

# Trajectory of the throwing knife and right distance to the target

In the beginning, you try to always make the same movements with your arm and body, with always the same force. Having mastered that constant movements for the throw, you can now find the distance from the target where the knives stick if you throw them with this movements.

In his flight towards the target, the knife will turn around his center of gravity, blade and handle will take turns pointing to the target. The throwing knife will rotate in a way that, if thrown from the handle, the blade will go **downwards** at first.

The first distance for a stick is about three meters from the target (Always measured from the tip of your rear foot!). Grip the knife at the handle, throw it, and after one full rotation it will stick. If it doesn't, move back or forward a little (see chapter on training).

The second distance is about one meter behind the first. Now you grip the knife at the blade (if possible), and after one and a half turn the knife will stick. It is important that you do not have to do anything to get this turns, they will just come. (In fact, later you will be trying to get less rotations to be in better control if you throw from further away.)

From the third distance, you once again use a handle grip, just now you get two full rotations of the knife till it sticks. Because you always throw with the same movements and force, the knife rotates in the same manner, and flies with the same speed every time. Therefore you can calculate or feel how much you have to go back so that the knife has completed another half turn. The pros with many years of experience can throw from distances where the knives make seven full rotations! Once you found your distance, you should measure it off and note it down. Note that the distance will slightly differ the next training day.

You might want to check out the turn-distance formula at StickingPoint.

(By changing your grip on the knife a little, you can stick it from distances between those of half turns. If you take more of the knife in your grip, it will spin slower, allowing you to move a little bit back from the target. Gripping it more towards the end will increase the spin.)