would like to improve our pitching mechanics (the

efficiency or inefficiency of our body working to throw the ball) and minimize the stresses on the body.

What are efficient mechanics?

Well, so called pitching gurus around the country have been debating this for years.

I like to explain them to our students in a simple way.

First off, not all pitchers should look the same. Just as our signatures are different, our throwing delivery is different.

Efficient pitching mechanics are pretty simple really. Just not easy to perform consistently.

As coaches, we should teach principles, not style.

Here is a brief summary of our pitching principles.

Number one, the pitcher needs to generate energy. How do we do that? Well, we use momentum to get the energy started. Think of how Happy Gilmore got his "golf swing" going. He ran into the ball.

The principle is a little foreign to some folks. The old-school teach is to get your balance point. Pause at the top. Well, if an outfielder tried to do that, or a short-stop, they wouldn't be playing that position very long.

Let mother nature do a lot of the work.

The next step in efficient mechanics is keeping your posture stable. Think of what they say about some of the better Major League pitchers like Mark Prior. "Gee, he looks like he's throwing so effortless." Well, the more your body is flopping around, the more stress and strain you'll have on your joints. The uglier the delivery. Think of the Olympic hurdler. Their heads stay so steady even when they are going over the hurdle. All their energy is directed to the finish line.

Our finish line is the catcher's glove.

Other aspects of efficient mechanics are timing mechanisms, torque for power and a controlled glove side to help with your control.

A lot of the problems we see with pitchers deliveries can be traced back to the pitcher's body. If the pitcher has limitations and restrictions in terms of flexibility,

strength, endurance, etc, then the body will compensate. This creates the quirkiness we see sometimes. This hurts your ability to make all the pieces work in sequence.

Bottom line, if your body is working out of sequence, you put on more stress on your joints.

### **Too High of A Workload for that Pitcher**

There have been volumes written about how many pitches or innings are appropriate for different age pitchers.

To put it simply, when the pitcher falls into muscle failure, the ligaments and tendons are working over-time to support the joint. When those go, then you have a serious problem with the bones.

Let me explain.

Think of muscle failure as running out of gas.

I think of muscle failure when I'm skiing and my legs are burning so much I can go on any more.

Or when I do an arm curl with weights and can't get those last two reps up, the muscles have failed.

It happens in pitching too.

We might not feel it the way we do with weight lifting or skiing, but they get fatigued. Now, just because we are pitching, people think the arm is the only part of the body that gets tired.

Wrong.

I have found that most pitchers, especially the youth pitchers, tire in their core region. The abs, low back, the obliques and upper legs. Once those go, what do you think does most of the work?

You guessed it. The shoulder and elbow.

What is most likely to get injured? The abs? The butt muscles? Of course the smaller muscles in the shoulder and elbow.

I can't really give you exact numbers when muscle failure happens while you are pitching, but look for signs in the pitcher's delivery. Not following through as much. Decreases in velocity and location are also good signs that the pitcher is tired.

You won't get that back any time in the near future either.

My rule of thumb for pitchers I coach is about 15 to 20 pitches per inning. No more than 25 in any inning. If the pitcher exceeds 25 pitches in any one inning, I would pull him.

After the pitcher has had high workloads and is possibly in muscle failure, then he should stay off the mound for a minimum of 3 days. If the workloads are higher, say 50 or more in one day, I would not have my own sons pitch competitively off the mound for 4 to 5 days. Especially if they are younger. Even if they playing for the championship of the youth league world series, I would not take the risk.

Bottom line. Don't look at innings as a barometer of workloads. Look at pitches. Do yourself and your pitcher a favor, watch the pitch count closely. Don't forget the number of days rest too. The pitcher needs to rest.

Rest doesn't mean not throwing. Throwing from shortstop after pitching isn't the same stress as pitching. Although, if a pitcher has thrown a lot of pitches in a game, I would put him in a position he doesn't have to throw much, if at all.

### **Improper or Lack of Conditioning Specific to Pitching**

It drives me crazy when I hear coaches tell a kid he needs to get in the weight room and put on some meat on his bones so he can throw the ball faster or hit it farther.

Our society is so obsessed with getting bigger. Bigger must be better to throw the ball harder.

Can't be further from the truth.

First off, most youth baseball players don't condition at all. All baseball players should train if they are able bodied.

That doesn't mean pump a bunch of iron.

As a pitcher, you need to train your body to handle the explosive stresses placed on it. You need to improve the endurance in all your joints. You need to work on

flexibility. Power training should become a passion too. Don't forget to address balance as well.

You need to work on all of these components of training. If you don't, or have a weakness in one area, it will show up in your performance if not develop into an injury.

How do you train in flexibility, strength and endurance, balance, and power? Well, that's a subject for another time. We certainly do have the tools there to help you.

Don't get caught up in the age thing. We've all heard it. Don't lift weights until you are 16...or whatever.

What I am saying is, you don't need to lift weights to gain in all these areas. Sometimes using your own body weight is enough. Anyone at any age can work on training with this formula.

In fact, traditional lifting can actually hurt you, even if you've been doing it for a while. You need to be careful.

To wrap it up, to be as successful on the playing field as you can, you need to train your body. You need to train in a certain way to do it correctly.

I've heard it said from my good friend and elite athlete trainer, Sean Cochran, there are no bad exercises. There are probably exercises that are bad for baseball players.

## **Post Game Wrap-Up**

So, I hope I've explained things concise enough for you about workloads for pitchers.

You need to look at your pitch counts, not innings. Make sure you get enough rest between outings. Train properly in the gym and on the field. And work on making your pitching mechanics more efficient.

Train like a champion!

*Bill Mooney*

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***About the Author***

**Bill Mooney** is the owner and lead instructor at the BioForce Baseball Academy in Beaverton Oregon. Here's what a couple of former Major League Pitchers and Pitching Coaches say about Bill Mooney and BioForce Baseball.

*“Bill Mooney is one of few pitching coaches in the nation who has been Certified by The National Pitching Association and Functional Fitness, Inc. I have found that Bill is one of the finest young pitching coaches in the country today. His knowledge and instruction are the most up-to-date and progressive you’ll find. With his knowledge, teaching skills and background Bill does an outstanding job helping pitchers perform at their peak and remain healthy.”*

### **Dr. Tom House**

Performance expert. Former Major League Pitcher. Former Major League pitching coach. Current coach and mentor to many star major league pitchers such as Randy Johnson. Co-founder of the National Pitching Association

*“As a former major league pitcher, pitching coach and former coordinator of pitching for the Montreal Expos/Washington Nationals, I am always searching for information and instruction that can help me improve. Most would guess that the best, most informative teachings come out of the professional game, but it has been my experience that the instructors who have dealt with hundreds of kids from all ages really have seen what works and doesn’t work. Such is the case for Bill Mooney and BioForce Baseball Academy. Having watched him interact and teach what we know today to be right, I would not hesitate to allow him to work with our pitchers. To place that trust in someone is the highest compliment I can pay to a fellow pitching coach. Without question, Bill Mooney is an outstanding coach and one worth learning from and training with.”*

### **Brent Strom**

Former major league pitcher and former pitching coach for the Houston Astros and Kansas City Royals

To find out more about Bill and BioForce, go to the website [www.bioforcebaseball.com](http://www.bioforcebaseball.com). To contact Bill, you can email him at [support@bioforcebaseball.com](mailto:support@bioforcebaseball.com).

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