When You Sew

Cooperative Extension South Dakota State University

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Your sewing machine is a precision instrument and will serve you well if you understand how it works and how to use it. Whatever make of sewing machine you have, you need to rely on the instruction book that comes with it for information on its operation and care.

You want to make professional looking garments as quickly as possible. This means:

1. The machine must be clean and well oiled.
2. It must be adjusted to the fabric you are using.
3. You must operate it skillfully, mastering correct methods of stitching until they are habits.

**SIZE OF NEEDLE**

Always test every fabric for size of needle, length of stitch, tension and pressure—they all work together for good sewing. Use a needle suited to the weight of fabric and thread. You need fine, medium and coarse needles. Too many women use the same size for all fabrics.

All sewing machine books have tables for needles, size of thread, and length of stitch. These are guides. Always make a sample of stitching to see how it looks.

**LENGTH OF STITCH**

With fine fabric you need a fine needle, fine thread and a short stitch. Heavy fabrics require coarser needles and thread and longer stitches.

The average length stitch on medium to fine fabric is 12-15 stitches per inch. Twelve is most commonly used. A longer stitch, 6-8 stitches per inch, is used to baste stitch, to mark buttonholes and center fronts (using a contrasting thread) and to gather.

A shorter stitch, 18-20 stitches per inch, is used to reinforce areas such as points on collars, underarm curves, angles to be clipped, gusset points, and to stitch buttonhole strips.

Most machines have a regulator with numbers for stitches per inch. If your machine has no indicator, draw two lines exactly one inch apart on a double thickness of fabric. Practice stitching between these lines, changing the length of the stitch and then counting the stitches. Mark the 6, 8, 12, 15 and 20 stitches to the inch (Fig. 1). Keep this sample of stitch lengths at your machine to easily recognize them.

**TENSION**

Many sewing machine tensions are set higher than need be. Adjust top tension first (Fig. 2) then adjust lower tension if needed (Fig. 3). Test tension on double thickness of fabric, stitching on lengthwise grain. Tension is balanced when the stitches lock in center of seam (Fig. 4). For more details see Special Circular 73, Your Sewing Machine, Care and Adjustment.
PRESSURE FOOT PRESSURE

You need enough pressure on feed to keep fabric from rising with the needle, yet light enough pressure for fabric to feed smoothly. Use less pressure for thick fabrics. (Fig. 5).

![Greater pressure, turn clockwise](image)

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LESS PRESSURE, TURN COUNTERCLOCKWISE

![Figure 5](image)

BEFORE YOU STITCH

Be sure you have the best possible light for work and the most comfortable chair height.

1. Check that top of machine is threaded properly, using same thread in top and on bobbin.
2. Bobbin must be wound evenly and in place. Before filling bobbin, be sure it is empty so bobbin will handle thread evenly until it is empty. Better have extra bobbins than to wind over thread already on the bobbin (Fig. 6).

![Bobbin incorrectly wound](image)

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![Bobbin correctly wound](image)

3. Bring up lower or bobbin thread. If not, thread may knot on first stitches.
4. Bring top and bobbin threads under presser foot and back.
5. Pin fabric for stitching. If you are experienced in operating the machine and in handling fabrics, you can adjust edges without pins. The two edges must be joined "thread perfect" at beginning and end of stitching. Use pins, gradually cutting down on the number, until you master stitching. Learn to make fingers serve as pins. To position pins, place them 1-2 inches from the edge or on the seamline, with heads toward you as you stitch. Put one pin at end of seam that holds edges together. Adjust seam edges as you stitch. Don't stitch over pins—you might blunt or bend the needle, or distort the stitches.
6. Use guide cloth for even stitching. Newer machines have markings on the throat plate (Fig. 7). You can use adhesive or masking tape, drawing lines for more detailed guides (Fig. 8). Some machines provide an attachment.

![Stitching](image)

STITCHING

1. Place needle in fabric where first stitch will be made.
2. Hold thread ends and lower presser foot.
3. Position your hands—beginner place hands in front and away from needle hole; experienced sewer place one hand in front, one in back, making left hand serve as pins.
4. Keep bulk of work to left of presser foot. Ease fabric along so its weight doesn't pull against the needle. Let foot feed control fabric—don't pull or push fabric through.
5. Stitch with even rhythm. As you learn machine
control, stitch short amounts at a time, feeding and adjusting fabric into machine.

6. To turn a corner, leave needle in fabric and raise presser foot.

**TO STOP STITCHING**

1. Never stitch off fabric—this wears foot feed and scratches presser foot.
2. Use hand on balance wheel to control slow stitching, starting and stopping.
3. Bring thread take-up as high as it will go by turning balance wheel by hand—this keeps needle from unthreading.
4. Raise presser foot—this releases tension on upper thread.
5. Draw fabric back, being sure upper thread is between the presser foot toes—this prevents bending the needle.
6. Cut threads. Keeping small scissors at the machine is more efficient than using a thread cutter. Cut both starting and ending threads.
7. As you learn and follow these steps, the procedure will become automatic.

**TO FASTEN THREADS**

There are four ways to fasten threads using the sewing machine:

1. Back stitch (if machine will do this).
2. Raise presser foot slightly and stitch 2 or 3 times on the same place.
3. Hold fabric so it will not feed and stitch 2 or 3 times in the same place.
4. Hold fabric to not feed and stitch 2 or 3 times in the same place turning the balance wheel by hand (good for treadle machines).

**USING ATTACHMENTS**

Before you select or use attachments, master using your machine as it is. Become skilled at adjusting tensions, pressure and stitch lengths to suit fabrics and threads.

Decide what needs to be done that your machine alone can’t do. Then choose attachments to do these jobs if they are time savers for you. Use the instruction book to learn how to attach, adjust and use attachments.