

**chapter**

**1**

# Getting to Know Your Sewing Machine

The largest financial investment you'll make in your sewing is the sewing machine. There are many choices of makes and models of new sewing machines from which to choose. Another option is to start with a used machine inherited from a relative or friend or bought at a sale. Whatever machine you're going to sew with, you need to learn what the parts are and what they do.

Experiment with your machine! Dive in and be creative. Having the machine malfunction when you start to sew can be very frustrating and distracts from the task at hand. The best way to avoid this is to be totally familiar with your machine. Save scraps of fabric when you're cutting out a project and use them to test your needle selection and machine settings.

A white Singer sewing machine is the central focus, with the brand name 'SINGER' printed in red. The machine features a red and blue logo above the name. To the left, a pair of yellow-handled scissors and a pair of orange-handled scissors are visible. A blue measuring tape is also present. The background is a light-colored fabric with a subtle floral pattern. The overall scene is brightly lit, creating a clean and professional appearance.

**SINGER**

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# The Parts of a Sewing Machine

Sure, you can sew by hand, but a sewing machine makes the job a lot easier. The photos shown here might not exactly match your sewing machine, but they do show the basic parts that almost all sewing machines have. The location of the parts may vary on your machine.

## 1. POWER SWITCH

This switch turns the power to your machine on and off.

## 2. PRESSER FOOT

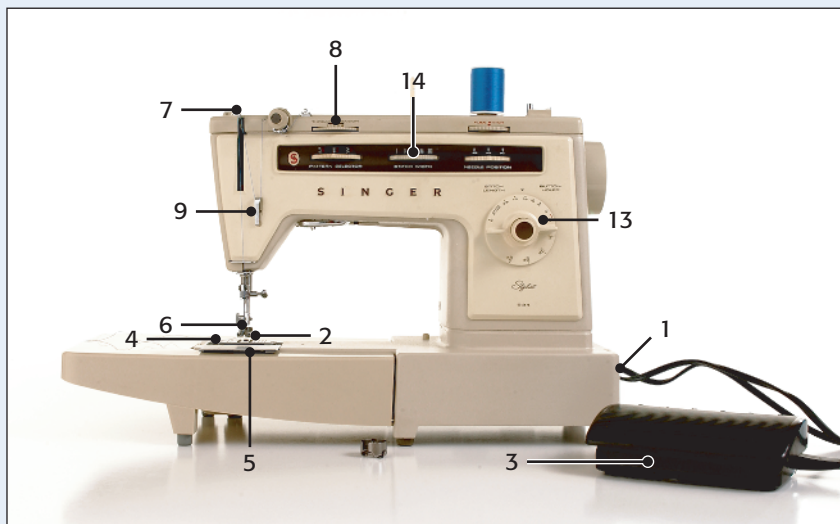
The presser foot holds the fabric in place as you sew. Most machines have a way to adjust the pressure that this foot applies to the fabric. Presser feet come in a variety of shapes and sizes. Many of them are called specialty feet. Specialty feet are designed for one task but are often used for more than one job. For example, a zipper foot is used to insert zippers and is also commonly used to insert piping in a seam; however, there are also specialty feet for cording. Using a presser foot for more than one task saves money but may not be the easiest solution. Visit a local dealer and experiment with specialty feet whenever you find yourself frustrated with a particular task. The odds are in your favor that a special foot exists that will make the task easier.

## 3. FOOT PEDAL

Think of the foot pedal as the gas pedal. The pressure you apply controls the speed of the machine. Take time to experiment with the pressure you apply before you thread the machine.

## 4. THROAT PLATE

The throat plate protects the bobbin unit and usually has guides for seam allowances.



## 5. FEED DOGS

A strange name, but they work like dogs to feed the fabric under the needle to maintain an even stitch as you sew.

## 6. NEEDLE

Needles are available in different sizes with different points for different fabrics. The needle penetrates the fabric, taking the thread under the fabric and catching the bobbin thread to form stitches. If the needle is bent in the slightest way, the stitches will not form correctly. The needle size and type also play an important part in forming correct stitches. Holes in your fabric and skipped stitches are often caused by not using the correct needle.

## 7. TAKE-UP LEVER

This lever moves up and down as the machine operates, feeding thread to the needle.

## 8. UPPER TENSION REGULATOR

The upper tension regulator adjusts the amount of tension on the thread as it's fed to the needles. When the upper thread is too tight, you loosen the tension by turning the dial to the left or lower number. When the upper thread is too loose, you turn to the right or higher number to tighten it. A handy expression to help you remember which way to turn the dial is "Righty tighty, lefty loosey." Referring to your machine manual is the best way to make the correct adjustments.

## 9. THREAD GUIDES

The thread guides keep the thread flowing smoothly to the needle. Most machines have more than one thread guide, so don't skip any when threading your machine.

### 10. SPOOL HOLDER

Many machines offer a vertical and a horizontal option to hold the spool of thread. Vertical spool pins work best for thread that's wound evenly and horizontally on the spool. Horizontal spool pins work best for thread that is wound in a crisscross, diamond-forming type of pattern and is meant to feed over the end of the spool.

### 11. BOBBIN WINDER

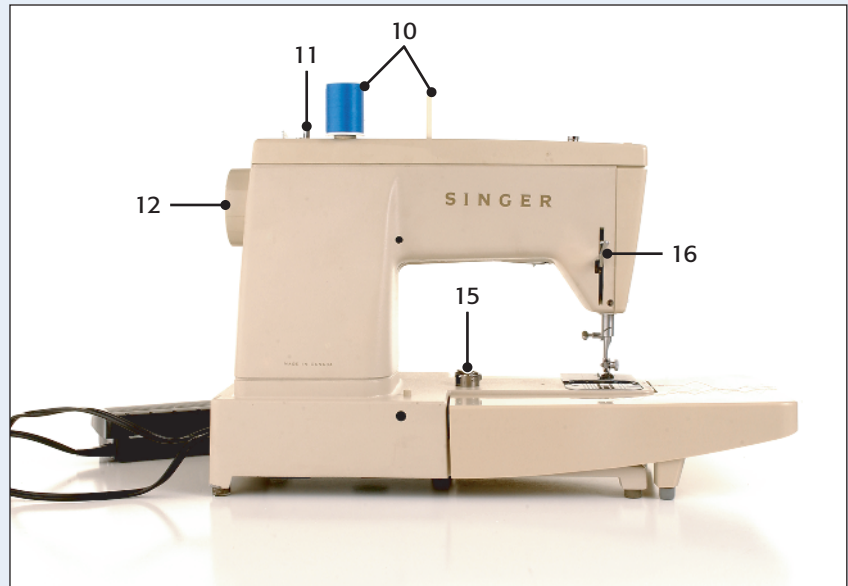
The bobbin winder holds the bobbin and usually slides to a stop when the machine is in bobbin-winding mode. Refer to your manual for proper bobbin winding on your machine. An improperly wound bobbin can cause problems in obtaining a balanced stitch. Always use a slow, even speed on your sewing machine to obtain an evenly wound bobbin.

### 12. BALANCE WHEEL

The balance wheel turns as the machine runs. You can also use it to manually raise and lower the needle. On some machines, the inner wheel turns to disengage the machine for bobbin winding.

### 13. STITCH-LENGTH REGULATOR

The stitch-length regulator (see page 4) sets how much fabric is fed to the needle at a time, thereby determining the length of the stitches. The stitch-length regulator enables you to set the number of stitches per inch.



### 14. STITCH-WIDTH REGULATOR

Available on machines with zigzag and decorative stitches, the stitch-width regulator (see page 4) determines the distance the needle can travel from left to right. The amount of width available varies from one machine to the other.

### 15. BOBBIN AND BOBBIN CASE

The bobbin case holds the bobbin for the thread. The bobbin provides the thread for the underside of the stitching. It needs to be wound evenly in order for it to function properly. The bobbin case has a proper way to be

threaded. Follow your machine manual to thread the bobbin properly in the bobbin case. There are adjustments on the bobbin case for the bobbin thread tension. Adjusting them is usually not necessary. You can see examples of bobbins in Chapter 6.

### 16. PRESSER-FOOT LIFTER

The presser-foot lifter enables you to lower and raise the presser foot. When the presser foot is raised, the tension on the upper tension regulator or tension discs is released. You should always thread the machine with this lever raised.

# Sewing Machine Needles

The most often changed part of a sewing machine is the needle. The commonly accepted rule is that you should change the machine needle after every 10 to 12 hours of use. It's a good idea to have an assortment of machine needles on hand.

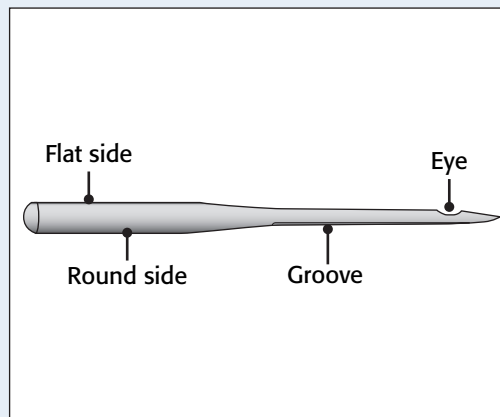
Because different types of needles are available, refer to your manual to purchase the correct type for your machine. The manual will also tell you how to insert the needle into the sewing machine correctly.



## Needle Parts and Sizes

### THE PARTS OF A NEEDLE

All sewing machine needles have the same basic components. Most home machine needles have a *flat* side and a *rounded* side at the top for proper insertion into the machine. The thread rides in a *groove* in the body of the needle as it goes to the *eye*.



### NEEDLE SIZES

Needle sizes are numbered using both European and American systems. Some companies label their needles with both systems, so for example you might see 60/8 or 120/19 on a package. In both systems, the higher the number, the thicker the needle.

Needle Size Conversion Chart

European	American	Fabric Weight	Fabric Examples
60	8	light	very sheer fabric
65	9	light	lightweight, see-through fabric
70	10	light-medium	light T-shirt fabric
75	11	medium	blouse fabric

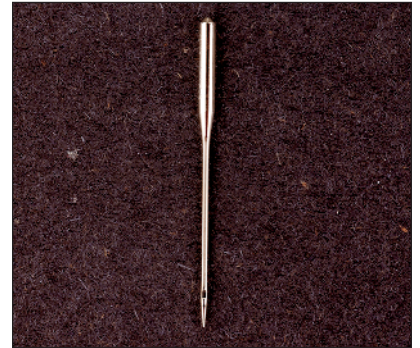
European	American	Fabric Weight	Fabric Examples
80	12	medium-heavy	lightweight denim
90	14	heavy	corduroy, suiting
100	16	heavy	medium-weight denim
100	18	very heavy	jeans
120	19	very heavy	canvas

**Basic Types**

Machine needles have a variety of points for different kinds of fabric and sewing tasks.

**UNIVERSAL**

Universal-point needles can usually be used for sewing both knit and woven fabrics. The point is slightly rounded, yet is still sharp enough to penetrate woven fabrics. These needles are sold in sizes 60/8 through 120/19.

**BALLPOINT**

Ballpoint needles have slightly rounded tips to go between fabric fibers. They're used for knit fabrics. Ballpoint needles do not pierce fabric fibers, instead going between the fibers of knit fabrics. They are sold in sizes 70/10 through 100/16.

**SHARPS**

Sharp-point needles have—surprise!—very sharp points. They're used for woven fabrics. The sharp point enables the needle to penetrate the fabric. The piercing ability of these needles makes them especially well suited for making a perfect straight stitch, such as topstitching. Various companies use different names for sharp needles. You may find them packaged under the name Microtex (Schmetz) and Standard Point (Dritz). Sharp needles are sold in sizes 60/8 through 90/14.



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# Sewing Machine Needles *(continued)*

## Specialty Needles

As your sewing skills develop, you'll find yourself reaching for more-specialized needles.

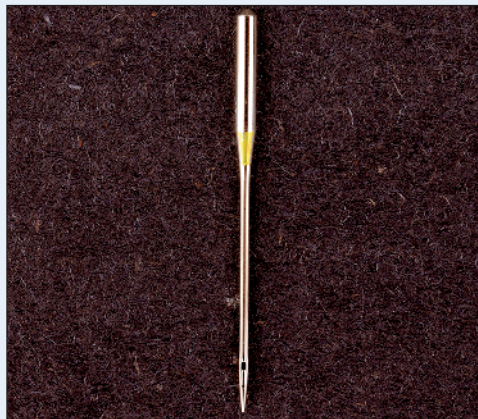
### TOPSTITCHING NEEDLE

Has an extra-sharp point, a larger eye, and a larger-than-normal groove to accommodate larger, topstitching thread. These needles also work well with metallic and delicate specialty thread. They're sold in sizes 80/12 through 100/16.



### STRETCH NEEDLE

Used when a ballpoint needle won't make acceptable stitches in a knit fabric. This sometimes happens with fabric such as Lycra. They're sold in sizes 75/11 through 90/14.



### SELF-THREADING NEEDLE

A great choice for someone who has difficulty threading a needle. This general-purpose needle has a slot in one side of the eye for the thread to slide into the eye. They're sold in sizes 80/12 and 90/14.



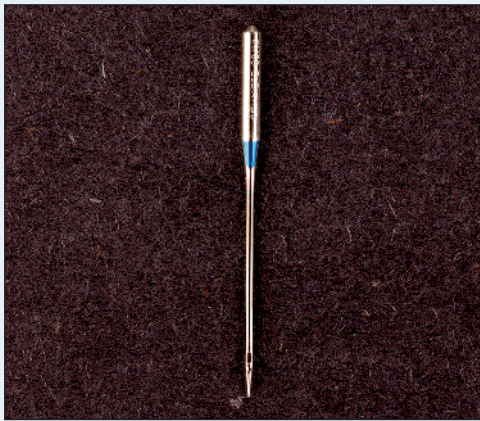
### WING NEEDLE

Has a flared shank and is used to create decorative heirloom stitches. The needle creates decorative openwork stitching on tightly woven fabrics such as linen and fine batiste.



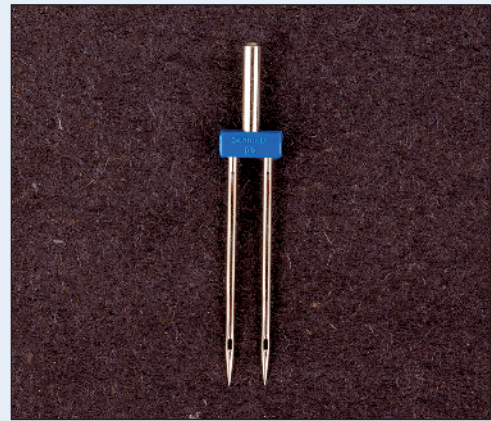
### DENIM/JEANS NEEDLE

Especially well suited for heavy denim or similar weight fabric. It has an extra-sharp point for penetrating layers of heavy fabric. The eye of this needle is slim, but the shaft is strong. Denim needles are sold in sizes 70/10 through 110/18.



### DOUBLE/TRIPLE NEEDLES

Multiple needles arranged on a crossbar with variable distances set between the needles. They allow perfectly spaced rows of stitching. The distance between the needles varies from 1.6mm to 8mm. They are labeled first with the needles' spacing distance and then the needles' size. Use these needles *only* with a throat plate with a large enough opening, and check your manual before using them. They're sold in sizes 80/12 through 100/16.



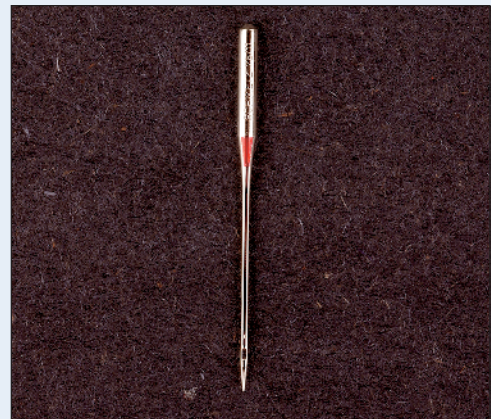
### QUILTING NEEDLE

Has a tapered point to penetrate multiple layers of fabric and the cross-seams of quilts. They are sold in sizes 75/11 and 90/14.



### EMBROIDERY NEEDLE

Has a large eye and is designed to protect decorative embroidery threads. They're sold in sizes 75/11 and 90/14.





# Sewing Machine Options

Before you buy a machine (new or used), consider how you're going to use it. If you just want to sew basic garments and home décor items, you don't need a heavy-duty machine. However, a machine with a wide variety of stitch options will enable you to create almost any item. Choose the correct needle with those stitches and you can sew almost any fabric.

Go to a local dealer for hands-on experience before you buy.



## Basic Options

The basic options you need on a sewing machine to work with almost any fabric available today are:

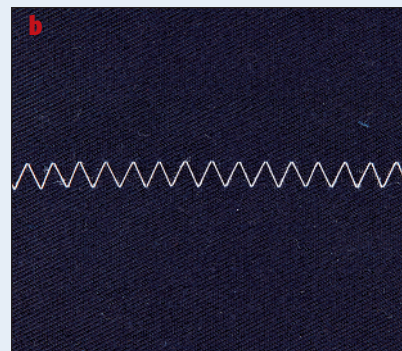
### STRAIGHT STITCH

The straight stitch is the most used stitch. You're going to depend on this stitch more than any other. Test the straight stitch on a variety of fabrics and be sure you like the results (a).



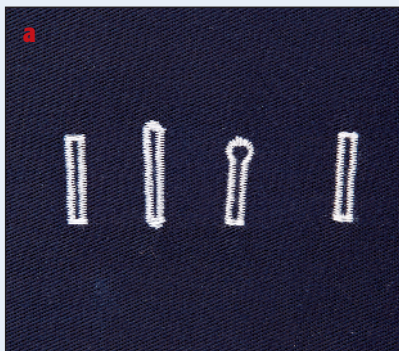
### ZIGZAG STITCH

A zigzag is the most commonly used stitch for seam finishes and is often used for a stretch seam. The changes on stitch width and length should give you a variety of options (b).



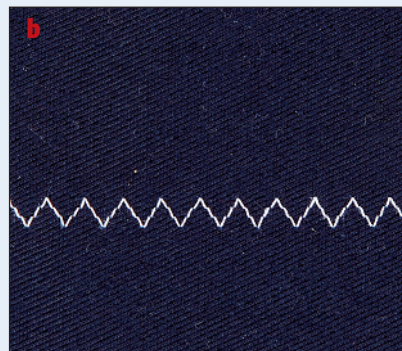
### BUTTONHOLE CAPABILITY

A variety of buttonhole options are available on different machines. Uniform stitches should be your goal in examining buttonholes (a).

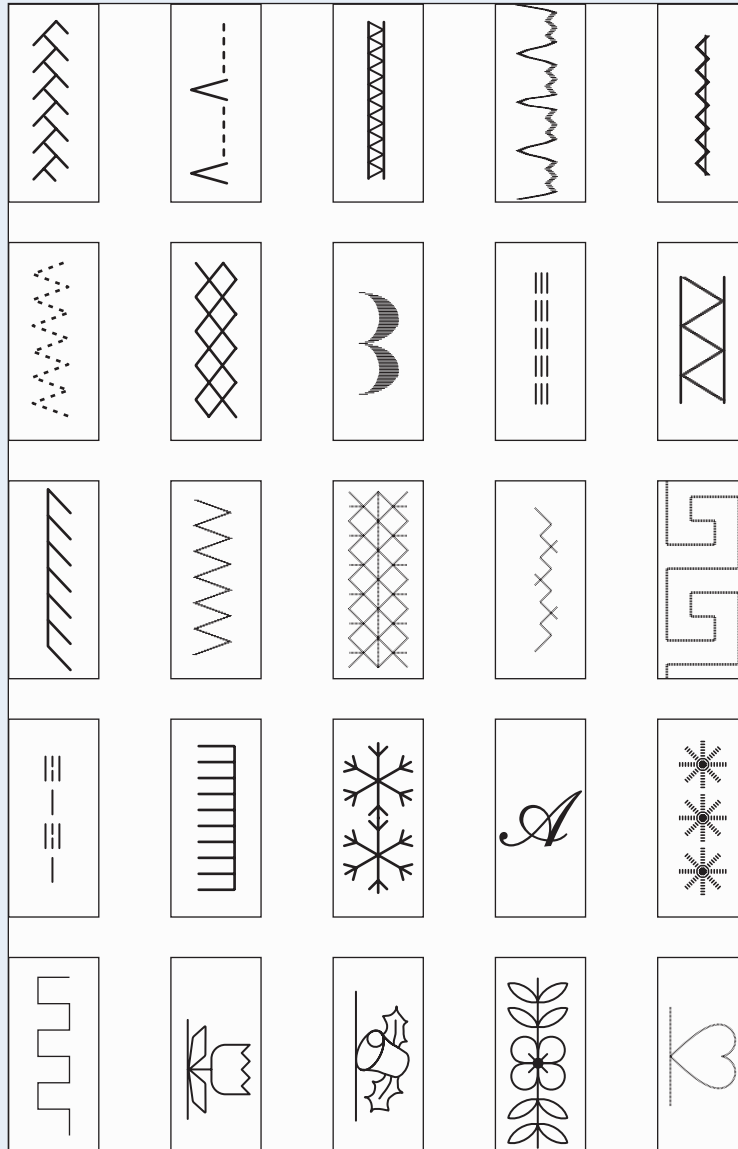


### STRETCH STITCH

A narrow zigzag can be used for a stretchable seam, but a built-in stretch stitch is a worthy investment (b).



If you love fancy threadwork and love to embellish, it may be worth your investment to purchase a machine that has these capabilities. Talk to local sewing machine dealers and test-drive machines before you make the investment. Seeing how available options work can help you decide if it is something you want or need. Most dealers offer free classes with the purchase of a machine. These classes allow you to get the most out of your investment. A good dealer knows the equipment they sell and can answer questions when you have a problem. Any machine you buy should have customer service contact information.



# The Manual

Whether your sewing machine is new or used, you *must* have the manual to maintain your machine properly and get the most out of it. Referring to the manual can save you hours of frustration.

You can purchase a manual or a copy of a manual for almost any older machine. The easiest way to obtain one is to visit a local sewing machine dealer. The following list can lead you to a local dealer or to a website where you can purchase a manual.



## Purchase Manuals

### MANUFACTURERS

Thousands of sewing machines are out there today. Have your machine's manufacturer and model number handy, if possible, when trying to track down a manual.

<b>Company</b>	<b>Website</b>	<b>Phone</b>
Baby Lock–Tacony	<a href="http://www.babylock.com">www.babylock.com</a>	800-422-2952
Bernina USA	<a href="http://www.berninausa.com">www.berninausa.com</a>	800-405-2739
Brother Company	<a href="http://www.brother.com">www.brother.com</a>	800-284-4357
Elna	<a href="http://www.elna.com">www.elna.com</a>	800-848-3562
Husquavarna Viking	<a href="http://www.husqvarnaviking.com">www.husqvarnaviking.com</a>	800-446-2333
Janome	<a href="http://www.janome.com">www.janome.com</a>	800-631-0183
Pfaff	<a href="http://www.pfaff.com">www.pfaff.com</a>	800-997-3233
Riccar	<a href="http://www.riccar.com">www.riccar.com</a>	800-995-9110
Sears Kenmore	<a href="http://www.kenmore.com">www.kenmore.com</a>	800-366-7278
Simplicity Sewing Machines	<a href="http://www.simplicitysewing.com">www.simplicitysewing.com</a>	800-822-6691
Singer Company	<a href="http://www.singerco.com">www.singerco.com</a>	800-474-6437
White Sewing Machines	<a href="http://www.whitesewing.com">www.whitesewing.com</a>	800-446-2333

### NON-MANUFACTURER SOURCES

If you can't get a manual from the manufacturer of your sewing machine, you might be able to purchase from one of the following sources:

- Shoppers Rule sells manuals for more than 15 brands of sewing machines. To enlist their assistance with your machine brand and model number, write to 2496 Starling Airport Road., Arnold, MO 63010; call 800-636-3460 or 314-287-9640; or visit [www.shoppersrule.com](http://www.shoppersrule.com).
- AllBrands.com sells many manuals. Call 866-255-2726 or visit [www.allbrands.com](http://www.allbrands.com).

Anyone who sews regularly dreams of having a room dedicated to sewing. The truth is, most people don't obtain that dream until later in life. You could easily let your sewing take over your home, but there are ways to rein it in.

Sewing can be addictive, too. Once you start a project, you might lose track of time; hours pass before you know it. Consider ergonomics wherever you set up your sewing machine. Proper height settings for your chair and table prevent back, neck, and arm fatigue.

### TABLE

Many sewing cabinets and tables are available, but most people start at the kitchen table. You want a sturdy surface; a card table is not a suitable place to set up your sewing machine. The vibrations of the machine rattle the table and end up distracting from the task at hand. The kitchen or dining room table is usually the best solution. Most kitchen tables also provide a flat, smooth surface for cutting fabric.



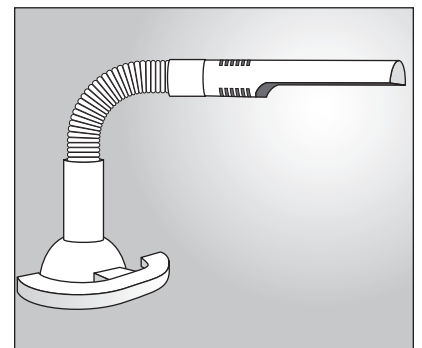
### CHAIR

The chair you use should be comfortable and provide support for your back. You should be able to reach the foot pedal on the floor and the bed of the sewing machine comfortably without putting undue stress on your back, legs, or shoulders. A good office chair usually has lumbar support and adjustable height.



### LIGHT

Allow yourself plenty of light. Don't add excess eye fatigue by running your sewing machine with a burned-out lightbulb. They are relatively inexpensive and easy to replace. Many elaborate lighting solutions are on the market, and if you're going to sew for hours on end, they're worth the investment to prevent eye fatigue. Sewing strains the eyes, and the more light you provide, the less eye strain you'll feel. Lighted magnifying tools are also available. Visit your local sewing shop or lighting center when you're ready to invest in good lighting.



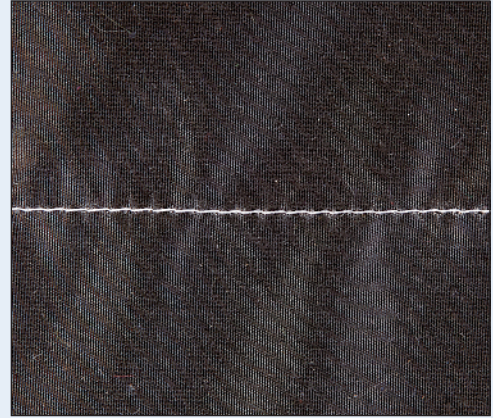


**STITCHES PUCKER**

You can usually remedy puckered stitches by loosening the stitch length.

**HOLES APPEAR IN FABRIC**

If holes appear in your fabric, you are probably using a needle that's too large for the fabric. Try changing to a finer needle.

**FABRIC ISN'T FEEDING**

If the machine is stitching in one place and not feeding the fabric under the presser foot, make sure that the presser foot lever is all the way down and the feed dogs are up in the correct position. If both are in the correct position, you might have too much or not enough pressure on the presser foot. Refer to your manual for the correct adjustment.

**BENT NEEDLES**

Beginners often unknowingly pull the needle with the fabric, which causes the needle to bend. The slightest bend in the needle causes the machine to malfunction.

Be sure that the presser foot is up before pulling the fabric out of the machine.

Let the machine do the work. All you need to do is guide the fabric and allow the machine to feed the fabric through.

