

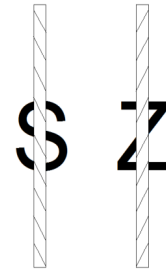
Spinning with a Hand Spindle

The hand spindle is one of the oldest spinning tools in human history, and until the late Middle Ages it remained the most commonly used tool for spinning in Europe.

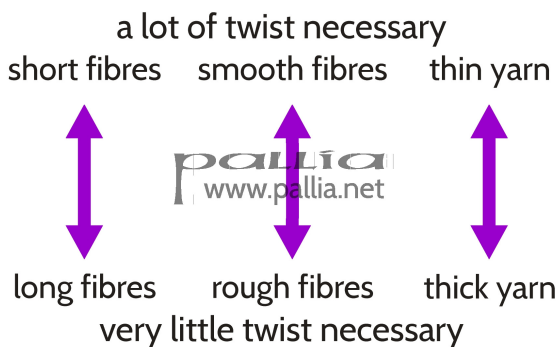
The spindle and spindle whorl in this kit are made according to medieval forms. The main difference between this concept and modern hand spindles is the detachable spindle whorl. This means you can use almost anything that has a hole as a spindle whorl, allowing you to find out about your personal spinning preferences. Feel free to experiment!

The art of spinning is based on a very simple principle: fibres are drafted (pulled out of a mass of fibres) to form a thin band, and this band is twisted with help of the spindle. This twist presses the single fibres to each other, forming a stable thread.

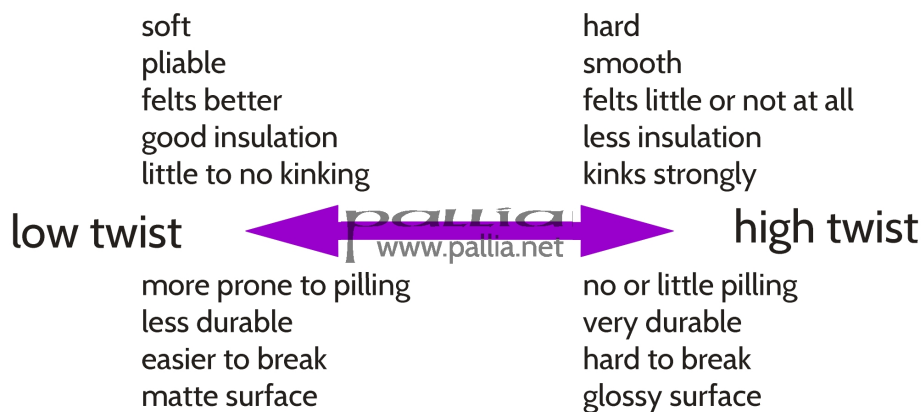
The direction and, to some extent, the amount of twist in a piece of yarn is visible on the surface: the individual fibres lie at an angle on the surface of the thread. The direction of this angle depends on the direction of spinning and is described by 'z' (spindle turns clockwise) or 's' (spindle turns counterclockwise).



There are three factors that decide how much twist is necessary for a strong thread: fibre length, fibre surface structure, and number of fibres twisted together.



If more twist is added, the thread becomes stronger and more resilient, but loses some of its insulation properties, as less air is enclosed between the individual fibres. Other properties of the thread will also change with the addition of more twist.

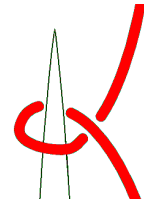


If more and more twist is added, the fibres will eventually snap in one of the thinner parts of the yarn – they have been ‘twisted off’. To achieve that using a hand-spindle, however, takes a lot of twist, and usually some effort, especially with thicker and even yarns!

Medieval and prehistoric textile finds are almost always high-twist yarns. This makes them much less soft, but also much more resilient than most modern yarns. Thus do not be afraid of high twist in your spinning.

How is the twist delivered into the fibres with the hand-spindle?

If the spindle whorl is not yet on the spindle shaft, place it onto the lower end (the end closer to the thickest part) and secure it by slightly turning it while lightly pressing it towards the middle of the stick. For an easy start to spinning, you will now attach a leader thread to the spindle. Take about one metre of wool yarn and wind a bit of it around the thickest part of the spindle stick to secure it. Now wind the rest of your leader thread in a spiral around the spindle stick and secure it with a half-hitch (shown in the drawing on the right) close to the top.



Always spin in the same direction as you have wound the leader thread around the spindle – winding, spiralling up the shaft and spinning are all done in the same direction.

For the spinning process itself, you can use either of several different techniques. For all of them, the spindle stick serves as storage area for the spun thread, and the whole spindle rotates and transfers twist into the fibres. To spin an even thread, it is key to draft your fibres very evenly.



The best-known method today is spinning ‘Long Suspended’. This is not the method used in medieval Europe. It probably came into our region during the textile crafts and hand-spinning revival in the 1960s and 1970s.

To spin long suspended, secure the leader thread to your spindle as described above. Take a handful of fibres into one hand and place the leader thread end on the fibres. Hold it there with your ‘fibre hand’. With your free hand, set the spindle into motion like you would a spinning top. The spindle is hanging freely from your leader thread, turning, and the fibres close to the leader thread end are twisted around it. Use the fingers of both hands to draft out an even amount of fibres from your bunch of fibre. The fingers of both hands take turns in holding the fibres turning into yarn. At the start of your spinning, you will still have the leader thread inside your newly spun thread.



As it becomes necessary, the free hand also sets the spindle into motion again. The spindle must not turn backward; otherwise the already spun thread will untwist and fall apart.

As the thread is growing, it becomes necessary to wind it onto the spindle stick – at the latest when the spindle reaches the ground. For winding, slip the half hitch off the spindle, unwind the spiral around the shaft, and wind the spun thread around the spindle stick at the lower half. Take care to leave a bit of room between the yarn and the spindle whorl, otherwise the yarn cop may push the whorl off the spindle stick. Leave a bit of thread to wind in a spiral around the spindle shaft, secure the spindle with a half hitch, and continue spinning.

Historical spinning techniques require a distaff (a special stick to hold the fibres) in addition to the spindle, as one hand is always close to the spindle, and the other hand needs to control the drafting process. The



spindle hand repeatedly flicks the spindle to keep it rotating at a very high speed, resulting in high-twist yarn made in a very short amount of time.

For the medieval spinning technique, as far as we can reconstruct it, the distaff is held on one side of the body; pictures usually show it on the left. The distaff can be tucked into the belt or held between arm and body; if seated, it can also have a

stand to stand by itself, or be held between the legs. One hand is always close to the distaff and the supply of fibres attached to it, the spindle is in or hanging right below the other hand.

For the spinning process, two options are available: 'In-Hand' spinning or 'Short Suspended'. For In-Hand spinning, you hold the spindle at its upper end between the fingers of your right hand, twirling it continually in the fingers without really letting go. For Short Suspended, you secure the spindle to the leader thread with a half hitch, similar to the technique for spinning Long Suspended. The leader thread runs through the fingers in such a way that the spindle hangs just below the hand, in easy reach for the fingers to repeatedly flick it into motion.

In both variants, the spindle hand moves continuously away from the distaff, moving to the side of the body and downwards, drafting out fibres from the distaff. The task of the hand close to the distaff is fine control of the evenness of the draft. This is achieved by opening and closing the fingers and by little twisting motions to control the progress of the twist into the unspun fibres.

The spun thread forms between left and right hand until the spindle hand has completed the downward motion and hangs at its side of the body. The spun thread is then wound around the spindle before continuing the spinning.

If you have trouble at the start, or your thread is very uneven – this is absolutely normal. You are learning a new craft technique, and that does take some patience. Don't give up! Here are some common issues and what to do about them:

The spindle only turns for a very short while and stops again almost immediately?

You already have a lot of twist in your thread (this happens very quickly if you spin a thick thread). Tuck the spindle under your arm or between your legs to keep it from turning in any direction. Then draft more fibres from your supply and let the extra twist travel into the newly drafted fibres.

The half hitch is slipping off, and the spindle drops to the floor?

Have you wound your thread in the same direction as you are spinning? Have you wound the spiral up the spindle shaft with enough turns, and tightly enough?

If you already have a substantial amount of thread wound up on the shaft, you can wind the thread around once just below the main ball before you spiral up the shaft.

Sometimes it's also helpful to place the half hitch a little higher or a little lower to keep from accidentally flicking it off the spindle when setting it into motion.

If all this does not help, there are several other options available. You might wind the thread around the very bottom of the spindle once, below the whorl, before doing the half hitch. Or cut a little notch into the top of the spindle to help secure the thread.

The spindle falls to the floor after turning backwards and un-spinning the thread?

Flick the spindle into motion and let it rotate for a while; then tuck it under your arm or lay it somewhere and draft without needing to pay attention to the spindle. After a while of drafting, suspend the spindle from the thread again and flick it, let it rotate for a bit, and so on.

Your thread is thick and thin?

That is completely normal for a beginner thread – it will just need some more practice! Over time, you will draft more evenly and thus will spin an even thread.

The spindle is not turning as easily and nicely anymore?

As more and more thread is wound onto the spindle shaft, weight and rotational properties of the spindle change. To improve the spindle's turning properties again, you can replace the whorl with a lighter one or even take it off completely. Or wind the yarn off to start with an empty spindle again.

The whorl is falling off the spindle stick?

The spindle whorl is held on the stick through friction between these two parts. If the yarn wound onto the spindle shaft touches the whorl, it will over time press down onto the whorl, eventually pressing it off the shaft. To avoid this, make sure to leave a gap between your yarn cop and the whorl. The cop will stay stable if you wind crosswise up and down instead of winding parallel all the time. More explanation on this winding technique can be found here: pallia.net/en/main-page/articles/medieval-spindles

Freshly spun yarn will twist back on itself, and free ends will untwist. After being stored for a while, the fibres get used to their new and twisted-up position, and both these effects will diminish. You can speed up the process by setting the yarn: soak in warm or hot water and hang up to dry, keeping the hank slightly stretched.

Happy Hand Spinning!

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The spindles, spindle whorls, and distaffs shown as well as spinning fibres and other textile tools are available in my online shop at shop.pallia.net (I ship world-wide). You can also book me for spinning lessons!

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