

## Correct Bow Size for Recurve and Longbow

It is important that the individual is matched to the correct sized bow, so that they can pull the correct draw length to:

- i) enable their muscles to work for maximum efficiency, whatever their proficiency at the sport, but so that they do not strain too far.
- ii) Enable the bow design to work at its optimum. All bows have a range of draw length within which they work best and produce the best shots

To shoot correctly the archer should be standing tall with head up looking straight ahead, shoulders down, back flexed and rib cage expanded. Any position which “scrunches up” the body is not going to promote good shooting and will cause discomfort after a short time. Body height, arm length and musculature are all factors which must be considered in selecting the correct sized bow. The wrong sized bow will not enable this optimum shooting position.

Smaller bows are usually of lower poundage but also have a smaller draw length and will eventually break if over drawn beyond their correct draw length. A large person pulling too small a bow will either overdraw the bow or have to “hunch up” to comply with the smaller draw length, thus not being able to use muscles efficiently or to position their head correctly or sight properly.

Alternatively a small person using too big a bow will not get any efficiency out of the bow as they will not pull the string back to the minimum point of the best performance range. They may also have difficulty with the poundage of the bow being too strong for them.

**Draw length:** With the archer standing correctly as per above and the bow drawn comfortably, this is measured from the front of the Riser back to where the string touches the nose tip (or side of the nose – whatever the individual archer finds comfortable) and with the hand holding the string anchored firmly under the chin.

### Rule of Thumb for Draw Length and Size of Bow

Draw Length	Appropriate Total Length of Bow (Size)
Up to 25 inches (Junior)	62 inches
Over 25 inches and up to 26 inches*	64 inches
Over 26 inches and up to 28 inches	66 inches
Over 28 inches and up to 29 inches	68 inches
Over 29 inches	70 inches
30 inches and over	Seek experienced assistance to obtain correct equipment setup

\*In reality a starting junior with a draw length of 25 and a half inches would move straight to the 66 inch bow, as they will continue to grow rapidly. They would be changing their gear again in a very short period of time otherwise, which of course means new expense for parents. They will have plenty to learn about technique before focussing on optimum performance from the bow and will quickly grow into it.

The total length of the bow is a combination of the selected length of riser (handle) and the chosen limbs. Sets of limbs are built to a strength which promotes optimum performance of the bow in conjunction with the form of the individual archer.

**Draw weight** (or poundage) is standardised within limb manufacture. Most bows are factory tested and assigned bow weight at standard draw lengths of 26 and 28 inches, (as appropriate to the total size/measurement of the bow).

So the draw length which will give best performance for a bow size, covers a range rather than a specific length. An individual will be pulling the poundage which matches their personal strength and draw length. If their draw length is less than the standard factory measurement then they will be pulling less poundage than that stated on the bow limb.

Eg: If a bow states (on its lower limb) that it is a poundage of 34lbs at 28 inches, then it was measured in the factory when drawn to 28 inches. If the length actually drawn by the archer is 27 and a half inches the poundage being pulled will be less than 34lbs, but still within the 27-28 inch range to obtain good performance from the bow.

The draw weight the individual archer is achieving, is measured by pulling to the draw length of that individual, and measuring the poundage being held at that point using a measuring scale. The weight (or strength) of the limbs selected would be decided according to what the individual archer can comfortably manage.

The combination of actual **draw length** and actual **draw weight** will then determine what size and length of arrow are selected.