

# DEREK JETER

## Dynamic Stretches

Before each training session, Jeter performs a thorough warmup that emphasizes dynamic stretches. Researchers at the **United States Military Academy** discovered this routine helps you sprint faster, jump higher, and **throw harder** immediately afterward.

**30 seconds each of jumping jacks, arm circles, pushups, lunges, and body-weight squats.**

## Balance your workout

Jeter does sets of exercises that require pushing and pulling. This prevents muscle imbalances that lead to injuries and also helps build a symmetrical physique.

**Pushing—Squats, Lunges, Presses**  
**Pulling—Rowing, Pullups**

## Sprint, Jump, Skip

Jeter also does a series of drills designed to improve his conditioning, speed, and agility. These are for the **fast-twitch fibers** that are most important for sports.

He uses running, bounding and basketball to train fast twitch-muscles for explosive energy.

# **ALBERT PUJOLS**

Pujols is one of the strongest men to ever play baseball. But he understands power begins with LEGS and CORE strength, plus FLEXIBILITY. Let Albert explain:

"I hit each part of my body twice a week and at least 2 days of cardio a week. But I don't want to get too big, where my body's too tight. Your body has to be loose and flexible. I stretch for 10 minutes before and after a workout."

## **For My Power Swing**

"The hardest thing is training your abs and lower back, but those are the parts that usually break down. A strong core keeps you in the game longer than big biceps. Plus flexibility and a few extra pounds of muscle."

## **To strengthen my core**

**3 sets of 15 Supermans**—"Lie facedown on the floor with your legs straight and your arms extended beyond your head. Lift your arms, head, chest, and lower legs off the floor simultaneously and hold for 1 to 5 seconds, then return to the starting position."

**Weighted Pendulums**—"Lie on your back with a med ball between your feet, your legs together and up above your hips. Slowly roll your legs to the right as far as you can comfortably. Pause, then bring them back over your hips. Repeat the move, rolling to the left." *These are essentially the same as Jon Kolb's Windshield Wipers.*

## **My Power Foods**

"I eat five meals a day. After a workout I eat all the carbs and protein I want. In season, I eat as much as I can. I'm burning calories and need to keep my weight up. I also drink two or three protein shakes a day."

# ALEX RODRIGUEZ

## Winter workouts

"It's all about developing fast-twitch muscles, that explosive first step. I work out with the track team at the University of Miami. Stretch for half an hour. Do plyometrics for 15 or 20 minutes: high knees, shuffles, backpedaling. Then run. Maybe four 400s, six 200s, and 10 straightaway 100s. **It's a total gut check.**"

## Weight Training

"I lift for only half an hour to 45 minutes. But it's hard core--**moving light weights as fast as I can** from point A to point B. That's another way to exercise those **fast-twitch muscles**. I focus mostly on my trunk and legs. I'll start with 135-pound squats, then I'll move up to 225. I'll do reps of five: up and down, up and down. It helps develop my balance, too."

## Sprints

"My work ethic has always been my best friend, but sometimes it can become your enemy. I made a mistake a couple of years ago. I started running 7 miles a day. **All that endurance training made me very lethargic.** That first-step quickness was gone. I learned my lesson: You can work harder than anybody, but that work has to be conducive to what you're playing. **Baseball players should train for explosive endurance not marathon endurance. That means sprinting.**"

## Relaxation

"**You want to be relaxed, like a cobra.** Hitters who hold their breath at the point of contact aren't good breaking-ball hitters. When you hold your breath, the plane of your bat changes because there's tension. [Alex grips a bat loosely. When he tightens his grip, the barrel of the bat rises 6 inches.] That's the difference between a foul ball and a double."

## DEMPSTER: A-Rod's Work Ethic

"A-Rod is one of the hardest working players you'll ever see. For instance, at the all-star game, one of the guys told me A-Rod made an error on a backhand in one game. When he came into the clubhouse he asked Robinson Canoe and one of the coaches to meet him at the park at 2:30 the next day for early work. Then he took about 250 groundballs.

"And if he struck out in a key situation he'd come in early and take 200 extra swings off the tee and live. He has perfect balance at the plate—just watch his finish."

# **DAVID WRIGHT**

**"Third base is a reaction position," says New York Mets star David Wright. "It's all instinct." Wright performs explosive exercises to increase reaction.**

## **Side Throw (ROTATIONAL)**

**Benefit:** Helps you turn on a fastball

**Muscles strengthened:** Abdominals, hip flexors

**Wright says:** "You can do sit-ups all day, but you won't get that full range of motion like you do with a medicine ball."

**How to do it:** Stand 3 feet from a solid wall, at a right angle to it, feet shoulder-width apart. Swing a medicine ball a bit to one side, then switch directions and throw it hard against the wall. Do two or three sets of four to eight repetitions, then switch sides and repeat.

## **Romanian deadlift (DOWNWARD)**

**Benefit:** Helps you stay low to the ground

**Muscles strengthened:** Hamstrings, back

**Wright says:** "Strengthening your lower back and hamstrings is key for a 162-game season. These areas have the biggest injury rates."

**How to do it:** Hold a dumbbell in each hand in front of your thighs. With your feet shoulder-width apart and knees slightly bent, bend forward at the hips until the weights are at midshin level. Pause, then lift your torso back to the starting position. Keep your back slightly arched throughout.

## **Standing Jump and Reach (VERTICAL)**

**Benefit:** Helps you explode upward

**Muscles and joints strengthened:** Ankles, quads, hips

**Wright says:** "Exercises like this one that fans see us doing before a game-- they aren't just to warm up. They actually make us play better."

**How to do it:** Squat slightly with your feet shoulder-width apart and arms at your sides. Then quickly explode upward, reaching both arms overhead. Be sure to land with soft knees. Do six to 10 repetitions.

## **Side Lunge (LATERAL)**

**Benefit:** Helps you move side to side

**Muscles strengthened:** Lower body

**Wright says:** "I need this explosiveness in my body to react to my left or right."

**How to do it:** Rest a barbell across your upper back. Take a long lunge step directly to one side, keeping your toes pointed straight ahead. Descend as you step so that your lunging thigh ends up parallel to the floor. Then push yourself back up to the starting position.

# DEMPSTER

## "He'd be running up Camelback Mountain"

I found it rather amusing this past winter when some of the baseball gurus wondered if Ryan could make the switch from closer to starter. Would he be able to handle the work-load, going back to 200 innings or more? Little did they know Ryan Dempster.

By the looks of it Ryan seems to be in the best shape of his career. In fact, during spring training Cubs manager Lou Piniella gave this classic quote: "We'd wrap up a session, after a hard conditioning workout, and I'd look around and Dempster would be gone. He'd be running up Camelback Mountain."

That's Ryan's philosophy. No one can out-work him. In Denver over the winter he hooked up with a personal trainer and told him to be merciless. "I said drive me until I throw-up," Ryan jokes, "and then make me do more." (At least I think he was joking.)

They concentrated on leg-work with squats, lunges and running hills. For his upper body they added strength but made very sure he stayed lean and flexible. He did Jobe's exercises with eight-pound dumbbells, which are way too heavy for younger pitchers but fine for Ryan who's done more Jobe's than Florida has oranges. We started him on a baseball weight-training program at the tender age of 15 and it was like turning CNN loose on breaking news. He was all over it.

The trainer added sessions with the BOSU ball, which is a sort of plyoball cut in half. BOSU powers the core area, demands an increase in balance-- which means body control--and increases flexibility. Ryan would include some chest and tricep exercises on the BOSU, which acts as a platform.

Suffice it to say Ryan came to spring training as fit as a UFC heavyweight and as tough as a German shepherd protecting a pile of beef bones. Was he ready to go from 70 innings to 200? Does Bill Gates have a few bucks? Is Craig Ferguson funny? Is Robert Downey Ironman? You get the picture.

# QUICK FEET AND AGILITY

**Overall conditioning is so important to baseball players but very few work hard enough. Those who do will have a huge advantage over lazy players.**

There are some great Quick Feet drills aimed at infielders and catchers--but also very useful to pitchers. Why? Simply because they give you balance and agility. **Everything that makes you a better athlete also makes you a better player.**

Body control, agility and quick feet are obviously crucial for infielders but they're just as important to catchers and they help pitchers develop good mechanics.

- 1) Jump rope**--I love this for all players. Great for footwork, co-ordination and endurance. Why do you think boxers jump rope so much?
- 2) Four corner drill**--Mark off a square about 10 yards by 10 yards. Start at one corner then sprint forward, shuffle sideways, run backwards and finish the square with crossovers or cariocas. Do them in sets of three, five, eight, whatever your endurance level.
- 3) Letters**--Trace a letter on the floor or the field. W, X, Y, H, etc. Just move your feet as quickly as possible from point to point. Use your imagination.
- 4) Line drills**--Pick a line in the gym or the foul line on the field. Start on one side of the line and jump sideways back and forth as fast as possible. Then jump forward and back across the line. Then straddle it and do quick crossover steps or jump turns. Finally, the Ali Shuffle, one foot in front of the line and the other behind and then quickly back and forth.

Agility drills teach players to get their mind in synch with their body and they're as valuable as chop sticks in a Chinese restaurant.

***"Be quick—but don't hurry."***

--JOHN WOODEN,  
legendary UCLA basketball coach

## MEDICINE BALL

The Medicine Ball has become a silver bullet in the baseball conditioning arsenal, used by almost every big league or college team. It's resurrection is long overdue and not to be underestimated. Good medicine ball work is invaluable for core conditioning through rotational drills.

**ROTATIONAL**--Baseball is first and foremost a rotational sport. For hitters and for pitchers. Pop your hips for explosive power. Use the Medicine Ball to develop torque through the abs, hips, lower back and obliques. Hold the Med Ball by yourself and do rotational reps from side to side. Or stand back-to-back with a partner and do rotating hand-offs. Add a hip toss by throwing sideways.

**OVERHEADS AND CHEST PASSES**  
--For shoulder, chest and back strength. Woodchoppers, overhead passes, wall jumps and chest passes.

There are a lot more, of course, but always remember to use a Medicine Ball of the right weight. If it's too heavy you can strain or pull a muscle, so be conservative to start. Also, Medicine Balls are fairly expensive and, if you can't afford one, be resourceful and adapt other equipment.

## MARTIAL ARTS

We cover **Tae Kwon Do** in "Cross-Training," but it's worth repeating that Martial Arts are a wonderful discipline for any athlete. They stress total body control, power, agility, and endurance.

The front kicks, side kicks, and round kicks are tremendous for balance and leg strength. Is it any surprise so many good baseball players are emerging from Japan, Taiwan and Korea? We're not asking you to become **Jackie Chan**, but the discipline of martial arts is invaluable.

## BALANCE

Most of us don't have very good balance because we don't work at it. But balance is a huge plus--so challenge yourself. Pitchers do a Balance Drill at the top of their delivery but that's only one drill among many.

The **plyo ball** is outstanding for balance and ab conditioning. In fact, a plyo ball is one of the most effective tools available. You can do Mountain Climbers with a plyo and 360 degree rotations to develop muscles only a kinesiologist can name.

But you really don't need any equipment to work on balance. Just lift your knee and hold for a count of 10 to 20. Alternate legs. Then close your eyes and balance to make it even harder.

## DEMPSTER Off-Season

Ryan's off-season work-out program is a monster.

He does all the weight-training we discuss here, concentrating on legs, mid-section and Jobe's. He runs sprints for explosiveness. He's married to plyometrics and a Bosu ball and medicine ball exercises. He wears a weight vest for squats and lunges. He absorbs new exercises from the Cubs strength and conditioning trainers, he invents some of his own, and tells a personal trainer to drive him without mercy.

For awhile, he spent the month of January in California with trainer Tyrone Bennett, a boxer who runs boot camp workouts guaranteed to test the most committed athlete. This is killer stuff, maybe a bit too relentless and intense.

Tyrone joked that Ryan is a bit psycho. After a workout including sprints, agility, boxing moves, squat jumps, weight vest, hand speed, torso twists and on and on, when the rest of the guys were sucking wind, Ryan would challenge Tyrone to give him more.

It reminds me of Roger Clemens, one of the hardest working athletes ever. In the great tradition of Nolan Ryan, the Rocket had a legendary work ethic.

## **DEMPSTER**

### **Conditioning during the season**

You know me--in the off-season I believe there's never enough conditioning.

But during the season all the conditioning is maintenance. During a 162-game season I think you can over-condition if you work too hard. I like to do a variety of conditioning exercises, including sprints, stationary bike and machines--done with the right precautions to not over-train between starts.

**Poles**--30 second runs with one minute rest in between.

**3/4 Poles**--No rest. Run 3/4 of the distance at three-quarter sprint speed, walk to the foul line, then back the other way.

**Sprints**--90 feet or from foul pole to centerfield.

**Stationary bike, running hills**--For variety to keep things interesting.

### **\*\*\* FAST TWITCH EXPLOSIONS \*\*\***

*"Fast twitch fibers give the athlete the ability to move quickly and explosively. Complex training allows the athlete to work muscle fibers in such a way the slow twitch fibers are taught to behave like fast twitch fibers.*

*"The more varied the workout, the less chance the body has to adapt to any one way of training. This will be key in building speed and thus power. Endurance training is important but be certain the type of endurance developed is specific to the sport.*

*"Several years ago, I had an Olympic javelin thrower and two strong football players working out. The football players could bench press 400 pounds, the javelin thrower didn't bench press but did complex training. I had them perform a seated medicine ball chest pass for distance, which resembles a bench press motion. The football players threw 28 and 32 feet. The javelin thrower threw it 48 feet before it hit the wall. The football players couldn't use their strength effectively because they did not train explosively.*

*"Strength training accomplishes the first half of complex training, with plyometrics, sprint training, and sport specific training completing the equation."*

--Donald A. Chu, Ph.D,  
"Explosive Power & Strength"

# **JOBE'S AND TUBING**

**Check out this web-site for excellent Jobe's:  
"The Thrower's Ten"**

Probably you've never heard of **Dr. Frank Jobe** but every pitcher should send him a Christmas card and a thank you note. Dr. Jobe is the guy who invented the dumbbell exercises pro players use to rehab injured arms. To some of us the next step was obvious:

**INSTEAD OF REHABBING--LET'S AVOID THE INJURIES IN THE FIRST PLACE. LET'S PRE-HAB.**

Pro players do these exercises three, four, five times a week and so should you. They are arm savers and the greatest protection I can offer for your **Rotator Cuff**.

They simply go by the name **Jobe's**, which is perfectly fitting. Some came right from the doc, but many originated from the fertile minds of strength coaches, who often disagree on exactly how to do a particular exercise. Don't worry about that--variations are worth trying. Start by doing these without weights, then progress to **one, two and three-pound dumbbells**. *There are dozens of Jobe's but these are the most important:*

**Military Press**--If you read the **CAUTION** in the weight-training section you'll see that we don't recommend Military Press (or Shoulder Press) with any kind of weight. Heavy MP's mean impingement on shoulder nerves, which is very bad news. Most pro teams won't allow them at all but you can do Military Press with light dumbbells or no weight, if you monitor it carefully.

**Front laterals**--We do these to shoulder level, palms down or turned in.

**Side Laterals**--Again, shoulder level with palms down--but an option is to go palms down to shoulder level and then rotate to palms up and raise the dumbbells straight above your head.

**Supraspinatus**--A big word for a very important part of your rotator cuff. Halfway between the side lateral and the front lateral, about 45 degrees in front of your body. We like to rotate the thumbs down as we lift. There are a lot of variations--30 degrees instead of 45, keeping the thumbs down throughout the movement without rotation, and others. Regardless, this is a mainstay. It feels good, it conditions and it protects. Enough said.

**Back Laterals**--Bend at the waist, back fairly flat, your arms hanging down toward the ground. Keeping your arms straight, lift the dumbbells sideways to shoulder height (parallel to the ground) to work the back of your rotator cuff. Never overlook exercises that condition the back or the back of your shoulder. They are crucial to balancing your muscular development.

**External Rotation**--This may be the most important Jobe's of all. Lie on your side with your arm across your chest. Rotate the weight up until your hand is even with your side. It's a good idea to put a towel under your upper arm to keep your elbow a bit off your side. **You can also do this one standing up using tubing.** External rotation is very important because few weight-lifting movements work the shoulder's external rotation. And that is absolutely fundamental rotation, crucial to throwing.

**Internal Rotation**--Just the opposite of External, of course. Easiest to do with tubing. Elbow at your side, forearm at 90 degrees to the upper arm, hand pointing straight out front, rotate in to your chest.

**Elbow Rotation**--A bicep curl but with a twist. Instead of curling straight up, start with your hand facing down and then rotate your palm up as you curl. Especially effective to rehab forearm, bicep or elbow soreness.

**How many reps and how many sets? Probably 10-15 reps with three sets of each exercise is good—but do at least one set of each.**

## **The Rotator Cuff**

A few years ago I attended a seminar on the Rotator Cuff by a kinesiology ph.D. Heady stuff. I'd already studied the rotator cuff but I wanted more information and this expert did a great job. He knew about Jobe's exercises and he had the weight programs for a dozen big league teams. He was not impressed. Many of them included exercises that could damage the arm and only two or three were acceptable by his standards.

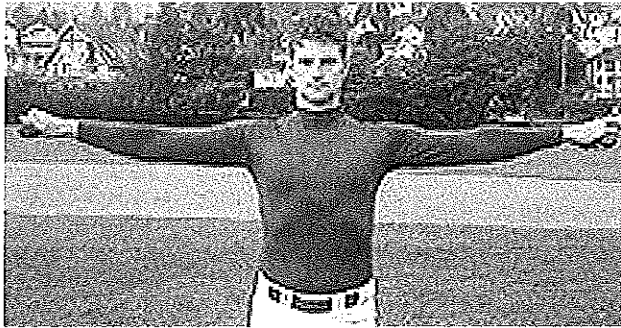
I told him I'd seen college weight programs based on football that could also be a disaster for pitchers. Many of the exercises are the same--but baseball players avoid military press and upright rowing, both dangerous to the rotator cuff, and add rotational exercises.

The Rotator Cuff is four small muscles in the shoulder—the Supraspinatus, Infraspinatus, Teres minor and Subscapularis. They're not very big so they're vulnerable and you have to condition them to avoid injury. They can suffer tears and impingement if bone spurs rub on the tendon when your arm is elevated.

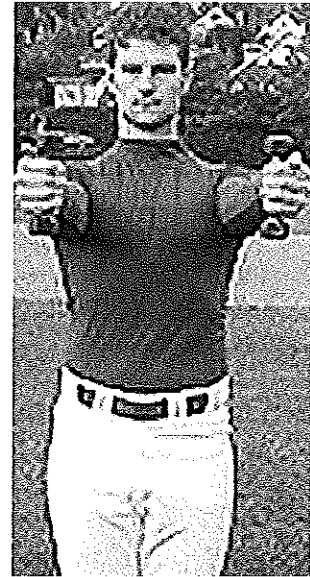
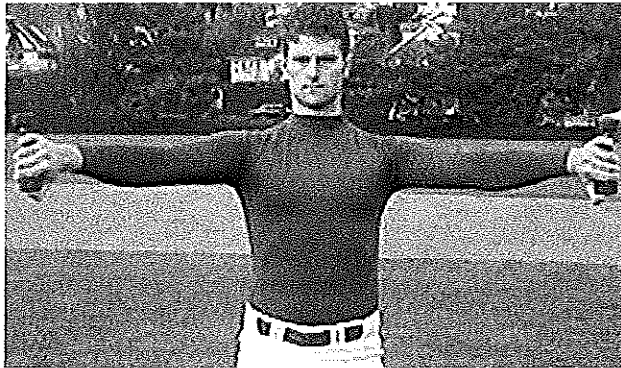
Do your Jobe's exercises often to protect your throwing arm--it's the only one you've got.

### **SUPER SETS, TRI-SETS, GIANT SETS**

A great way to do Jobe's is **Super Sets** (two exercises together) or **Tri-Sets**. A good tri-set would be 15 reps of Military Press, followed immediately (no rest) by 15 reps of Front Laterals, followed immediately by 15 reps of Side Laterals. Tri-sets are very efficient but even better are **Giant Sets**, which means four or more exercises together. A great Giant Set is those three exercises, plus Supraspinatus.



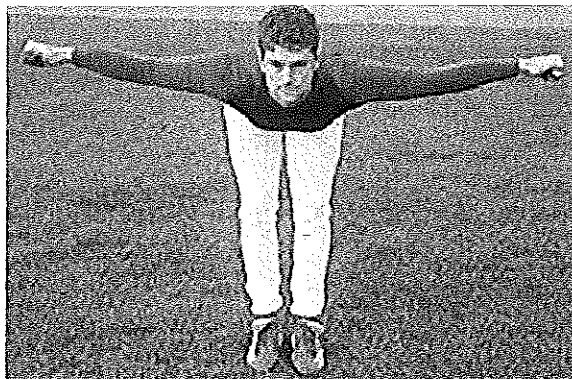
***SIDE LATERALS***



***FRONT LATERALS***

**These Jobe's exercises are the best protection you have for your Rotator Cuff muscles.**

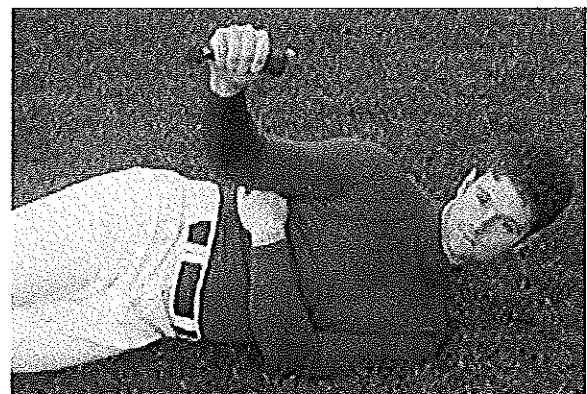
***SUPRASPINATUS*--Bring your hands up at 45 degrees and rotate.**



***EXTERNAL ROTATION***

***THE JOBE'S  
BACK LATERALS (Above)***

**Do your Jobe's several times a week, as a warm-up before throwing or as a conditioner. Do two or three sets of 15 reps for each exercise. Use one, two or three pound weights--or NO weight at all if you're very young.**



***INTERNAL ROTATION***

By doing Tri-Sets or Giant Sets you speed up the process and get a lot more done in less time.

Lifting weights can become very tedious—so change your routine often to stay fresh. This is also beneficial to the muscles.

But, no matter how you hack it, do your Jobe's. Almost every day, if you can. Do them when you don't throw and do them to warm-up. And then thank God for Dr. Frank Jobe.

## **DEMPSTER** Fast Twitch

I see guys doing Jobe's where they hold it at the top and count 1,000, 2,000 and then down. I don't understand that. Why teach a fast-twitch muscle to work slow?

I want to be quick so there's no point in teaching the muscle to be slow. You're going to throw 65. I don't jerk the weight up and down--that would be stupid--but I do my Jobe's at a steady pace and under control. It's not bring it up and then hold it.

## **DEMPSTER** Doing Jobe's

Over the winter and during spring training I'll do my Jobe's about six times a week. During the season I cut back a bit, maybe four times a week, a maintenance program.

I'll do them for sure on the days I throw a bull pen and a little bit to warm-up before I pitch, even when we play in 100 degree weather. I just do them a bit to get a pump going.

There are all sorts of theories on doing Jobe's. You shouldn't do them too fast, that's pointless. But I don't like a long hold at the top of the exercise, either. I don't think you should train fast twitch muscles to go slow by stopping. I just go up and down nice and even.

I like to combine the exercises, side laterals with front laterals, for instance, a set of 15 to the side, then 15 to the front, with three-pound weights. Or three different exercises, one after the other, 15 reps each. Then a break and do the tri-set over again.

**Jobe's are pretty crucial.** I do a lot of weights for the big muscles and it's very important to do the Jobe's for muscle balance. These smaller muscles, like the rotator cuff, control everything. The Jobe's not only help you avoid injury, but they keep you in tune and co-ordinated with the big muscle groups. Dave taught me how to do Jobe's when I played for him with the Twins and I've done them regularly ever since.

I always do them after a bullpen, either for normal maintenance or maybe to burn out my shoulders to get stronger. When it's hot you don't need to do a lot to get warm, mostly just stretching. We'll stretch, then play a little catch, and you're sweating like crazy and very loose, so you really only need to do a bit of Jobe's to warm-up.

After a bullpen I'll go into the weight room and warm down--so my shoulder doesn't tighten up. Sometimes between starts your upper body doesn't feel strong, maybe you've been working it too hard, so, instead of doing a full upper body work-out, I'll just do Jobe's. You're giving your upper body a good work-out but with light weights.

They are so important. Get some light dumbbells and do them in your room--or even without weights. I'll have three pound weights in my hotel room on the road and I'll be sitting around so I'll take 10 minutes and get a pump with the Jobe's exercises. It's just 10 minutes--and I've protected my arm. The same when I'm standing around in the outfield during batting practice. I'll just start doing an exercise for external rotation or something like that. I'll just focus on something that can help my arm.

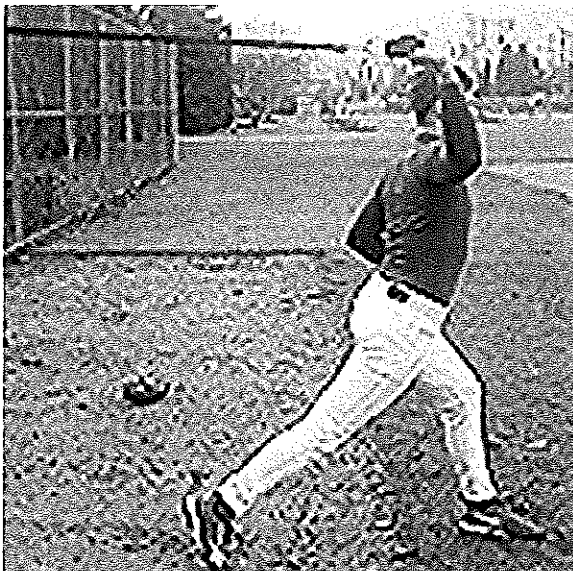
## TUBING

Surgical tubing is another absolute necessity. You can do a lot of Jobe's with tubing (particularly external and internal rotation) but, even more important, you can shadow box your whole pitching motion using tubing as resistance to get stronger.

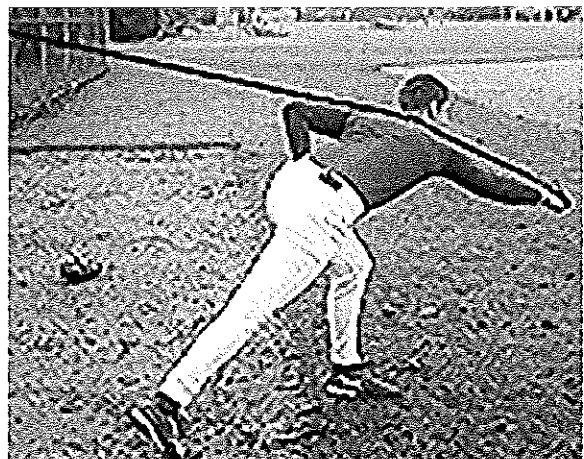
We love tubing. You can adjust the resistance by simply increasing the tension and it's about the safest conditioning possible.

We also use a piece of equipment called **The Gun**, which is sturdier than tubing. You can find eight and 10-foot cords at many fitness stores. We encourage our pitchers to buy one and use it at home--it's a great way to work on your full motion and get stronger as you do it.

We keep the cords set up by our dugout and pitchers use them to warm-up and also to stay loose when we have a long inning on offence. Anytime a pitcher is sitting for any length of time he should use tubing, especially on a cold day. A great way to protect your arm.



***THE GUN***  
This is super tubing for the arm



# **Hitters**

**Think about the muscles you use when you hit.** You hear TV analysts talking about "wrists" but that's a cliché. The wrists don't roll over until after contact. (If they roll over earlier you're hooking the ball instead of staying inside it and you'll hit a lot of weak groundballs.) Driving a baseball starts from a strong base--your legs and core--plus these upper body muscles:

## ***Back, Chest and Triceps Forearms***

Strong forearms are very important to a hitter. Jeff Bagwell, who was a power hitter for the Astros for 15 years, is barely six feet tall but his forearms are massive. Hitters should concentrate on the legs, core and upper body, but also work for their forearms with these exercises:

### **Reverse curls Hammer Curls**

### **Wrist Rollers Hand Squeezers**

The squeezers strengthen your hands, of course, which is important for both pitching and hitting, and they also work your forearms.

## ***Cable Swings***

These are favorites of mine. In the gym you can hook a dumbbell or a piece of wood into the handle on the cable machine and practice your swing. Start with a very light weight, building endurance, and gradually increase the resistance, without getting very heavy.

Simulate your swing, staying direct to the ball. Your hands move from your set-up position to the point of impact and **ALL** your upper body muscles get a workout, plus your core rotational muscles. Simon Pond did this exercise a lot when he first started lifting weights.

# **SQUAT KICKS=LEG POWER**

**Ted Kubiak** played infield for 10 years with six different big league teams. A few years ago he told me one of the most important things an infielder can do is develop his endurance and leg strength. "You have to be strong out there in the later innings or you just don't react to the ball very quickly." And, obviously, catchers need endurance like a car needs wheels.

There's a great exercise pitchers, catchers and infielders can do to develop leg and core strength, plus endurance. It's called **SQUAT KICKS** and it's based on Tae Kwon Do. You execute a front leg kick and then a full squat, moving up and down and alternating legs.

# Wind SPRINTS

To run or not to run? But that is **not** the question. The enigma is how to run and how much. Now that may be news to you. Since the turn of the century baseball pitchers have blithely been told to run for endurance--a mile, two miles, five miles. Pole after pole, lap after lap. It's just been a given. Endurance running creates endurance on the mound. End of story.

## **But the problem is...**

Science tells us it's best to train your muscles to react exactly as they would in the game itself. In other words, for an explosive sport like baseball you'd like to train explosively. Not always, of course, particularly when you're doing certain lifting exercises, but as much as possible.

### **DEMPSTER Sprints**

I do a lot of sprinting. Pitching is explosive and that's what sprints are all about.

When I worked out in Los Angeles we did a lot of sprinting. Sometimes we'd actually sprint uphill for one minute--as far as we could go. When the beeper went off you'd jog down to the bottom--and then go again. And there was a decathlon event that included push-ups, knee-ups, sit-ups, jump squats, tons of stuff. No rest. Zero. You go right to the next thing.

One of the drills was running a rectangle 120 feet by 120 feet and completing it in 45 seconds. If the last guy wasn't through in 45 seconds you'd go again.

#### **3/4 Sprints**

These are one of my favorites. I go foul pole to foul pole. I run at 75 per cent sprint speed for three-quarters of the distance and then jog to the pole. I do multiples of these and love them.

Baseball is simply a string of quick explosions. The pitcher explodes to the plate. The hitter explodes on the ball. The base runner explodes to steal a base. The Out-fielder explodes to get a jump. This is not marathon running. It's a 10-metre sprint at best--over and over.

For a pitcher it means anywhere from 15 to 120 explosions per game. That requires quick bursts of energy--but it also means endurance to do it over and over again. So, of course, you have to train for both.

Explosive bursts are covered by plyometrics, medicine ball twists and tosses, agility drills--and, best of all, actual throwing. Bullpens. Games.

So what's the best way to develop endurance for baseball? Distance running? As Alex Rodriguez points out, distance running leads to lethargic muscles. We are not running a marathon.

**The best way to develop endurance for the explosive act of pitching or hitting is the explosive act of SPRINTING. Over and over. Wind sprints, lots of them. Start by warming up thoroughly and then run half a dozen 50-yard sprints.**

**Next time make it 10 sprints, Then 12, 15, 20, 25, 30.**

In my early 20's I ran wind sprints three or four times a week. On a football field I'd walk 25 yards, jog 25 and then sprint 50. Turn around and do it again. And again and again, sometimes for an hour, around 50 or 60 sprints. And I never got tired pitching--or playing any sport, for that matter. In fact, in the last inning I inevitably felt stronger than I did in the first inning. This was my endurance running. Sprints. I never liked to jog. But I loved sprints. They were like weight-lifting. They gave you a pump and you knew you were getting stronger every day.

You absolutely **must** have endurance--you can't be a five-inning pitcher. But endurance doesn't have to come from endless laps. You're really looking for **explosive endurance** and there's no better way than sprints.

Should you combine sprints with distance running? Kinesiology experts say distance running is counter-productive for explosive sports. Distance running trains the muscles to react slowly. Why would you want that? What you need is **fast-twitch muscle reaction** and sprints implore fast-twitch, just like plyometrics. You can do both—but wind sprints are as necessary as a catcher's mask.

The best way to train for baseball is sprinting, or playing basketball, floor hockey, soccer, touch football--any sport that requires short, explosive bursts of energy. Over and over again. That's baseball endurance.

## **SPRINT EXERCISES**

Our track coach **LORNE BERKUN** has dozens of sprint drills. They include Running on the Spot and A's and B's, which emphasize high knee raises, plus LUNGES. You're limited by your genetics when it comes to running speed but very few players ever come close to their potential. These drills help you get there.

### **DEMPSTER Running**

The first time I saw Ryan pitch he was 15 and, obviously, he had a great arm. His mechanics needed work, of course, but that came quickly. We taught him to stay taller and use his body, and, as usual, he learned right away.

But he had about five-inning endurance, not uncommon with 15-year-olds. By the fifth his velocity was down, his curveball lost bite and he looked tired.

We gave Ryan a running program, including a lot of sprints, and I never saw him get tired again. By the time Ryan was 18 we had reports like this from **Walt Burrows**, the head of the Canadian Major League Scouting Bureau: "Ryan was throwing 90 in the first inning and still throwing 90 in the seventh after 100 pitches. He never gets tired."

Personally, when I hear about a pitcher "tiring" in the late innings I have to wonder about his pride. All it takes is work.

Baseball is such a tough game because it's a never-ending battle to master the overwhelming avalanche of skills and drills. From the outside it looks simple. From the inside it's about as complex as a thesis written by a Harvard lawyer about an MIT experiment on DNA.

## **DEMPSTER**

### **Rotational**

One of the things we did in L.A. was the Punching Bag. It's great for rotation. You punch, punch, down, up, shuffle, shuffle, punch, punch. You hook to this side and then hook to that side. You emphasize the rotational aspect, using your body to get power behind the punches.

You go as fast as you can. Until you're so exhausted you just can't punch anymore. It makes you stronger and quicker and helps you explode your hips when you're pitching.

Pitching and hitting are both linear and rotational—while moving forward you uncoil your hips as your weight shifts from back to front.

Which leads to power--or to spin out. Power is very good, of course. But spin-out lurks in the shadows like a private detective--ready to blow your command and make you another Mitch Williams, who was so wild and off-balance he had to break his fall by putting his glove on the ground. Great stuff. But he drove managers crazy with endless 3-2 counts.

So we're talking about **controlled rotation**. We want to harness that torque and generate power--and then combine it with linear direction down the hill. A case of advanced physics and I mean **advanced**.

The human brain and body are amazing, really. If you fed all the info for throwing a slider or hitting a curveball into a computer the scientific equation would fill a book longer than **War and Peace**. Even the fastest computer is a light year behind the human brain. Each moment of the delivery or swing requires split second timing. If it was just linear it would be a lot easier. But rotation coils the body to get you loaded and then uncoils to explode.

The hips and shoulders are essential to rotation. But they're aided and abetted by the lower back, the obliques and the abs. All those neat muscles in the core of our body that we don't enjoy developing. Plain hard work.

A pitcher pops his hips and the ball explodes out of his hand--but he can't think about this during the delivery. It's the product of good mechanics **and rotational conditioning**.

## **DRILLS FOR ROTATION**

**MEDICINE BALL**--Torso twisters with the med ball are excellent. You can do them alone or with a partner. Rotational throws. A hip toss with a quick sprint at the end. Lunges with rotation. Even better, lunges with a weight vest and rotation. There are dozens of exercises and they're extremely effective.

**ROTATION BAR**--We use a bar that weighs about 10 pounds. Put it behind your back, hold it hip high and rotate. After awhile, as these muscles get in shape, you can get more and more explosive. You can also put it across your shoulders and do more rotations. Great for both pitchers and hitters.

**PUNCH DRILL**--This one emphasizes trunk and hip rotation the same way a boxer rotates to get more power behind his punches. Set-up like a boxer, left hand out front and right hand near your chin. Simulate a punch, a straight right hand, and pop your hips for torque. Also, pull your left hand back into your side. **Make sure you keep both elbows as high as your shoulders as you deliver your KO punch.**

**TAE KWON DO KICKS**--These kicks are great for strengthening your hip flexors. They aren't necessarily rotational but they develop power in the core area and that makes it easier to explode your hips. **Try front kicks, side kicks and round kicks.**

**SHADOW BOXING YOUR MECHANICS**--There is nothing quite like repeating your actual mechanics over and over. Shadow boxing means exactly that--without a ball or a tee, and, preferably, in front of a mirror so you can check out your delivery or your swing. In this case concentrate on popping your hips as your arm comes through or you swing the bat.

### **The Problem Is...**

Whenever you emphasize hip rotation in baseball you have to be careful. Excessive rotation at the plate causes a hitter to spin off the ball and makes him very vulnerable to pitches on the outside half.

Spinning out is also detrimental to pitchers. You need balance and direction to throw strikes. If you open up too soon it pulls you off line and off balance. This is actually early rotation rather than too much. There have been some outstanding pitchers who throw this way--mainly because they are brilliant athletes who overcome bad mechanics. Why should you have to overcome spinning?

This is all part of the fine line that makes this sport so difficult--and so frustrating. Rotation is necessary--even crucial. But it has to be in synch with the rest of your delivery or swing.

# CROSS-TRAINING

## **BASKETBALL**

I'm somewhat amused by all the science we see in training these days. I believe in it--I love science. But I've seen so many great athletes who couldn't spell **plyometrics**, let alone do them. Officially, that is. Unbeknownst to everyone, including themselves, they were, in fact, *doing plyometrics* all along. They didn't know it, of course, they were just playing a whole lot of sports, like basketball.

There's no question basketball is one of the best cross-training sports for any baseball player. Play 3-on-3 for a couple of hours and you have a total work-out. Cardio. Agility. Quickness. Leg and mid-section strengthening. Hand-eye co-ordination. And all the plyo jumping and leaping you'll need to join a circus act.

Playing defence makes you quick, agile and reactive. Shooting jumpers and rebounding speeds muscle contractions, transforming energy from the floor up. For a baseball player this translates into legs and core power. If you like playing basketball, then stay with it. Pick-up games are even better than organized hoop--just as long as they're friendly, controlled, and as non-contact as possible.

## **BOXING**

Pro infield coaches often tell their players to jump rope or punch the light bag for foot and hand speed. But punching can also help pitchers. Boxers are taught to punch straight--direct to the target and inside the other guy's hands. They also pop their hips to provide explosive torque and power.

Hand speed. Hips. Torque. Power. Sound familiar? Baseball Perfect.

Now we're not suggesting you get in the ring to spar with **Mike Tyson**. Or Sylvia Tyson, for that matter. Save the real boxing for guys who like concussions and contusions. We just want you to do some of the work-outs that boxers go through.

For instance, if you're right-handed, set-up in front of the heavy bag with your left foot forward. Jab the bag with your lead left hand and then throw a straight right cross and pop your hips. This is a simple combination--left jab, right cross--but it simulates the co-ordination of arms, hips and torso you need to pitch or hit with impact. A great way to cross-train, have some fun, and get rid of frustration. Maybe they should put a heavy bag in every pro dugout instead of a water cooler.

## **TAE KWON DO**

I've coached for years with **Paul Gemino**, a fifth degree black belt who teaches Tae Kwon Do, which is extremely effective for pitchers and hitters. We had our guys do front kicks, side kicks, round kicks and squat jump kicks for balance, strength, speed and flexibility in their hip flexors and mid-section. These are power builders.

## **...AND ALSO**

Volleyball is a very plyometric sport, just one of many athletic activities you can incorporate as cross-training. That includes soccer, hockey, racquetball, tennis, badminton, handball and cycling. Just emphasize balance, flexibility, leg and core strength and explosiveness. Marathon running won't do you much good--just the opposite--but sports with short bursts of energy are ideal.

# PITCHERS AND HITTERS

Hitting and pitching are almost identical:

***The hitter coils to load***--the pitcher rotates to load.

***The hitter sets up to balance***--the pitcher gathers to balance.

***The hitter gets back and loads***--the pitcher strides and loads.

***The hitter pops his hips***--the pitcher explodes his hips.

***The hitter develops bat speed***--the pitcher develops arm speed.

***The hitter finishes long out front and follows through***--the pitcher finishes long out front and follows through.

Hitters and pitchers are almost identical twins. About the only difference is the front shoulder. A hitter keeps his front shoulder down and in to keep from pulling off pitches. But a pitcher keeps his front shoulder up to load and stop rushing.

Otherwise, most of the drills you do as a hitter can be very helpful as cross-training for pitchers, particularly **loading** and **exploding your hips**.

## PLYOMETRICS

**Plyometrics** seem rather complex but here's the bottom line—they're about muscle contractions and muscle explosions. **Fast contractions and explosions**. Obviously, that's ideal for baseball.

A lot of athletes are doing plyometrics without even knowing it. **Basketball**, for instance, is very plyometric. Every jump shot or rebound involves contraction and explosion. For baseball you want explosive running speed and quick lateral moves. You'll get that with plyometrics **like cone jumps, tuck jumps and box jumps with a short sprint**.

CAUTION: Some plyometrics can be very hard on knees and other joints. Only do them on grass or soft ground.

## Perseverance

Nothing in the world can take the place of persistence.

Talent will not;

Nothing is more common than unsuccessful men with talent.

Genius will not;

Unrewarded genius is almost a proverb.

Education alone will not;

The world is full of educated derelicts.

Persistence and determination alone are omnipotent.

# Dave Empey draft picks

Here are the guys Paul Gemino and I helped get drafted. A total of 21 draft picks. They all played for us with the North Shore Twins, except ND's James Paxton, Connor Janes (Cap College) and Brandon Kaye (Douglas College).

	<u>ROUND</u>	<u>YEAR</u>	<u>TEAM</u>	<u>PRO EXPERIENCE</u>
Ryan Dempster, RHP	3	1995	Rangers	15 years, 12 in big leagues
Chris Mears, RHP	5	1996	Mariners	10 years, one in big leagues
Simon Pond, SS	8	1994	Expos	13 years, one in big leagues
Nom Siriveaw, 3B	9	2000	Blue Jays	4 years
Ryan Kenning, OF	12	2002	Angels	2 years
Adam Daniels, LHP	15	2005	Cardinals	5 years
	43	2004	Cubs	
	22	2003	Rockies	
	19	2002	Twins	
	27	2001	Blue Jays	
Connor Janes, OF	27	2006	Diamondbacks	2 years
Matt Huntingford, OF	29	1997	Mariners	
	29	2001	Giants	2 years
Dom Laurin, SS	29	2002	Dodgers	4 years
Dustin Schroer, OF	36	2000	Dodgers	
	37	2001	Dodgers	Unsigned
Clint Hosford, RHP	41	1998	Dodgers	6 years
Jamie Metzner, RHP	46	2004	Brewers	Unsigned
Beau Payne, RHP	71	1994	Marlins	Unsigned
James Paxton, LHP*	1 (sup)	2009	Blue Jays	Unsigned
Brandon Kaye, RHP	45	2009	Blue Jays	Unsigned

\* I was with James for one year as the North Delta pitching coach. A great young man who turned down over \$1 million as a supplemental first rounder to go back to the University of Kentucky for his senior year.

## Notes on the draft

**RYAN DEMPSTER** signed with the Rangers for \$200,000, turning down a full ride at Notre Dame. Ryan threw over 600 innings for the Marlins in his first three years in the majors and needed Tommy John surgery to repair a torn ligament in his elbow. He rehabbed in record time, came back with the Cubs, was a National League all-star, and recently signed a \$52 million contract over four years. Former Cubs

infielder Mark De Rosa says Ryan is Chicago's team leader. "He makes everyone better," says De Rosa. "Better as a player and better as a person."

**SIMON POND** was the highest drafted positional player in Canadian history in 1994. As such he was a trailblazer. Simon got a sip of big league coffee with the Blue Jays in 2004, hit a double and a home run at Fenway Park, went to the Rome Olympics and then retired in 2006. He only played briefly in the big leagues but over 90 per cent of all pro players never get there at all.

**CHRIS MEARS** had five major mechanical flaws when he came to us in 1995. To his immense credit, Chris took instruction very well and corrected all those problems in about three weeks. Eventually, he got to the bigs as a closer with the Tigers in 2003 and also played in the 2004 Olympics. Chris is now a Red Sox scout.

**CLINT HOSFORD** was drafted in the 41<sup>st</sup> round in 1998 by the Dodgers but my contacts told me he'd go in the fifth or sixth round the next year. Clint was talked into signing for \$100,000 a week before the 1999 draft and, unfortunately, the Dodgers managed to put him into rehab in his first season. He recovered and had the best curveball in the Dodgers organization but retired with a back injury.

**ADAM DANIELS** reached AA in the Cardinals organization. He was first drafted with the Twins in 2001, then again at Cap College, then twice at Eastern Oklahoma, and finally signed with the Cardinals as a junior out of Oklahoma State. I told him he'd be on the cover of Baseball America if he waited one more year and was drafted for the sixth time. Adam grinned, "The players were wondering if I knew how to sign my name."

**CONNOR JANES** played for Cap College for two years. Previously, he'd had virtually no coaching and, quite frankly, he was, well...mediocre at best. But he had spirit and a work ethic, he listened and learned, and got bigger and stronger by the minute. Connor went on to UBC where he hit NAIA bombs and was drafted by the Diamondbacks. Unfortunately, he was 23 and that's a bit old for a rookie. He was hurt in his second year, spent some time in extended spring training hell, and Arizona eventually released him. Now he's an up and coming young coach with UBC.

**BEAU PAYNE** is one of the most talented players I've ever seen. He was 6-4 and threw aspirin tablets and a filthy slider, both with good command. But Beau hurt his arm after leaving us and never got the shot he truly deserved.

**DUSTIN SCHROER** is 6-6, has 400-foot plus power, a strong arm, and he can fly. With the Twins I saw him hit stand-up TRIPLES into the left-field gap. Yes, LEFT-FIELD gap. With those tools he should be a 10-year big league player but Dustin's problem was hitting curveballs. Still, a great talent.