Always Be Tournament Ready

Each time you shoot you should:

Put bow together

Stretch your muscles

Go over a perfect shot in your mind

The Perfect Shot

Stance -

Feet are wider than shoulder width apart and at a 15-30 degree angle

towards the target

Stand up straight with bow in front Shoulders are parallel to target

Draw a Anchor-

Bow hand is in V position (thumb sfirst finger)

Set hand on string with fingers hooked

Look over your front shoulder Raise bow toward target Rotate elbow down Relax string hand and wrist

relax siring name and wilsi

Draw string arm back with elbow at shoulder level; come down to chest

and up to your chin

Position chin on hand and string touches nose and mouth

Aim -

Put sight in the gold

Tighten back muscles (shoulder blades coming together)

Maintain relaxed bow hand and draw hand

Release -

Relax the string hand

s Follow

Keep elbow pulling back releasing fingers from string

Through

Keep bow arm up toward the target Maintain aiming s head position

Release hand finishes near your rear ear a shoulder

Archery Tips & Tricks – Making the most out of training

Success" doesn't have to mean winning - for beginning archers, success may just mean learning how to compete, while for others, it will be about being consistent under pressure. Some archers will find that feeling of accomplishment with setting a new personal best score - or shooting their average despite a distraction. However you define winning, there are a few things you can do in practice to maximize your chances of having a positive tournament experience:

- 1. Your training routine should depend on your goals. Hopefully you've defined your goals; this can be as detailed as a goal setting worksheet, or as simple as a personal statement, written on a scrap of paper that you keep in your quiver. Whatever your goal is, though, t should be realistic for the time you have to train and the time you spend training should be appropriate for the goal you've set.
- 2. Be thoughtful and methodical in practice. It's not just about flinging arrows: every arrow shot during practice is an opportunity to learn good habits. Thoughtful, methodical practice will help you to teach yourself something positive with each shot you take; shooting quickly just to "get my arrow count in" is counterproductive, as it may lead to poor habits and even injury.
- 3. Keep a practice journal. Writing things down how many arrows you shot, what the weather or lighting conditions were, whether you met your goals, successes and things to work on helps to keep you honest and motivated. If you can't remember to keep a notebook, keep a monthly calendar (hang it somewhere you'll see it) and note your arrow count and achievements on each day.
- 4. Be creative as you train. Everything that happens is an opportunity for learning. If someone's playing loud music nearby, consider it distraction training and learn to run your mental program despite it. If you discover that uneven lighting bothers you, deliberately adjust your lighting so that you learn to adjust. Whatever the distraction is, embrace it: it's a chance to make yourself better.
- 5. You can only do your best. If you have work, school and/or family responsibilities, practice to the best of your abilities, and be realistic about the outcomes you expect. An hour of practice, a few days per week is always a better bet than three hours of practice, one day per week. Achieve a sensible balance.

Above all else: think back to the first time you shot, and why you got involved in this sport. Keeping the fun in archery is vital to staying in archery - so find a friend or friends to practice with; join a league; shoot balloons or funny targets. Focusing on fun will help keep you motivated!

Larry Wise

PRACTICE WITH A PURPOSE

January, 2012 By Larry Wise

CAN YOU ANSWER THESE QUESTIONS?

Why did you practice last Wednesday?
What did you accomplish?
What part of your form did you work on?
What bow tuning did you do?
Are you better now than you were two weeks ago?

And the really big one, Why don't you know the answers to the first five questions?

If you are serious about improving your archery skill level then, of course, you know the answers to all of these questions. You know them because you build an organized practice session and keep records of your progress. You know the "whats" and "whys" for all the practice you do because you have it in a notebook.

PRACTICE STRUCTURE:

A good practice session has the following parts: A short warm up/stretching period.
A blank bale/no sight/no target period.
A scoring round at least twice a week.
A practice-ending blank bale session.
Bow tuning as needed.
Stretching/cool down.

Let's look at each of these ingredients to see how many arrows need to be shot, what scoring needs to be done and the record keeping needed to hold it together so you keep moving in the right direction.

THE WARM UP:

Starting cold is your enemy. Starting time is the most likely time you'll injure yourself because your muscles aren't ready to work at their highest efficiency. To shoot your best at tournaments you must practice at your best and that means warming your muscles a little before your first arrow.



Most injuries occur when archers start shooting without warming up their muscles. The stretch band is the best way I know to do this. A short jog or walk is also a great way to get loose before you shoot.

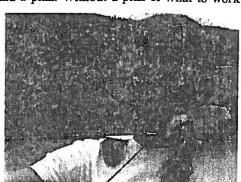
I like to take a short walk before practice. Other times I use a rubber exercise band to warm up. There are lots of articles already in print on how to use the stretch band to prepare for practice and tournaments – check them out. Having the discipline to do it is what you have to work on. It's up to you to make it happen.

BLANK BALE PRACTICE:

This is where real archers are made, in front of the bale with no target, no sight and a plan. Without a plan of what to work

on, blank bale shooting will only build endurance. Your biggest job is to make a plan for each practice session. In fact, you should have a plan for the full week of practice and much longer if you have a tournament to prepare for.

Your plan, of course, must be geared toward form improvement. I find that 98% of my students need to improve their bow hand so I suggest you start with that form element. Of course, to do this you must have your



Every practice session should begin and end with some shots at a blank bale from close range. For best results close your eyes so your conscious mind stays more focused on the particular objective of that practice session — open your eyes and you'll start aiming and your conscious will join your eyes.

form steps written in a sequential list. If you don't have a list now is the time to write it down in your notebook. If you need help with this please check the list in my book "Core Archery" (2004, Target Communications Corp.).

Build form step-by-step until each step is correct. Build one step correctly (it will take you 20-30 days) and then, and only then, move to the next step. For example, my students working on bow hand position will have a written plan to follow for the first four weeks. That plan will focus on hand position and shooting 30 blank-bale arrows to open each practice session, and ten more to end the session – all with intense conscious focus on correctly using the bow hand.

During these practices you must focus only on hand position. You must make sure you set your hand properly at the first touch to the grip area. "Feeling" is what you must establish and engrain into your subconscious and it can't be done well while aiming. It is best done while shooting without a bow sight and no target. In fact, you should even practice with your eyes closed to be most effective – don't let your vision distract your conscious guidance of your bow hand.

After three or four weeks of progress you may move to a second form element. It should be the form element next in line in your sequence. Always build in sequence like building a house from the ground up. Build in front of a blank bale.

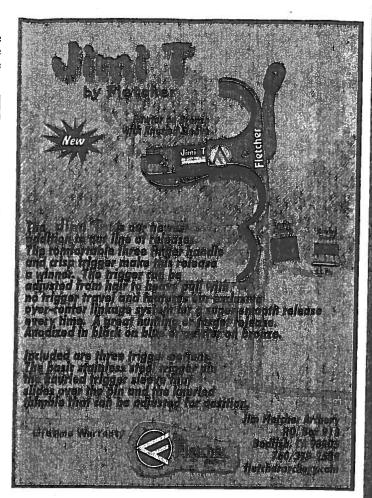
Thirty to forty arrows are sufficient for a blank bale opening practice. More can be shot after you do bow tuning and shoot a scoring round. High quantity is not your priority here, quality is

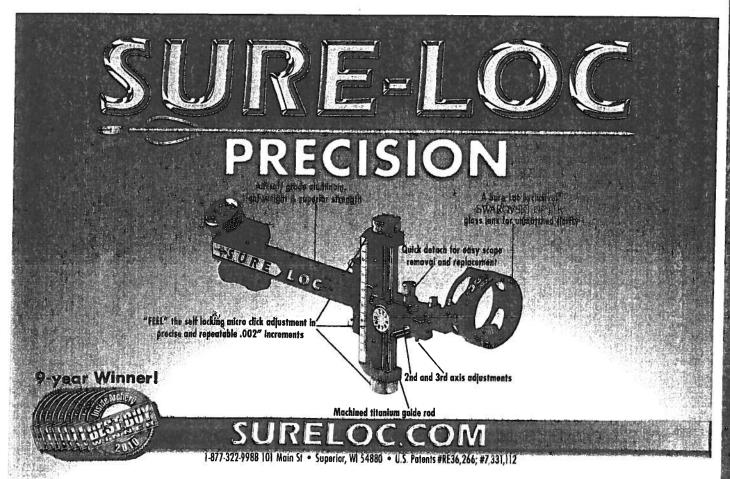
THE SCORING ROUND:

We practice to get better. And if we practice properly we will get better but we won't know it unless we shoot for score regularly and keep a record of it. Scoring is the real measure we Continued on page 42,



Several practices each week should incorporate a scoring round of some sort. It might be a standard archery round or one you invent. Pick a favorite distance and set spot size to get started then as you improve, move further away or shrink the spot size.





have of our shooting improvement (or decline) so we must have a place for it in our short-term and long-term practice plan.

Indoor archery offers some good standard rounds to use and I'd recommend using one of those when indoor practice is all you can do. For outdoor scoring you can invent your own. I like shooting 30 arrows at fifty yards using the NFAA hunter target with a four-inch spot. I also like shooting 30 or 36 arrows at seventy meters using the 122cm FITA target. Whatever the round, keep records and when you shoot perfect scores on that round, switch to a longer distance or use a smaller spot.

A score doesn't need to be shot every practice session. Two scores a week are sufficient to monitor progress.

END-OF-PRACTICE BLANK BALE SHOOTING:

Every practice session should end as it began, shooting at a blank bale. You start each session working on a certain form element and when ending that session you once again should work on that same element. As before, no target or sight should be used during this practice phase so the desired "feel" of the new skill being learned can be gradually engrained into the subconscious mind. Total focus needs to be placed on that one form element and getting the correct "feel" for it.

This closing phase doesn't need to be long. Ten or fifteen well-executed shots are sufficient to pass along the muscle actions to the subconscious. Closing with that "feeling" is important and doing it four or five times a week over twenty days will enable you to learn and retain that new habit. Build your "core form elements" and then you will build your score!

COOL DOWN:

When you're all done shooting arrows you need to stretch your warm muscles before quitting. This can be done with stretch bands or with isometric type stretches. A short walk, run or bike ride are good ways to deprogram and relax.

BOW TUNÍNG DÛRING EACH PRACTICE:

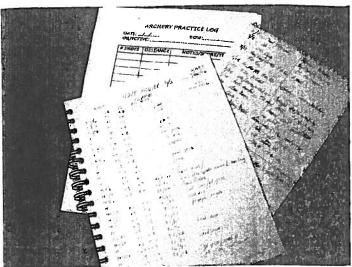


At the end of a practice session make several draws of your bow with your non-dominant side to stimulate and condition those muscles. Use your stretch bands if that is more to your liking.

Testing and tuning can be done before scoring, during scoring or after but not while shooting at the blank bale. You can make changes to the bow and test it before you score and if the score is significantly worse you'll know to reverse that adjustment and make another tuning change. If your bow is better then the score will show it as well.

RECORD KEEPING:

Record keeping is the glue that holds all of your hard work together. Good records, when used, prevent you from wasting time relearning a lesson you learned six months ago. You can't remember everything so write it down.



Keeping notes is essential for archery success. Use customized calendars pages or just a simple spiral binder, just be sure to keep enough notes to chart progress and eliminate duplication of effort.

Here's a form I've developed. Feel free to use it and make changes to it to suit your own needs.

DAILY PRACTICE LOG

BOW _

DATE

| OBJECTIVE | | | |
|--------------|---------|---------|----|
| DISTANCE | # SHOTS | SCORE & | |
| LANK BALE | | | |
| | | | 12 |
| | | | |
| | | | |
| BLANK BALE | | | |
| | | | |

Every daily practice session should begin and end with blank bale shooting geared to reinforcing a particular objective. Keep notes simple and to the point. This sample chart was made using a Microsoft Word "TABLE".

Good luck practicing.

Larry

NOTE: Larry's books and new DVD, CORE ARCHERY BACK TENSION, are available on his web site: larrywise.com

Terry Wunderle

One of my students was in the shoot-down round at an ASA tournament. He went to the stake,

set his sight, attached his release and stood motionless, while staring at the target for nearly a minute. I knew the shot that was soon to follow would be perfect, and it was. This archer had prepared himself mentally to execute a shot with perfect form.

If an archer develops a picture of the perfect shot, he or she can enhance his or her performance in a tournament. It should be both a positive picture and a feeling

of the the best shot possible. If you have trouble visualizing and feeling the perfect shot, go to the practice range and shoot a blank bale with your eyes closed. Relax your body and practice shooting perfect form. Feel the muscles involved and the explosion of the shot. When you have acquired this feeling, then try to duplicate it without the bow in your hand. Shoot the shot exactly the same as you did when the bow was a part of the process. When you have mastered

Develop a Positive Picture

By Terry Wunderle

this, then lower your arms and shoot the same sh mentally without arm movement. You should be ab to feel the muscles and the shot execution though yo are not physically moving.

Now, back up and shoot the same shot bot physically and mentally at a target. When the sho feels perfect and the arrow goes into the mark, procee to close your eyes and repeat the process mentall several times. Feel the shot and see the arrow hitting the mark. This will give you the perfect picture and feeling for your mental imagery training. It is the form that you want to shoot and feel in your mental

training, practice and at tournaments. The imagery practice will help ingrain this shot into your brain and it will carry over into your performance.

Your body will do

what your mind

does. Mentally

shoot the perfect

shot and your

body will shoot the

perfect form.

Practice your form both mentally and physically. Place your trust and your confidence in your form. Knowing that you can shoot perfect form will give you the positive attitude needed for tournament situations. Practice this imagery daily and

your groups will tighten because you will be shooting a more consistent form. This will also raise the level of your performance in a competition because you are also increasing the degree and intensity of your focus. When the pressure starts to mount at a tournament, visualize the perfect shot, and then shoot that shot.

Your body will do what your mind does. Mentally shoot the perfect shot and your body will shoot the perfect form.

See Terry Wunderle's ad on page 62 for further information. Support Our Advertisers They Support You!





Easton Tech-tips #2-12 Arrow Tuning- Cause and Effect

By George Tekmitchov

Editor's note: George is the Senior Recurve Engineer for Hoyt, Inc. and International Technical Advisor for Easton Technical Products, where he developed the X10 arrow shaft. A four-time member of the US Archery team, George has also represented the United States in the FITA World Field Championships and the World Games. George is also known as the "Voice of Archery" having been the official FITA announcer at World and Olympic events since 1992.



For this issue of Tech Tips we will examine some obvious- and, perhaps, less-than-obvious-relationships between arrow shafts and arrow components vis a vis tuning.

Tuning is, of course, fundamentally the process by which we manipulate the bow and arrow system to cause the arrow to depart the bow in a particular manner which enhances grouping and reduces the variable influence of human input (the shooter) on what is otherwise a well-ordered and consistent mechanical system (the bow and arrow).

It's all well and good to consult the latest Easton chart and pick a candidate for a well-tuned arrow from the various alternatives the chart will offer, but you might be surprised to learn that it's possible to pick the right shaft and still have an incorrect tune through certain choices that the chart does not address much at all.

And, there are variables that can lead to effects opposite

those intended or intuitive.

For example, it's generally accepted that an arrow shaft reacts in a less stiff manner with a heavier point than with a lighter one, and generally this is true if the only variable is the point weight. However, there are a number of situations where this isn't true at all.

For example, consider the case of an X10 100 grain tungsten point- with a very short shank inside the arrow shaft- and a 120 grain X10 Stainless Steel point- which features a much longer shank inside the arrow shaft. One might think the 120 grain point equipped arrow would read weaker in a bare shaft planing test than the 100 grain point equipped shaft- but this is not the case. The reason is that the extra shank length of the 120 grain point stiffens the arrow shaft relative to the short shank of the tungsten point- and so, the two will read about the same in most bare shaft tests, with the 120 grain point equipped shaft reading stiffer in some cases. Of course we can use this to our advantage when trying to dial in an optimal tune, by selecting components which cause specific reactions within a reasonable range.

Similarly, nocks can have a significant role in tuning, both through mass distribution and also, through their mechanical

interface with the string.

For instance, it's generally well known that a heavier nock will usually cause the arrow shaft to react stiffer. However, if the nock is heavier, and also longer and more flexible, this effect can be cancelled out. On the other hand, a heavier and stiffer nock system (such as an Easton Pin Nock) can have a significant impact on tuning. A nock that fits more tightly can cause the arrow to tune differently than the same arrow with a loose nock, because it will separate from the string at a different point in the powerstroke.

Other methods that can be used to leverage the effect of mass on the back of the shaft include the use of arrow wraps (available in various lengths and thickness) and also, the use of different plastic vane materials. For instance, up to a 9 grain difference can be achieved by replacing low-mass Spin Wing Vanes with heavier denser vanes such as Flex-Fletch or other solid vanes.

In between are vanes such as the Blazer and AAE vanes which are available in less dense formulations and can add less mass

through both design and density.

Adding mass to the back of the arrow shaft to increase arrow apparent stiffness is a double-edged sword. Too much mass will slow the arrow down and decrease front-of-center balance, reducing wind tracking performance. A heavier rear half is also susceptible to clearance problems, because if the arrow mass prevents a full bending cycle upon separation from the bow, the rear half of the shaft is more prone to collision with the arrow rest. And a lighter rear half can be more forgiving of minor release inconsistencies.

By understanding the interactions of components within general tuning principles, a finer tune can be achieved in less time

and with a reduction in cost and effort.

Ultimately, however there is one component owned by most archers which has a far more profound effect on tuning than any other. That is the Allen wrench. Yes, this simple device is truly the most powerful tuning tool in existence. It can be used to adjust bow weight- and there is no more powerful tool than a slight weight change to dial in the ideal tune.



Terry Wunderle

One of my 3-D students walked off the course and said, "It was ugly. I didn't shoot good form

in that wind."

"Did your mental program break down?" I inquired.

"You know it did," he replied. "The wind kept beating on my body and I was worrying about it."

This common is occufrence for most archers. They know what they are supposed to do to execute a good shot, but their mental process breaks down when they are placed in an awkward situation. Negative thinking takes over and their confidence erodes.

How do you avoid this problem? You do it by practicing and mastering what causes you the most difficulty. If you want to be the best possible archer, always work on the weakest part of your game and make it into a strength. If you continue this practice and improve, you will soon discover that what had been a flaw has become the strongest part of your game. If you are not shooting perfect scores, there will always be a weakness to improve.

When you compete in a tournament, record your shots and try to make note of why you dropped points. Note body position, such as uphill or downhill, and foot position, such as heels or toes pointing uphill or downhill. If yardage estimation was the problem, record the distance of the target, the target setting, the terrain, and the lighting conditions. Good record keeping will help you identify your weakness so the problem can be corrected.

Archers often prefer to practice what they are best at doing. In most cases, this includes shooting targets under calm conditions on level ground. Shots like these only make up a small

Make Your Weakness Your Strength

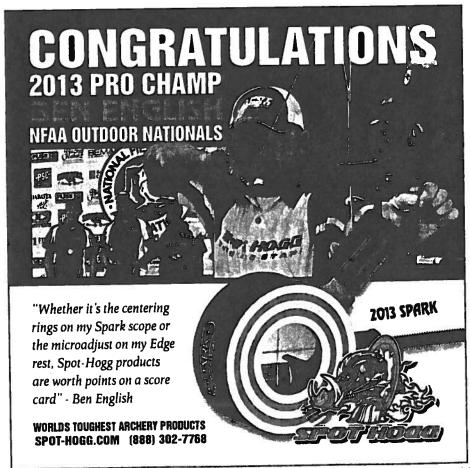
By Terry Wunderle

fraction of those that an archer will face on a good 3-D course. Being able to perform well on a flat surface does not mean that it can be easily achieved in the rolling hills. In my shooters' schools, I've had archers who are sure they can make all five shots on a five-spot target. Their first shot is done in the usual manner. Then I bring out a small ramp with a twenty-five degree incline for the next four shots. By rotating the ramp after each shot, I simulate uphill, downhill, side hill with toes downhill, and side hill with toes uphill. This everying quickly points out the exercise quickly points out the level of their abilities in shooting uneven terrain. A small ramp is a good tool to have on a flat practice range. However, the best training is to take a portable target to some rolling ground and begin working. Use all of the foot positions until you can shoot them as well as you can on an even surface. This

kind of exercise will raise your confidence and your ability to shoot tight groups.

When people tell me they have trouble shooting in the wind, I usually ask them when they last practiced in the wind. The typical answer is that they haven't. Then when faced with windy conditions, they are very uncomfortable mentally and cannot execute a good shot. Learning to master wind and hill shots is not easy, and most archers prefer not to practice under those conditions because their groups open up. True, even with practice, your groups on a windy day will never be as tight as on a calm day. However, they will be much closer than they would have been if you had not practiced.

Serious archers work hard to identify and eliminate each weakness from their game. Then they can confidently walk onto the course with the attitude, "They cannot set a target that I won't 10.





Terry Wunderle

everal years ago on the final day of the World Championship, I watched one of my students shoot an 8 on the first two targets. I called him over and instructed, "You got here by shooting a strong, aggressive shot. Now, you are letting the situation intimidate you. Be aggressive and attack the target!"

At tournaments, many archers have difficulty believing in themselves. They will shoot strong shots with perfect form on the practice range, but when the self-inflicted pressure starts to mount, they alter their



Attack the Target

By Terry Wunderle

shot. The target becomes an intimidating influence because the archers put a more significant value on each arrow, and suddenly the emphasis is on the ability to score. When this happens, they try to fine-tune the sight. This adds several seconds to the normal shooting rhythm and the bow arm will either breakdown and shoot a weak shot, or tighten up and produce an erratic explosion.

One must be able to confront the pressure situation with aggressive confidence. As an archer, you must believe in your ability to execute the perfect shot. This self-assurance comes from quality practice. Raise the value of every practice shot and the concentration level needed to execute it. In training, do everything both physically and mentally to simulate a tournament shot. As your skills become refined and the groups grow tighter, your confidence will increase. Place your trust where it belongs, which is in your ability to execute a shot with perfect form.

Rhythm is also critical. Adding extra holding time to the shot rhythm can produce a breakdown in form. If the pin does not settle in, let the bow down and start over. Do not force the shot. When practicing, work hard on maintaining a consistent rhythm. A common complaint from most archers is that they cannot keep a good rhythm in a tournament because their release will not go off or perhaps the arrow does not come through the clicker. Most amateurs as well as professionals add one to two seconds to their normal shooting rhythm when starting a big tournament. This is not a desirable occurrence, but do not compound the problem by getting upset. The dilemma is caused by tension and tight muscles and getting upset only magnifies the issue. Relax and concentrate on the perfect shot. If the shot sequence is a little longer than normal, accept it and make sure you perform the best shot that you are capable of shooting. The rhythm will become a little quicker as you become more relaxed. In practice, try to simulate the start of a big tournament. Add a couple seconds to your normal shooting rhythm, so you will be able to handle it if it happens in a competition. Do not over-aim! Trying to guide the sight pin produces more tight muscles and additional sight movement. Let the pin float, accept the extra movement and shoot a strong aggressive shot. Trust and believe in your form and the arrow will hit its mark.

["Attack the Target" is from author Terry Wunderle's newly released book Archery: Think and Shoot Like a Champion, which can be found at wunderlearchery.com]

Terry Wunderle

Some years ago the finals of the Junior World Trials were over, but they weren't. I walked up to one of my young archers and said, "I've got good news and bad news. The good news is that you made the Junior World Team. The bad news is the tournament is not over. You are tied for third and are in a twelve-arrow shoot-off." The major difference between third and fourth was about \$2,000 because the third place position was a paid trip. It was very obvious the pressure and tension were mounting. I placed my hands on her shoulders to calm her and said, "Do your mental imagery." She shot some arrows with her arms and some with only her mind until she reunited the bond between her mind and her muscles. The match was very close, as it came down to the last The young archer looked at the target and shot the arrow mentally. Next, she drew the bow and shot the most valuable arrow of her short career. It was a ten, worth a couple thousand dollars. When the time came for the Junior World Championship, she used the same mental approach as the USA Girls' Compound Team captured the gold medal.

Mental imagery can calm fraying nerves and refocus an archer's mind so he or she can shoot the best possible shot. Your mind can only focus effectively on one thought process at a time. Make that thought pattern a positive one

Master Mental Imagery

By Terry Wunderle

concerning your performance. Think and concentrate on making a shot with perfect form. How do you go about mastering mental imagery? Imagery is seeing and feeling an experience. Learn to shoot a perfect shot with your mind. Practice shooting your bow until your form feels perfect and the arrow is hitting the mark. Set your bow down and then shoot the shot with your arms. Shoot it numerous times until the shot feels the same as it did when the bow was in your hands. If you have trouble making the shot feel the same as it did when you were actually shooting, pick the bow up and shoot a few shots to reacquaint yourself with the feeling. Keep going back and forth shooting the shot with and without the bow until they both feel the same. Now look at the target and shoot the shot with only your mind. Feel the shot. Feel your back muscles pulling through the release. Feel the bow arm explode through the shot. Try to visualize the arrow hitting the mark. If you have trouble feeling the shot when shooting with your mind, go back and shoot some shots with just your arms until you reestablish the feeling. Shoot some shots with your arms and some with your mind until the feelings become very familiar. Being able to duplicate the feeling with your mind is more difficult for some people. Keep practicing it and the feeling will become stronger. The more you rehearse mental imagery, the more pronounced the feelings of the shot process will

Once you think that you have mental imagery mastered, start putting it to the test. When you are watching TV, turn your head over your bow shoulder and see if you can mentally shoot

a shot with perfect form. You should be able to see and feel the shot. The noise of the TV should be in the background, but it should have no importance. You might try the same thing the next time you are in a large store bustling with activity. Stop and put your head over your bow shoulder. Picture a target down the aisle and see if you can mentally make a perfect shot. In your mind, there shouldn't be anything in the shopping area other than you and the target. If you can master this, then go a step further. The next time you are upset and feeling angry, turn your head over your bow shoulder and see if you can make a perfect shot. The strong emotions should be repressed and not be in your thinking when performing the perfect shot. If you have trouble the first time that you attempt this exercise, repeat the process so it will become easier. Yes, repressing negative emotions and then mentally shooting a perfect shot is challenging. If you work and master it, you will then be ready for the big test.

It is the start of the Indoor National Championship and the announcer says, "This end is for score." At this moment many archers "go mental." Now you have a tool that you can use to get refocused and shoot a shot with perfect form. Look at the target, shooting it mentally several times. This will help calm you down and refocus you on the task that you need to perform. Then physically shoot each shot with perfect form the same as you do in practice. Your most important piece of archery equipment is your brain. It can work for you or against you. Learn to use it to your advantage. Stay focused and shoot your best form.