FIND THE RIGHT SWING WEIGHT TO BE A BETTER HITTER

Bat speed is a key factor for hitting the ball with greater force and distance but don't overlook the mass or weight of the bat. You can swing a whiffle ball bat really fast but try hitting the softball any distance with it as it has little or no mass. In senior softball, I believe that more should be written or stated regarding the importance of the "Swing Weight" of a softball bat. By using the optimal swing weight, a hitter can maximize the effectiveness of their swing. Primarily, an on-base type of hitter will prefer a balanced bat whereas, a player that drives the ball to the fence or out of the park will select an end-weighted bat.

Here's a common question posed to a hitter: "Is your bat balanced or is it end-loaded?" In theory, a balanced bat will have more weight toward the handle and less weight toward the end, for an end-loaded bat it's the reverse. As a general rule, the end-loaded bat will have a low handle weight of typically 10_{oz} or less and the remainder is considered end-weight.

Every bat has a balance point (i.e., center of mass) that can be found by placing your index finger under the bat centering it until the bat has equal weight on each side and balances; you've successfully found the bat's center of mass. When the center of mass is nearer to your hands it is likely a balanced bat that feels lighter and is easier to swing for more controlled hitting.

The farther away the center of mass is from your hands, the harder it will be to swing and will feel heavier, but you will have more force when striking the softball (i.e., end-loaded). So, a bat can have the same absolute weight but feel heavier of lighter depending on where the center of mass resides.

To continue the distinction between a light or a heavy swing weight it basically comes down to where the location of the balance point resides on the bat. The nearer the bat's balance point is to the handle, the easier it is to swing. Therefore, an end-loaded bat will be harder to speed up through the hitting zone than a balanced bat but has more kinetic force behind it.

Kinetic energy: KE = .5 x Mass x (Swing Speed)^2

> **Balanced Bat**: Bat has no weight added to the barrel during manufacturing and the center of mass is closer to the handle,
>
> **Small end-load**: ½ $_{oz}$ weight is added to the barrel's end-cap internally to make it slightly end-loaded,
>
> **Full end-load**: Weight added to the end of the bat that is between 1 and 2 ounces.

If a bat is marked as a 27.0_{oz} for its total weight, then using a small weight scale and some simple arithmetic we can find the swing weight:

> total weight is 27.0_{oz}…
>
> handle weight is 9.6_{oz}…
>
> swing weight is the remainder 17.4_{oz}.

It's Important to experiment with both balanced and end-loaded bats to find your best swing for feel, power and overall performance.

Happy hitting,

Art Eversole


17.4 END WEIGHT
27.0 OZ TOTAL WEIGHT
9.6 HANDLE WEIGHT