



Congratulations on being selected to participate in the Kansas 4-H State Family and Consumer Sciences Judging Contest. This guide will help you and your team prepare for the 2024 Contest to be held Saturday, September 14 in Hutchinson, KS. The contest is in Dillon Hall at the 4-H Encampment Building on the Kansas State Fairgrounds.

Eligibility – Youth ages 9-13, as of January 1 of the current year, are eligible to participate in the Intermediate division. Youth ages 14-19 as of January 1 of the current year, are eligible to participate in the Senior Division. Each team must have at least 2 members and no more than 4 members.

The FCS judging contest will include three components:

1. Judging classes - These categories are chosen from the same list that the FCS National Championship and Conference uses for their contest. Participants may have ranking and/or reason classes.
2. Group Think – This is a team discussion modeled from the FCS National Championship and Conference. In this activity, youth work as a team to come up with a solution to the challenge presented. The team will be judged/scored as they complete this activity.
3. Hands-on puzzle experience – The team works together to solve a series of puzzles. In 2024 , the experience will not be related to the study guide.

The 2024 Contest will utilize information included in the attached study guide for these topics:

- Athletic Wear
- Bedding - Bed Sheets
- Dental Products
- Event Venues
- Fast Food
- Ground Transportation
- Wearable Technology

## **GROUP THINK - Video Example [https://youtu.be/1Ldvcx\\_UktY](https://youtu.be/1Ldvcx_UktY)**

Step 1: State the problem or situation

The club needs \$200 to purchase plants and flowers for a Butterfly garden.

Step 2: Identify alternative solutions for the situation or problem

car wash - bake sale - fruit sale - magazine sale - rummage sale

Step 3: Identify the standards stated in the situation or problem. You may add additional standards even if they are not stated in the situation.

simple, short term, require minimal money and involve member of all ages

Step 4: Evaluate each alternative solution based on the standards. You can use a grid to make a plus or minus sign or yes or no to indicate good or not good choices.

car wash - Yes simple, Yes short term (1 day), Yes minimal money needed (we have most of supplies); Yes appropriate or all ages - some younger members may need specific tasks. cons - unpredictable weather, not in winter

bake sale - Yes, simple (allergies - food items would need to be labeled); Yes short term (1 day);

Yes minimal money (some may not be able to afford to bake something); Yes younger kids can help with baking

fruit sale - not simple - difficult to get fresh fruit; not short term - would need to order fruit in advance; money needed upfront before ordering

magazine sale - not simple because you have to go door to door or must host an event; longer term unless selling at a single event, requires minimal money to operate, Y- involves members of all ages

Step 5: Select the best choice for the situation and explain to judges (like providing a committee report to a 4-H club.)

...As a group, we ultimately chose the bake sale option because it was simple, short term, required minimal money and everyone would be able to participate.

NOTE: in the video example, the team identified 5 options and barely had enough time to accomplish their review. Your Kansas contest organizers suggest your team identifies 2-3 solution options with 3-4 standards. The video presentation is 9 minutes - you have 7 minutes.

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Teams have 7 minutes for the Group Think activity and will be provided with a printed copy of the situation (which relates to one of the identified topics in the study guide), paper and markers.

### **HANDS-ON PUZZLE/IMMERSION ACTIVITY**

Your team will have a group activity to complete a series of puzzles related to a theme.

Here

are tips:

- 1) Review overall tasks
- 2) Communicate and delegate among group members
- 3) Take notes!

In 2021 and 2022, the content for the puzzle/immersion activity was related to topics in the study guide. In 2023, it was related to textiles and study materials were not provided.

For 2024 participants will be provided with resources to complete the activity. (In other words, you can't study for this activity!)

### **OPTIONAL- FCS Skill-a-thon**

We have a group of youth and adult volunteers that are creating a skill-a-thon activity which include identification of items that might include sewing/clothing, interior design/housing, and/or food/cooking items. This activity will be optional and scores will not count toward the overall team score.

Questions or scheduling needs?

Contact Becky Reid at [bkreid@ksu.edu](mailto:bkreid@ksu.edu) or 620-221-5450.

# Athletic Wear

# ATHLETIC WEAR

4-H Consumer Decision Making  
Study Guide



# Activewear

The activewear industry has witnessed significant growth in recent years, reflecting the increasing importance of sports and fitness in people's lives. With a worldwide market size of 303.44 billion in 2021, this sector shows no signs of slowing down. What began as clothing specifically designed for athletic pursuits has evolved into a diverse range of garments suitable for various physical activities. Today, activewear encompasses attire for sports and exercise and everyday routines that incorporate fitness elements. This surge in demand demonstrates the changing preferences and lifestyles of consumers who seek both comfort and functionality in their clothing choices. As the market continues to expand, the activewear industry is ready to offer a wide array of options to cater to the evolving needs and preferences of individuals worldwide.

Activewear or Sportswear is any apparel, including shoes, worn for physical activity or participation in sports. The fabrics and materials used in activewear are engineered to achieve the desired attributes for a particular activity. When selecting activewear, it is important to consider the type of activity you will participate in, activity impact level, your body type and if you will be using it indoors or outdoors. The right active wear can enhance your training and performance.

Brand-name activewear, including Under Armor, Nike, and Adidas, is popular with teens and adults. Private-label brands available in department and discount stores might be made of similar materials but cost less than the national brands.

## CLOTHING

The right clothing can enhance your training and performance. Fabric and fit are most important when choosing clothing for specific sports or activities. Choose activewear that contains cotton, cotton blends and moisture wicking fabrics that will assist with moisture absorbency, ventilation, and comfort.

## FABRIC

Fabrics are designed for different purposes. Some fabrics pull sweat away from your skin and others absorb it. When it comes to workout clothes, some choices are better than others on your workout.

### **Fabrics with wicking characteristics:**

Wicking fabrics are breathable synthetic fabrics that provide moisture control for an athlete's skin during a mid to high intensity workout. The fabric "wicks" the sweat away from your skin which can help it evaporate quickly and keep your body cool.

Wicking fabrics tend to be soft, lightweight, and stretchy, making them an excellent choice for activewear. This broad category of fabrics is used to make garments like t-shirts, running and cycling jerseys, socks, and polo style shirts for any physical activity where the goal is to keep your skin as cool and dry as possible.

Moisture wicking fabrics are used to make apparel for outdoor activities such as hiking, fishing, mountain biking, snow skiing and mountain climbing.

There are products marketed for their wicking. Several fabrics are known for their wicking properties. Here are some common fabrics that offer wicking:

**Polyester:** Polyester fabrics are widely used in athletic and outdoor apparel due to their excellent moisture-wicking properties. They quickly pull moisture away from the skin and allow it to evaporate, keeping you dry during physical activities.

**Nylon:** Nylon is another synthetic fabric that offers good wicking properties. It is often blended with other fibers to enhance its moisture-wicking capabilities.

**Merino Wool:** Merino wool is a natural fiber known for its exceptional moisture-wicking properties. It can absorb a significant amount of moisture while still feeling dry to the touch. Additionally, merino wool has the advantage of being odor resistant.

**Bamboo:** Bamboo fabric, derived from bamboo pulp, has gained popularity for its softness and moisture-wicking abilities. It absorbs moisture from the body and allows it to evaporate quickly, making it a comfortable choice for activewear and undergarments.

**Microfiber:** Microfiber fabrics are made from extremely fine synthetic fibers, usually polyester or nylon. They have a high surface area, which helps in efficient moisture transport and quick drying.

**Synthetic Blends:** Many moisture-wicking fabrics are blends of different synthetic fibers. For example, a polyester/spandex blend can provide both moisture-wicking properties and stretch for enhanced comfort during physical activities.

It is important to note that the specific construction and treatment of the fabric, such as the addition of moisture-wicking finishes or mesh panels, can also affect the wicking performance. When selecting clothing for activities that involve sweating or moisture exposure, look for garments labeled as "moisture-wicking," "quick-dry," or "performance fabric" to ensure optimal comfort.

**Cotton:** Lacks the wicking properties that are found in other fabrics but can still be a good choice when choosing activewear. Cotton is breathable, soft, comfortable, and natural fiber that works well for lighter workouts. Cotton also tends to be less expensive than synthetic activewear. However, cotton is very absorbent and is slow to dry. When wet, cotton holds the moisture next to your body.

## **FIT**

Choose activewear that fits your body and your workout. For example, if you are running or biking, avoid wide-leg or loose pants/leggings. Likewise, for activities such as yoga or Pilates, choose stretchy, fitted fabrics. Additionally, avoid fabrics that could chafe or irritate your skin during repetitive movement.

Pay close attention to fit more than size because some workout clothes tend to run smaller and more from fitting than regular clothes.

## **COST**

There are many factors to consider when shopping for activewear. You may be surprised at how much activewear costs. Paying the top dollar does not necessarily mean that you will get the best activewear for you. Be sure that whatever price you choose to pay for activewear it is the right activewear for you and that it meets the needs you desire.

# ATHLETIC SHOES

With the many types of athletic shoes that are available, it can be hard to choose the right shoes for you. There are differences in design and variations in material and weight. The American Academy of Orthopedic Surgeons says that these differences have been developed to protect the areas of the feet that encounter the most stress in a particular athletic activity. Let's review some of the several types of sports shoes available.

## Athletic shoes

Athletic shoes are grouped into the following categories: **running, training, and walking**; they include shoes for hiking, jogging, and exercise walking. These shoes should have a comfortable soft upper, good shock absorption, smooth tread, and a rocker sole design that encourages the natural roll of the foot during the walking motion.

## Running Shoes

Running and walking shoes might look similar, but there are significant differences. Traditional running shoes provide extra cushioning, because landing can generate a force of 1½ to 3 times your body weight. They should also provide easy flexing at the ball of the foot and enough stability. The outsoles should be durable and provide good traction on pavement or dirt. Features of a good jogging shoe should include cushioning, flexibility, control, and stability in the heel counter area, lightness, and good traction.

Be aware that longer distances typically call for more support. A shoe worn to run sprints is typically a lightweight minimalist shoe worn for its quick feedback and responsiveness. While a marathon shoe has much more cushioning and support for the longer runs. As a rule of thumb an increase in distance and or time on your feet calls for more cushion and support. Nurses typically wear marathon shoes as they must be on their feet all day moving around.

## Cross-Trainers

Cross-trainers are all-purpose shoes that bridge walking shoes and sport-specific shoes like tennis or basketball shoes. They can be a money-saving alternative to several pairs of specialized shoes for people who pursue a variety of activities, but they don't provide the same flexibility or cushioning for running or other high-impact sports. A good cross trainer should have flexibility in the forefoot that you need for running, in addition to stability on the inside and outside of the shoe for the control needed for aerobics and tennis.

## Walking Shoes

These are best for people who walk for fitness or who want casual shoes for everyday walking. They should provide enough cushioning to be comfortable. And their flexible soles, designed for the relatively low impact of walking, allow the foot to roll easily from heel to toe. Walking shoes should flex easily at the ball of the foot, which helps feet to push forward.

## Sport Specific Shoes

### Court sport shoes

Include shoes for tennis, basketball, and volleyball. Most court sports require the body to move forward, backward, and side-to-side. As a result, most athletic shoes used for court sports are subjected to heavy abuse. The key to finding a good court shoe is the sole. Another key factor is grip. A shoe worn for tennis must grip onto the clay surface while a basketball shoe must grip onto a hardwood court. You should ask a coach or shoe salesperson to help you select the best type of shoe for your sport.



## Field sport shoes

Include shoes for soccer, football, and baseball. These shoes are cleated, studded, or spiked. The spike and stud formations vary from sport to sport, but they generally are replaceable or detachable cleats, spikes, or studs affixed into nylon soles. Soccer cleats are lightweight allowing the user to reach maximum speed and agility. Football and baseball cleats are heavier weight allowing the user to grip onto the turf/dirt field. Football and baseball cleats also have more spikes than soccer cleats allowing them to maintain a better grip

## Track and field sport shoes

Are very specific to the sport. The needs of the individual are most important when picking the shoe. For example, foot types, gait patterns, and training styles should always be considered. It is always best to ask a coach about the type of shoe that should be selected for the event in which you are participating. Proper fitting sports shoes can enhance performance and prevent injuries.

Follow these specially designed fitting facts when purchasing a new pair of athletic shoes:

- Try on athletic shoes after a workout or run and at the end of the day. Your feet will be at their largest.
- Wear the same type of sock that you will wear for that sport.
- When the shoe is on your foot, you should be able to freely wiggle all your toes. There should be a thumb's width from the tip of the toe to the end of the shoe.
- The shoes should be comfortable as soon as you try them on. There is no break-in period. If they are not comfortable in the store, they will not be comfortable when you are exercising.
- Walk or run a few steps in the shoes. They should be comfortable. The heel of the shoe should not slip off the foot as you walk or run.
- Always re-lace the shoes you are trying on. You should lace through each top eyelet as you crisscross the lacing pattern to ensure a snugger fit and decrease slippage. Do not tie the laces too tight as this may cause injury to the nerves or tendons on the top of the foot and ankle.
- There should be a firm grip of the shoe to your heel. Your heel should not slip as you walk or run.

## Athletic Shoe Features

Like other products, it is important to know the different parts and features of the shoe. This way you can appropriately identify the parts of the shoe and feel confident in knowing what you are purchasing.

### The Sole

Three layers comprise the sole. The bottom layer, or outsole, is generally made of carbon rubber for durability. It is segmented for flexibility and grooved or patterned for traction. The squishy middle layer, or midsole, provides most of the cushioning. It is usually made of shock-absorbing foam and might incorporate gel or air sacs and plastic torsion supports. The layer directly underfoot, the insole or sock liner, provides some additional shock absorption and arch support. It is removable and washable in many running and walking shoes.

### The Upper

This is the body of the shoe, the part above the sole. The toe box—the forward part of the upper—should be roomy enough to let your toes spread and leave a half-inch space ahead of your longest toe. The heel counter at the rear should keep your heel from slipping excessively. These days, the uppers on most running shoes are made of synthetics, though some walking shoes still use leather. The more your feet sweat, the more you will appreciate the breathability of mesh. But if you plan to be outside in the cold weather, a less porous material will provide a little more protection.

## Lacing

Fabric, plastic, or metal speed-lacing loops make tightening easier. Extra top eyelets provide a snug fit at the ankle. Flat laces are less likely to loosen or come untied than round ones.

## Style

If you are on your feet a lot all day long, you might want shoes that combine the comfort and support of a walking shoe with something dressy enough for the office. Unfortunately, the dressier walking shoes tested in the past did not perform as well, overall, as the ones that look like sneakers.

## Reflectors

If you jog or walk at dawn or dusk, reflective tabs on the uppers can provide extra safety by reflecting cars' headlights. The reflector should be as big as possible, especially if you will be outside at dusk or dawn.

## Heel to Drop

Also known as the Shoe Offset, Heel differential, or HTD. The HTD refers to the height difference between the heel and the forefoot of an athletic shoe. It is measured from the base of the heel and the middle point of the forefoot. It is measured in millimeters in running shoes. In general, a 0mm drop is called natural or barefoot running. Low drop shoes are common for trail running. The most common drop range for most running shoes is 10-12mm. A shoe with a higher drop will be easier on the lower leg, foot, ankle, Achilles, and calf while directing more stress to the knees and hips. A lower-drop shoe will typically spare the knees but put more stress on the lower leg.

|                                  |       |
|----------------------------------|-------|
| Low Drop-Trail Running           | 1-4mm |
| Mid Drop- Minimalist Running     | 5-8mm |
| High Drop-Running/ Long Distance | 8+mm  |

## Pricing

In addition to being overwhelmed by all the choices of athletic shoes, you may be surprised at how much they cost. Slick ads and television commercials tout technological features, the latest gimmicks, and shoes named after sports celebrities. Paying more than \$100 does not necessarily get you a better shoe. Good quality shoes may be pricey, but don't overlook the less expensive shoes because they can outperform their costlier brandmates. Be sure that whatever price you decide to pay for the shoes, it's because the shoe has the features that meet your needs—not because it is a certain brand or has a sports celebrity's name on it.

## REFERENCES

### Athleticwear

Information for this study guide was compiled, with permission, from:

Texas 4-H Consumer Decision Making Categories and Descriptions Study Guide 2017-2018.

Linda Manikowske, Ph.D., *Choose Activewear for Comfort and Safety Factsheet* – North Dakota State University.

### Athletic Shoes

American Academy of Orthopedic Surgeons, <http://orthoinfo.aaos.org> Consumer Reports, [www.consumerreports.org](http://www.consumerreports.org) American College of Foot and Ankle Surgeons, [www.acfas.org](http://www.acfas.org).

*Best Athletic Shoe Buying Guide*. Consumer Reports. (n.d.. <https://www.consumerreports.org/health/athletic-shoes/buying-guide/>)

Dack, D. (2023, January 19). *The Runners Guide to the heel to toe drop* -. Runner's Blueprint. <https://www.runnersblueprint.com/heel-to-toe-drop/>

Texas 4-H Consumer decision making Categories and Study Guide 2005. Prepared by: Courtney J. Schoessow, MPH, Extension Program Specialist–Health, Texas Cooperative Extension, December 2005, Family & Consumer Sciences website: <http://fcs.tamu.edu>

*What Heel-to-Toe Drop Is, and Why It Matters | Zappos.com*. Consumer Reports. (n.d.-b. <https://www.consumerreports.org/health/athletic-shoes/buying-guide/>)

# **Bedding**

## **Bed Sheets**



# Bedding

- bedsheets (2023-2025)
- mattresses (2025-2027)
- pillows (2027-2029)

*The average person spends one-third of their life in bed. Properly caring for bedding will help generate a more comfortable sleep and maintain the longevity of bed sheets. While some bedding like blankets, comforters, quilts, and mattress pads can be laundered less frequently, sheets need much more attention.*

## TYPES OF FABRIC

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### COTTON

Cotton is the most common material used to make bed sheets. It's breathable and stains can be removed easily and effectively. The fabric stays cool. Cotton sheets also soften up with time and washes while maintaining their durability. When choosing these types of sheets, however, be aware that there are different types of cotton. Below is a list of types of cotton fabrics used to make sheets:

#### EGYPTIAN

The most luxurious and highest quality of the cotton fabrics is Egyptian cotton. Egyptian cotton features a smooth finish, incredible durability, and resistance to pilling. It's typically made with an extra-long staple — the longest cotton fiber available — and can be expensive. The longer the cotton fiber, the stronger the fabric. Each cotton fiber links to the next one via filament connections. Short-staple cotton, in contrast, has more filament connections. Thus, the resulting fabrics are somewhat weaker and more prone to wear and tear. Egyptian cotton originated along the Nile River Valley in Egypt and has been used for over 140 years. What makes this type of cotton so long and luxurious? It's the way that they cotton is processed. Unlike cotton that is picked using saw ginning or roller ginning, Egyptian cotton is hand picked. Hand-picking does not put any stress on the fibers, leaving them straight and fully intact.

#### SUPIMA®

Supima® is the trademarked name for American Pima cotton is made from the *Gossypium Barbardense* species of cotton. Its name is derived from "superior Pima". It has been cultivated since antiquity, but has been especially prized since a form with particularly long fibers was developed in the 1800s. Supima® is a close second, in terms of quality, to Egyptian cotton. Supima® cotton, like Egyptian cotton, is of the long-staple variety. However, the fibers are shorter than those of Egyptian cotton. To separate the fiber from the seed, Pima cotton uses a roller gin process which is ultimately more gentle on cotton than saw ginning. The end result is a stronger fabric. This cotton is durable, high quality, and still luxuriously soft without the exuberant cost of Egyptian cotton.

#### UPLAND

With a lower quality than both Supima® and Egyptian, this short-staple cotton is the most common variety you'll find. Upland cotton is from the *Gossypium Hirsutum* species of cotton. It is also known as Mexican cotton. Globally, about 90% of all cotton production is of cultivars derived from this species. Labels that read "100% cotton" are typically Upland, and while still fairly durable, aren't nearly as soft as other types.

## FLANNEL

Flannel has been made since the 17th century and likely originated in Wales. Though it was once made of wool using a process called carding (disentangling and softening the yarns of the surplus of sheep's wool, to allow for a softer fabric that still retained the toughness of wool). By the 20th century, flannel was more commonly made with cotton, sometimes even mixed with silk. Nowadays, flannel is 100% cotton. It features either a plain or twill weave usually brushed in either a single or double "nap" (a technique using a metal brush to rub the fabric, raising fine fibers for an even softer feel). The plain or twill weave of flannel sheets also makes them soft and pliant and great for use in colder weather.

## JERSEY

Originally made of wool fibers, jersey fabric is most commonly made of cotton. While traditional cotton doesn't have a lot of flexibility, the knitting technique used to create jersey fabric gives it an elastic quality, even without the addition of blending synthetic fibers like elastane or spandex. While these sheets are soft and easy to clean, they pill with age and aren't very lavish, and due to their pliable nature. They tend to easily stretch out with time and are less durable than other cotton sheets. The first jersey material was produced on Jersey, the largest of the Channel Islands in the British Isles. The textile is thought to date back to the Middle Ages.

## BAMBOO

Bamboo is an environmentally friendly material that grows quickly. It is used to not only make bed sheets, but many other household goods. Bamboo sheets are made by extracting bamboo cellulose and weaving the fibers into what's called bamboo rayon. These sheets are softer than polyester or linen. They are wrinkle-resistant, durable, hypoallergenic, and breathable.

## POLYESTER

Known for wrinkle-resistance and affordability, polyester sheets come in two different forms. Pure polyester sheets are rough. Polyester blends are typically much softer and provide a higher level of comfort. Both types are easy to wash. However, despite its water-resistance, polyester absorbs oil and grease and stain easily.

## LINEN

Linen is a naturally cooling and hypoallergenic material. Hot sleepers and those with allergies greatly benefit from them. However, stiffness has been identified as a negative with linen sheets. The stiffness does lighten up with time and number of washes, but they never quite reach the softness level of cotton.

## TENCEL™

Tencel™ is a soft, smooth and hypoallergenic material that comes from the wood pulp of eucalyptus. This environmentally-friendly material is a popular choice for eco-conscious consumers because any waste resulting from the closed-loop production process can be recycled and reused. Also known under the brand name, Lyocell, Like cotton, Tencel™ is wrinkle resistant. However, Tencel™ is not as breathable as cotton or linen fabrics.

## SILK

A pricier bed sheeting option is silk. Silk is a natural fiber produced by silkworms. What makes it more expensive is the special, careful steps required in the production process. Because of their delicate nature, the care and maintenance of silk sheets tend to be laborious. However, in spite of these negatives, silk sheets are hypoallergenic, cool and perfect for adding a more luxurious feel to a room.

## MICROFIBER

Microfiber is a type of polyester fabric that is woven extremely fine. Microfiber does not stain, thus making it ideal for children and people who sleep with pets or eat in their bed. Even though it is a type of polyester, it is much softer. It is less breathable than cotton, but ideal for use in cold weather.

## SATIN

Satin sheets are best identified as synthetic fibers with an luxurious feel and look. When considering satin sheets, be mindful and pay special attention to how the fabric is constructed. Is the fabric woven or knit? If woven, the satin fabric will be smooth. Knit, on the other hand, will add a feeling of roughness to the fabric.



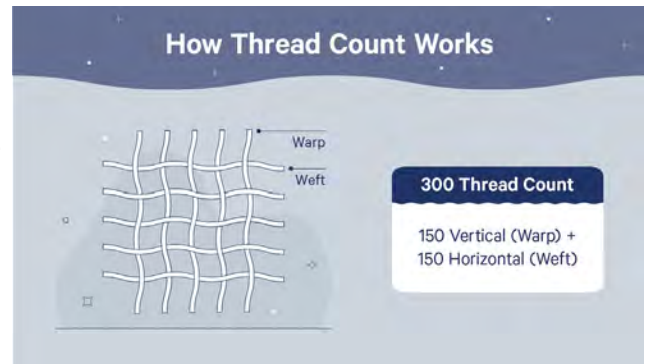
# THREAD COUNT

Images: (2023). <https://casper.com/bedding/sheets/>

Thread count refers to the number of horizontal and vertical threads in one square inch of material. In general terms, the greater the number of threads, the smoother and more durable the sheet. More is more, right? That's what most people think. However, this is not necessarily the case when it comes to bedsheets. Thread count is an more important focus of the overall quality of the bed sheet. Bedding experts suggests that the best thread count when buying sheets is actually between 200 and 600. Anything higher than 600 can trap body heat, resulting in uncomfortable sleep.

| Material | Best Thread Count |
|----------|-------------------|
| Bamboo   | 250-350           |
| Cotton   | 400-600           |
| Linen    | 80-150            |
| Percale  | 250-300           |
| Sateen   | 300-600           |

There are, of course, exceptions to this rule. When choosing sheets based on the thread count, there are fabrics -- such as Linen -- in which a smaller number of threads is equivalent to high quality. A good quality linen sheet can have a thread count of 120, whereas a cotton sheet would need upwards of 600 to be good quality.



Consumers should be cautious of extremely high thread counts (1,200 to 1,500). Because only so many threads can be included onto the loom at one time, manufacturers will often decrease thread quality to increase thread quantity.

# BED SHEET SIZES

Bed sheets should be selected based on the size and the depth of the mattress. You can find bed sheets in all the standard mattress sizes, including twin, twin XL (often found in college residence hall rooms which are extra long beds for taller students), full, queen, king, and California king. Many mattresses today are extra thick (up to 18-inches). If you have a thick mattress, choose sheets that are labeled "deep-pocket" or "extra-deep" to ensure proper fit.

# FREQUENCY OF PURCHASE

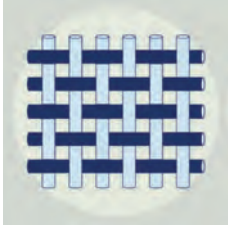
Think about it -- your sheets and pillowcases get a lot of wear and tear. After all, most of us use our bed sheets on a daily basis. If you use a bed sheet set every day of the year, experts recommend replacing bed sheets approximately every two years. Why? Bedding comes in direct contact with you skin each and every night and require washing often. Frequent washing generally breaks fabrics down quicker than other bedding materials.

Of course, bed sheet lifespan also depends on other factors. If your sheets are frayed, stained, or faded, they will need to be replaced earlier. Additionally, the fabric type and frequency of use (daily, bi-weekly or seasonally) should also be considered. Luxury cotton sheets, like percale and sateen, can last two to three years. Linen fabrics will last even longer -- three to five years — sometimes more. If you switch your sheets out every other week or use an insulating set in the winter and cooling bedding in the summer, you can expect the fabric to last twice as long.

# COMMON WEAVE PATTERNS

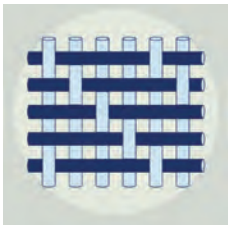
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Images: (2023), <https://casper.com/bedding/sheets/>



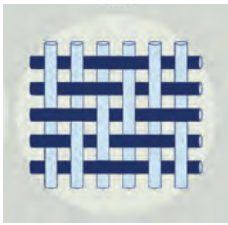
## PERCALE

Percale sheets (pronounced “per-kail”) are made with cotton. These have a plain weave meaning that the pattern is a simple, one yarn over and one yarn under. Plain weave is the simplest form of weaving and features both durability and cheap manufacturing costs. To create a plain weave, every filling alternates moving over and under the weft yarn. The results of this process look like a checkerboard. The finish is a matte and crisp. Cotton bed sheets with a Percale weave will get softer with each wash. They are best for hot sleepers and warm weather. They aren’t wrinkle-resistant and must be removed from the clothes dryer immediately following the end of the cycle to prevent excessive wrinkling.



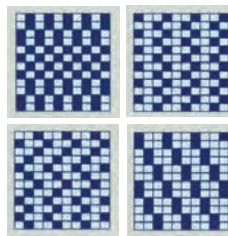
## SATEEN

The satin weave structure (one under, three over) creates not only satin bed sheets, but also sateen sheets. What’s the difference? The difference is that sateen uses yarn as its fiber base rather than filament fibers. Sateen woven sheets are just as elegant and silky smooth as satin. Overall, they are less durable than percale weaved sheets but retain heat more effectively and are therefore better for cold sleepers and cooler weather. The weave has a minimum of four weft yarns hovering on one weft yarn. In some cases, it is one weft yarn that hovers over more than four weft yarns.



## TWILL

The twill weave is characterized by an over two, under two pattern. This weaving method is among the most common in textile processing. Twill weave is created by alternately moving the weft yarn over and under various warp yarns. It is commonly used in the production of solid fabrics like denim and gabardine. The end result is a very distinct, diagonal design. Twill is typically wrinkle-resistant due to the thickness of the fabric. Twill woven sheets are prone to shrink more than those with a sateen weave. It is often times more affordable than sateen.



## DOBBY

Dobby weaves are produced on a Dobby loom and allows for the production of prints or designs that are woven into the fabric. A Dobby Loom is an alternative to a treadle loom and offers an alternative to printing fabric. This type of floor loom controls the warp threads using a device called a dobbie. The weaver manipulates different colored yarns in the fabric by raising and lowering the vertical threads (called warps) individually to create the patterns (either small geographic or stripes) formed on the fabric. This technique dates back to the 1840s. This weave creates more texture than others, as the shapes (be it squares, diamonds, dots, or the like), have a slightly raised feel. The most common design for bed sheets is thick stripes.

## PLY

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Ply refers to the number of fibers used to create one thread. One-ply sheets have one fiber, two-ply sheets have two fibers wrapped together to create a single thread, etc.

While it may seem that a two-ply bed sheet would be a better choice with the greater number of fibers it contains, this isn't usually the case. Two-ply sheets are often rougher and less durable, as cheaper materials are typically used. Focus more of your efforts on finding the right material and weave, but do try to stick with one-ply sheets.

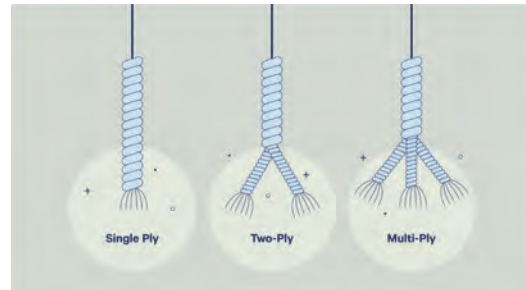


Image: (2023). <https://casper.com/bedding/sheets/>

## FITTED AND FLAT SHEETS

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Knowing what types of bed sheets fit your personal needs, as well as your mattress, can help you sleep better and prevent you from having to buy replacements frequently. Most sheet sets are packaged together and typically include a flat sheet, fitted sheet, and one or two pillowcases.

The purpose of the fitted sheets is to fit snug around your mattress. Fitted sheets are made with an elastic band around the edge. It wraps around the mattress to prevent it from moving too much while you sleep. These sheets protect your mattress from body oils, spills, and other things. Using a mattress protector underneath your fitted sheet is also a good idea for creating an extra layer of protection. Flat sheets lay on top of fitted sheets to protect your quilt, duvet or comforter from body oils, tearing and other damage.

## LAUNDRYING

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### WASHING BASICS

1. Wash bed sheets separately from towels, blankets and other clothing to give them more room to circulate in the washing machine tub and get cleaner, protect them from damage caused by zippers and fasteners and limit pilling.
2. Some washing machines have agitators (center post) located in the center of the tub. The purpose of the agitator is to twist back and forth, rubbing against clothes to help break apart stains. If your washing machine features a center agitator, do not wrap your bed sheets around the agitator when loading the washer as this will cause damage over time. Instead, loosely form each sheet into a ball before dropping it into the tub.
3. Most sheets should be washed on a gentle cycle using cool or lukewarm water. Washing sheets in hot water is usually unnecessary unless you need to sanitize the sheets due to allergies or after an illness. Remove the sheets as soon as the cycle is over to reduce wrinkles. Shaking out the sheets before placing them in the dryer helps to reduce wrinkles.

## WASHING BASICS *continued*

4. Check your bed sheets before washing and identify any stains. It is important to pre-treat stains before laundering sheets. Do not use bleach (even color-safe bleach) on bed linens as it can damage the fabric. If you need to brighten white sheets, add 1/4 cup of lemon juice to the wash water instead of bleach. Use a mild detergent for cotton and cotton-polyester-blend sheets. Special fabrics such as linen and silk might require a special detergent. Be sure to always check the care label before washing.
5. Clothes-lined dry sheets are the best! If you can do this, just be sure that it is out of direct sunlight. When using machine-drying, it is important to use a low heat setting to minimize damage to the fibers from high temperatures. Remove the sheets from the dryer as soon as possible after the drying cycle is complete and fold them, smoothing wrinkles with your hands. If wrinkles have been set, dry the sheets for an additional five minutes with a damp towel (some dryers have a steaming feature and can also be used) tossed into the mix to add moisture. Avoid ironing the sheets if possible because the high heat can damage the fibers. If you must iron, be sure to use a low level heat on your ironing device.
6. Bed sheets should be washed weekly according to the experts. If you live in a humid climate, it is ideal to wash them even more frequently to extend the life of your bed linens. The longer these particles (dirt, dust, skin cells, body oils and fluids and fecal material) build up on the sheets, the more stress is put on the fibers. In addition, skin cells and body oils or fluids can attract microscopic mites.
7. Pay attention to the labels as all fabrics are not washed the same way and may require special washing.

### SILK

- Delicate or hand-wash cycle in cool water.
- Use Woolite detergent or any special soap suggested by the manufacturer.
- Hang sheets on an outside line out of direct sun, or dry on the lowest setting above air fluff on the dryer.

### LINEN

- Wash in hotter water -- up to 104 degrees
- Use a mild detergent
- Avoid bleaches or solvents containing bleach.
- Linen dry quickly; use a cooler and shorter setting
- Linen can be ironed at a hot temperature.

### BAMBOO

- Mild laundry soap or one for natural products.
- Do not use bleach or harsh cleaners.
- Use a gentle wash cycle, and prepare for fading with the first few washings.
- Air-dry or use a low or air-dry setting.

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# **Dental Products**

## **Toothbrushes and Dental Floss**

2023

# Dental Products

FCS CONSUMER DECISION MAKING STUDY GUIDE



TOOTHBRUSHES AND FLOSS

Brushing your teeth is a vital part of a daily routine that our parents teach us from a young age. But there's one lesson many of us have yet to learn from our parents or dentists: how to choose the right toothbrush.

Have you ever stopped to think about how to choose the best toothbrush? It is such an everyday item that most people have not. They either use the toothbrush their dentist provided or select one based on color or price. Every store has many different toothbrush options, and it can be overwhelming. It is essential to consider the most important factors before choosing a toothbrush to ensure good dental health.

While brushing correctly daily is the most important consideration, your toothbrush matters. New toothbrushes have been shown to remove 30% more plaque than older ones. Dentists recommend purchasing a new toothbrush or replacing the brush head on an electric toothbrush every three months or when the bristles show wear to maintain good oral hygiene and dental care. Always look for specific features best suited to your unique dental needs and dentist recommendations.

## Manual or Electric: Which One Should I Use?

Manual toothbrushes have been on the market for years, but electric toothbrushes are increasing in popularity. The good news is it doesn't matter which type of toothbrush you use; as long as you brush your teeth effectively twice a day for two minutes using fluoride toothpaste, the effect on your oral health is the same.

Electric and manual toothbrushes each have multiple benefits. As long as the American Dental Association (ADA) has placed the seal of approval on the toothbrush, it is safe and effective.

## Electric Toothbrushes

Electric toothbrushes can be powered by a rechargeable or removable battery that, when turned on, has rotating, moving, or vibrating bristles that clean the plaque as you move the toothbrush across your teeth and gum line. The vibrations allow for micro-movements as you move the brush through the mouth.

Electric toothbrushes clean teeth and gums much better than manual toothbrushes, according to a study by the





Oral Health Foundation. Scientists found that people who use an electric toothbrush have healthier gums, less tooth decay, and keep their teeth longer than those who use a manual toothbrush. The following factors should be considered if you are considering an electric toothbrush.

## **Types of Electric Toothbrushes:**



- **Oscillating rotary toothbrushes.** These toothbrushes have small circular heads that rotate back and forth to clean each tooth. Some models combine this rotating feature with vibrating and pulsing to help dislodge more plaque. Studies have indicated that oscillating toothbrushes are the most effective at removing plaque.
- **Sonic toothbrushes.** Sonic toothbrushes have vibrating brush heads that move bristles side-to-side at high speeds. To be classified as a sonic toothbrush, the vibration has to be fast enough to produce an audible hum. Sonic toothbrushes today offer frequencies up to over 50,000 movements per minute.
- **Ultrasonic toothbrushes.** Instead of relying on physical motion to clean your teeth, ultrasonic

toothbrushes use a high frequency of vibration called ultrasound to remove plaque and food debris.

Ultrasound generates waves at a frequency beyond human hearing, and existing ultrasonic toothbrushes use operating frequencies from 20 kHz up to 10 MHz, according to Dentistry Journal. Though ultrasonic brushes can break up plaque without movement, most models also provide a sonic vibration to remove plaque and food debris remnants further.

## **Things to Consider Before Purchasing:**

### **1 Cost**

Electric toothbrushes are more expensive than manual ones and range in price from \$25 for a model with replaceable batteries to more than \$250 for a model with rechargeable lithium-ion batteries, multiple brushing modes, Bluetooth connectivity, and other features. In addition to the initial expense of an electric toothbrush, you will need to replace the removable toothbrush head as often as you replace your manual toothbrush.

Toothbrush heads range in price from \$5 to \$30, depending on the brand and number in the pack. Not all stores carry the same brand, so you might have issues finding the head to match your toothbrush, especially when you travel.

## 2 Bristle Stiffness

When a toothbrush is labeled "extra soft," "soft," "medium," or "hard," this relates to bristle stiffness. The ADA advises brushing with soft bristles because stiff bristles can damage and remove enamel and root surfaces.

## 3 Timer

If you're thinking about an electric toothbrush, one feature to consider is a 2-minute timer. According to the ADA, most people brush for an average of only 45 seconds, so a timer may encourage you to brush longer. Many newer toothbrushes include a timer to help you make sure that you are brushing your teeth as long as you should be.

You probably know that you should brush your teeth for at least 2 minutes, but did you know that the average time most people brush their teeth is less than a minute? This could be a massive advantage if you are one of those people. Some brushes will buzz and beep every 30 seconds to remind you to spend equal time brushing all quadrants of your mouth.

## 4 Cleaning Modes

Toothbrushes are equipped with a variety of modes that meet every need. Modes will vary per toothbrush, with the default mode being Clean. Other brushing modes that may be found on electric toothbrushes are:

- **Deep Clean:** allows extra time to work on trouble spots
- **Whitening:** works to remove surface stains
- **Polish:** smooths the surface layer of your teeth
- **Gum Care:** Cleans and massages your gums. Best for those with sore, inflamed, or bleeding gums.
- **Sensitive:** gentle vibrations perfect for sensitive teeth
- **Tongue Care:** cleans the tongue

The extra modes allow for customization of your brushing experience to best suit your needs. It is better to have a toothbrush with one cleaning mode that you use regularly and correctly than to have a brush with multiple modes you may not use. The evidence that extra modes significantly benefit dental health care is limited.



## 5 Pressure Sensor

Placing too much pressure on your teeth doesn't help remove more plaque; instead, you are probably harming your teeth and irritating your gums. A pressure sensor will let you know you are using too much pressure and will use a light indicator, buzzer, or beeper as an indicator. Some models will even slow the rotating speed if you brush too hard.

## 6 Range of Motion

Older adults, especially those with arthritis, might not have the dexterity to maneuver a manual toothbrush, but an electric toothbrush will do the work for them and have a more oversized handle, making them much easier to hold.

Kids often have an easier time using an electric toothbrush as well. Some toothbrushes, designed explicitly for kids, will play music or connect to timer apps to encourage longer brushing sessions.

An electric toothbrush can also be a plus for anyone with braces. Since the brush head moves faster, it's easier to dislodge any trapped food or bacteria without any complicated maneuvers. Brush heads may be purchased that are designed specifically for people with braces.

## 7 Battery Life

The life of an electric toothbrush depends on how often it's used and the type of battery in the toothbrush.

- **Alkaline Batteries:** Depending on the battery, these should last 4-6 weeks.
- **NiMH Rechargeable Batteries:** Can last up to two weeks on a full charge.
- **Lithium-Ion Batteries:** Full charge can last more than two weeks.

Using your electric toothbrush twice a day for 2 minutes each, the rechargeable battery will last about three years before it will need replacing. If you use it once daily for the same amount of time, the battery should last about five years before needing replacement. So, the average life span is between three to five years before they stop working or require a replacement.

Some brushes will last longer, depending on the care and use of the toothbrush. Keeping the toothbrush off the charging stand at night and only charging when the battery light indicates will save electricity and maximize operational life.

Most electric toothbrushes offer a one to a two-year warranty. In most cases, the battery

is covered as part of the warranty, but check the specific terms for your toothbrush.

Choosing an electric toothbrush comes down to one factor: likability. The best toothbrush for you is the one you're most likely to use. If you like your toothbrush, you're more likely to brush for two minutes and clean all the tooth surfaces, as dental professionals recommend. Before purchasing an electric toothbrush, factor in your oral health, lifestyle, and budget, and if you're still unsure, consult your dental professional for recommendations.

## Manual Toothbrush



A manual toothbrush is a hand-held brush made of hard plastic with bristles for cleaning the gums and between teeth. A manual toothbrush has no moving parts and is not powered by anything. When purchasing a manual toothbrush, there are two factors to consider. The first is a personal preference. The best manual toothbrush is the one you will regularly use that does not harm your teeth or gums. The second factor to consider is which toothbrush removes germs and bacteria effectively. If the toothbrush is the wrong size or has damaging bristles, it will do more harm to your teeth than good. Not all manual brushes are created the same. Ensure that the brand and type you buy will help your oral health.

### ***Some Things To Look For Are:***

#### **Cost**

Manual toothbrushes are less expensive than electric ones and more portable. It is easy to bring a manual toothbrush to the office, carry one in your purse, or for traveling. The average manual toothbrush costs less than \$10 and is widely available at most pharmacies or grocery stores. A manual toothbrush should be replaced every three months, when the bristles show wear, or when you have been ill.

#### **Size**

A toothbrush with a smaller head will help clean hard-to-reach back teeth. A standard-size toothbrush with a 1/2 to a 1-inch head works best for most people, but those with a larger mouth might prefer a larger head for a better fit.

The toothbrush should have an ergonomic handle long enough to hold it comfortably in your hand. If you have dexterity issues, a thicker handle will make brushing your teeth easier.

## **Bristles**

The American Dental Association (ADA) recommends soft-bristle toothbrushes with angled or multi-layer bristles, allowing the toothbrush to lift plaque and bacteria off the tooth without harming your teeth. Medium and hard bristles can damage your teeth and gums while brushing, and this is especially true if you brush too hard, leading to abrasion, loss of enamel, and gum irritation.

Once you figure out the type of bristles you are working with, there are a few other questions you want to answer before making a decision:

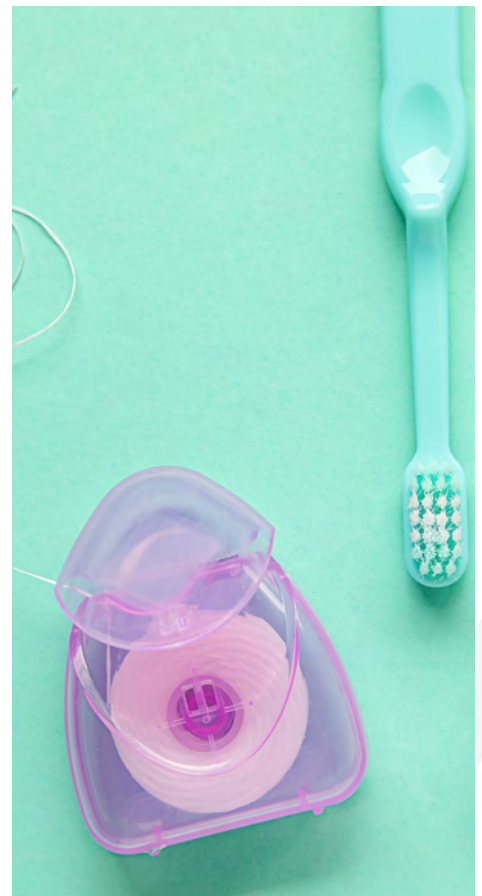
- Are you focusing on polishing and whitening the teeth?
- Do you have sensitive teeth and gums?
- Are you looking for an eco-friendly option?
- Do you wear braces or other orthodontic appliances?
- Do you need a Tongue and Cheek Cleaner on the toothbrush?
- Do you want a bristle indicator to know when the toothbrush should be replaced?

## **Flossing**

Dental floss is a cord of thin filaments that removes food and plaque between teeth or places a toothbrush cannot reach. The American Dental Association recommends flossing daily to prevent cavities, tooth decay, and gum disease.

How often should you floss? Taking your time and flossing correctly is more important than flossing often. Dentists recommend flossing at least once a day. Flossing after every meal removes any debris stuck between your teeth and prevents plaque buildup. There is no such thing as too much flossing - unless you do it incorrectly and apply too much pressure, which can damage your gums.

There are many types of dental floss, and there is no one right floss that will suit everyone. Some people have more than one type of dental floss for different scenarios. Let's explore some common types of dental floss to enable you to choose the right kind.



# Types of Dental Floss

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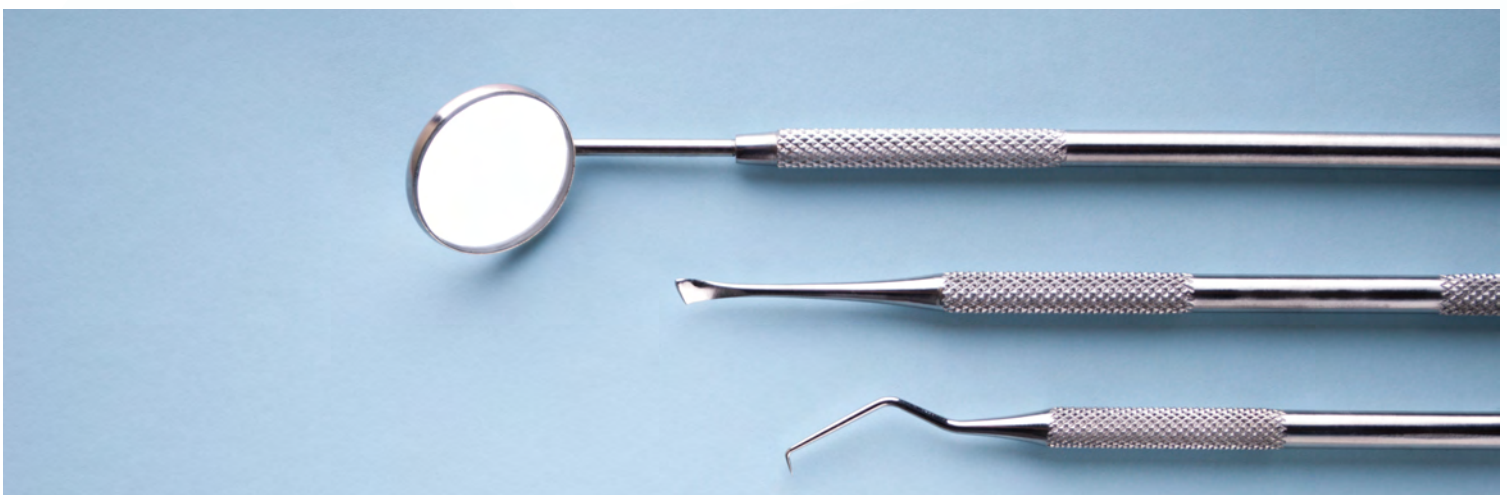
- **Unwaxed floss** is one of the most common floss types used. It's constructed of a nylon material crafted by twisting multiple strands together. Unwaxed floss comes with no artificial flavoring, which means that this type of floss is free from chemicals. This floss is perfect for those with small gaps between their teeth, as unwaxed floss is much thinner
- **Waxed floss** is constructed similarly to unwaxed floss, with a waxed layer applied. This waxed layer strengthens the floss, so it doesn't shred or break on the user. In addition, it allows the floss to glide better between teeth than unwaxed floss. Due to the added layer of wax to this type of dental floss, it's thicker than unwaxed floss. This makes it more challenging to get into small gaps. The waxy nature of the floss also makes it harder to grip for the average user.
- **Flavored and Unflavored:** Any floss may be flavored. Flavored floss can make the process of cleaning between your teeth more enjoyable. With flavors ranging from cinnamon, mint, and peppermint to coconut and strawberry, it can make your breath smell fresher and cleaner and incentivize kids to floss their teeth. Choosing a flavored or unflavored floss is a personal preference based on an individual needs.
- **PTFE Floss (Polytetrafluorethylene Floss):** PTFE floss is made from the same material as Gore-Tech fabric. The floss is very strong, slippery, and will not shred. People with very tight spaces between their teeth prefer this floss. This floss does have Teflon in it and has caused health concerns, so dentists do not recommend extended use of this product.
- **Dental Tape:** Similar to regular dental floss but thicker. Dental tape is perfect for people with wide gaps between teeth, requiring thicker floss. This floss is not ideal for most people because it can be challenging to get between teeth.
- **Biodegradable and natural floss:** Patients can opt for locally manufactured all-natural flosses made from biodegradable silk or other raw materials. Products with threads infused in tea tree oil or other natural antimicrobial oils exist.
- **Superfloss:** The floss is used by patients with traditional braces, bonded wire retainers, and bridges. Each piece of Superfloss has three different parts—a stiff end for easy threading, a thicker spongy section, and a "regular" floss section. The threader allows the user to easily maneuver the floss under bridges and other dental fixtures to remove debris.

- **Disposable Flossers:** Floss picks hold the floss for you, so you only have to use one hand. Most also have a dental pick at the opposite end. Floss picks are convenient and comfortable but are not as effective as regular floss because they do not allow you to reach all angles and clean your teeth effectively. Disposable flossers are ideal for people with limited dexterity who have difficulty manipulating the floss around the teeth.
- **Water Flossers** - Water flossers are hand-held cleaning devices that shoot thin streams of water between your teeth or gums. The water is pressurized, making removing plaque and food buildup easy. A water flosser is easy to use and does not have any waste. It works well for individuals with dental work in the mouth and those with difficulty flossing. According to research published by Dentistry Journal, a water flosser's pulsation motion can reduce gum inflammation and bleeding while cleaning this area gently. A water flosser is challenging outside the home because it relies on electricity and water.

## American Dental Association (ADA)

Whichever dental products you purchase, look for the ADA seal. The American Dental Association Seal of Acceptance, has been the leading mark of dental product safety and efficacy for 90 years. A dental product earns the ADA Seal when the manufacturer provides scientific evidence demonstrating safety and effectiveness in removing plaque and reducing gingivitis.

Ultimately, the best dental products are the ones you'll use regularly and adequately. All dental products are useless if you don't use them, so pick the ones that work best for you. Contact a professional with any questions or concerns about dental products or your dental health.



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# Event Venues



## Selecting an Event Venue

When planning an in-person event, one of the most important decisions you'll make is where to host it. There are many factors to consider when choosing a venue, from the size of the space and the event date to the cost.

This guide covers the essentials that should be considered when choosing the perfect venue to host your special occasion. Whether you are planning a party, prom, club or business conference, festival, or anything in between, use this helpful advice to find the perfect venue for your next event.

### Location

There are a few factors to consider when narrowing down your choices, but choosing the right location is key to a successful event.

Before you start reaching out to venues, take some time to figure out what's important to you and your guests. If proximity to major transportation hubs is a priority, then you'll want to look for venues in or near city centers. If easy parking is a must-have, then suburban areas might be a better fit for you.

When deciding which type of venue will work best for your event, there are a few questions you need to ask yourself, such as:

- What is the purpose of the event?
- What type of event is it?
- What type of atmosphere am I trying to create? Can I create the theme, ambiance or mood that I want in this venue?

- How many attendees am I expecting?
- Do I need a seated or a standing venue?
- What is the layout of the venue? Will it work for your event?
- What are the technology needs for the event?

## **Accessibility**

A great venue must be accessible to your attendees. If they're not easily able to find it and enter, you could end up with an empty room or space. First, make sure you make it clear on when and how to attend. Second, you may want to consider your transportation options if your guests are coming from far away. Good public transportation will make it easier for them to get there, which means they are more likely to attend. Next, have clear signage to and at your location. Consider if the location/setting is indoor/outdoor, formal/casual, closer or further to a specific location.

Also consider if the location is easy to find and accessible for your guests. (For example, some outdoor locations may require a short walk).

## **Capacity**

When choosing an ideal place or spot for an event, you should consider how many attendees the venue can accommodate. There should be adequate space for open mingling. Technically, it should have enough space for attendees and all the equipment you will be using. Attendees include the guests, speakers, caterers, performers, support personnel, volunteers, and anyone who will have a part in your event.

If you have more attendees than the venue can accommodate, things could get chaotic. If the venue is too small, you will not be able to accommodate everyone who wants to participate. On the other hand, you can pay for extra space to fit more people but this will equal extra costs. The maximum occupancy is usually set based on fire and safety codes, so it is important not to exceed this amount.

A larger space is ideal, but if it is too big, it may seem impersonal. It is also more expensive. At the same time, a space that's too small can make attendees feel cramped or restricted and less comfortable or safe. An ideal venue should be large enough to accommodate everyone, but not so big that it fails to create the atmosphere you're hoping to achieve.

Also, consider any special equipment you might need in the space, such as a stage, speakers, or special lighting. The venue should accommodate anything you require to carry out your event successfully.

Be certain to make note of where guests will register or check-in and where the emergency exits are located.

## **Parking**

Choose a venue with ample parking and make sure the attendees can access the space easily and safely. There is nothing worse than when guests arrive at a venue only to find that there is no parking or the parking is full.

The last thing you want is attendees having to look for parking elsewhere, which can take time and increase the chances of them arriving late or forgoing the event entirely. Therefore, make sure there are more parking spaces than you expect you will need, as it is better to have too many than too few.

## **Budget**

It's no secret that planning an event can be expensive. Between catering, decorations, and renting a venue, costs can add up quickly. That's why it's important to choose a venue you can afford.

Here are some tips for finding an affordable venue for an event:

- Consider hosting your event within your organization. For example, are you part of a school district where a school would be a good option to host your event?
- Check out local community centers or church halls. Often, these facilities offer lower rental rates than a full-service venue.
- Consider sharing your venue with another group. If there are two events being held at the same time, your rental rates will go down. Plus, if you are hosting an event for a charitable cause, sharing the space with another group can help raise awareness.
- Ask about discounts. If you are renting the venue during off-hours, inquire about a possible discount.

# Function Spaces and Services Offered

It is important to find out what services a venue can offer. These can include catering, live entertainment, room set-up, high-speed internet, clean-up, and more. If you need a service that the venue does not provide, it is important to find out if the venue will charge for the service if you hire it separately. Also, check to see what function spaces are available, whether it be outdoor space, indoor space, or both, and if the venue provides tables, chairs, or any other items you might need for your event.

Questions you should ask include:

- Does this venue have good acoustics and sound?
- What type of insurance is necessary and who is expected to provide it?
- Do you offer any additional services that might interest me? (such as a conference center with added technology, etc.)
- If the venue is providing food and beverages, what is the minimum number of guests for which you will be charged?
- Can you give us sample menus and a quotation?
- Can we experience a food tasting?
- Can you accommodate vegetarians or other special dietary requirements?
- Do you offer menus according to themes?
- Does the venue have a wedding or alcohol license?
- If the venue is not providing food and beverages, is there a kitchen used by you and your team?
- Does the venue have any partnerships with food vendors?
- Are the restrooms easily accessible?
- Is security offered and/or necessary?
- Will a cleaning crew make sure the venue is clean before the event and clean up afterwards?
- Does the have adequate tables, chairs, linens, silverware, etc.?
- Are there sufficient audio and video capabilities?
- Is there a stage available?
- Are there restrictions in place regarding noise or photography?
- Is there a music curfew around the venue?
- Are there any extra fees such as corkage fee, overtime fee or cancellation fee?

- If the event is planned outdoors, what is the rain plan in case of inclement weather?

## Event Date and Time

Before you rush to book a venue, check availability. You may find a perfect event space, but it may be reserved on the date you need it. It is best to check availability months before the actual date of the event, just in case the date is already booked.

If you are keen about a particular place or space and it's available on the date of your event, make sure to book it as far in advance as possible. This way, you don't have to worry about the venue and you can focus your attention on other things.

## Venue Experience

It's important to look at references for prospective venues before making a final decision. You can get references from past clients or even ask your friends, family, and co-workers if they have ever attended any events there.

You could also check out their website, if they have one, to see pictures or attendee reviews and ratings of any recent events that have been hosted there. This can give you a good idea of what the venue has to offer and what you can expect from it.

If the place has a restaurant, for example, you'll know if their food is well received or if they are known for being overpriced. If the venue is outside, you'll know what amenities it has and if its facilities are well maintained.

By seeing what other events have been hosted there, you can see if the venue's description matches what they actually have to offer.

Furthermore, you might want to ask if they have hosted events similar to what you are planning on hosting. Event venues often hold different types of events and you want to make sure that it has experience with hosting your type of event.

# Tips for Booking an Event Venue

Are you still unsure how to choose the best venue for your event? You'll find a couple of useful tips below:

- Outdoors or indoors? If you are looking for a place that will hold at least 100 people, then it is best to stick with an indoor venue. It has better amenities and is more secure. However, outdoor venues are cheaper and offer better scenery for your photos.
- Book early. In-person events are usually planned way in advance, so be sure to book a spot at least six months ahead of your event. This will give you ample time to set up for it.
- Do your research on the venue's policies beforehand. While some venues are flexible with their rules, others are strict. Be sure to read over the contract and ask for a few changes if you are not comfortable accepting all their terms.
- Practice your negotiating skills. If you don't like the venue's terms, then negotiate. Add specifics to why you are not comfortable with their terms and ask them if they can change them for you. Remember that this is all about getting the best deal for yourself too.
- Book according to your needs. If you are hosting a small event of 20-30 people, then it's more efficient to book a small space than a large space. If you are hosting an event of more than 100 people, then it's best to book a large space.
- Alternative options. If you cannot find a suitable venue that agrees with your terms and conditions, then get creative. Loop in your networks to see what options you have available to you.

## Event App or Website

It is also helpful if you can provide attendees with an event app or website. Today, it is more common than ever for events to have a website or an event app. These are used more frequently for large events because they enhance event experiences. Using one or both can help your attendees save time when searching for event information, such as schedules and maps.

# Wrapping Up

Choosing the right venue for an event can be a lot of work, but it's well worth it to pick the right spot. Plan ahead and plan well, and do your research thoroughly. Don't hesitate to think outside the box when it comes to finding a place to hold your next event, big or small. Compare different venues to get the best possible deal, but make sure the place you choose is flexible and suitable for your event needs.

Sources: Whova; Event Solutions; J. Shay; Tagvenue; Sched; Superevent

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# Fast Food

# Fast Food



2023 Revised Edition By:  
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## FAST FOOD MEALS

Fast foods are quick and easy substitutes for home cooking, and a reality with the busy schedules many families maintain. However, fast foods are almost always high in calories, fat, sugar, and salt.

Fast food used to mean fried food. However, today there are many more healthy alternatives available at fast food restaurants. Some restaurants still use hydrogenated vegetable oils for frying. These oils contain trans fats, which increase your risk for heart disease. Some cities have banned or are trying to ban the use of these fats. Now, many restaurants are preparing foods using other types of fat.

Even with these changes, it is hard to eat healthy when you eat out often. Many foods are still cooked with a lot of fat, and many fast-food restaurants do not offer any lower-fat foods. Large portions also make it easy to overeat, and few restaurants offer many fresh fruits and vegetables.

Before heading out, it is important to know your personal calorie limit. Staying within yours can help you get to or maintain a healthy weight. Most adolescents need 1800 (girls) to 2200 (boys) calories; however, knowing how many calories one needs is based upon age, sex, height, weight, and activity level. When choosing what to eat and drink, it's important to get the right mix – enough nutrients, but not too many calories.

In general, eat at places that offer salads, soups, and vegetables. Select a fast-food restaurant that you know offers a variety of food selections that fit in your healthy eating plan. Along with that, the following tips can help you make healthier selections when dining at fast-food restaurants.

Check and compare nutrition information. Knowing the amount of calories, fat, and salt in fast foods can help you eat healthier. Many restaurants now offer information about their food. This information is much like the nutrition labels on the food that you buy. If it is not posted in the restaurant, ask an employee for a copy.

Have it your way. Remember you don't have to settle for what comes with your sandwich or meal – not even at fast-food restaurants. Ask for healthier options and substitutions. Adding bacon, cheese, or mayonnaise will increase the fat and calories. Ask for vegetables instead, such as lettuce or spinach, and tomatoes. With pizza, get less cheese. Also pick low-fat toppings, such as vegetables. You can also dab the pizza with a paper napkin to get rid of a lot of the fat from the cheese.

Keep portion sizes small. If the fast-food restaurant offers several sandwich sizes, pick the smallest. Bypass hamburgers with two or three beef patties, which can pack close to 800 calories and 40 grams of fat. Choose instead a regular- or children's-sized hamburger, which has about 250-300 calories. Ask for extra lettuce, tomatoes, and onions, and omit the cheese and sauce. If a smaller portion is not available, split an item to reduce calories and fat. You can always take some of your food home, and it is okay if you leave extra food on your plate.

Skip the large serving of french fries or onion rings and ask for a small serving instead. This switch alone saves 200 to 300 calories. Or, ask if you can substitute a salad or fruit for the fries.

Strive to make half your plate fruits and vegetables. Take advantage of the healthy side dishes offered at many fast-food restaurants. For example, instead of french fries choose a side salad with low-fat dressing or a baked potato, or add a fruit bowl or a fruit and yogurt option to your meal. Other healthy choices include apple or orange slices, corn on the cob, steamed rice, or baked potato chips.

When choosing an entrée salad, go with grilled chicken, shrimp, or vegetables with fat-free or low-fat dressing on the side, rather than regular salad dressing, which can have 100 to 200 calories per packet. Vinegar or lemon juice are also healthier substitutes for salad dressing. Watch out for high-calorie salads, such as those with deep fried shells or those topped with breaded chicken or other fried toppings. Also skip extras, such as cheese, bacon bits and croutons, which

quickly increase your calorie count. If you forgo the dressing, you can find salads for around 300 calories at most fast food chains.

Opt for grilled items. Fried and breaded foods, such as crispy chicken sandwiches and breaded fish fillets, are high in fat and calories. Select grilled or roasted lean meats – such as turkey or chicken meat, lean ham, or lean roast beef. Look for meat, chicken, and fish that are roasted, grilled, baked, or broiled. Avoid meats that are breaded or fried. If the dish you order comes with a heavy sauce, ask for it on the side and use just a small amount.

Go for whole grains. Select whole-grain breads or bagels. Croissants and biscuits have a lot of fat. People who eat whole grains as part of a healthy diet have a reduced risk of some chronic diseases.

Slow down on sodium. Americans have a taste for salt, but salt plays a role in high blood pressure. Everyone, including kids, should reduce their sodium intake to less than 2,300 milligrams of sodium a day (about 1 tsp of salt). Adults age 51 and older, African Americans of any age, and individuals with high blood pressure, diabetes, or chronic kidney disease should further reduce their sodium intake to 1,500 mg a day.

When eating at a fast food restaurant, pay attention to condiments. Foods like soy sauce, ketchup, pickles, olives, salad dressings, and seasoning packets are high in sodium. Choose low-sodium soy sauce and ketchup. Have a carrot or celery stick instead of olives or pickles. Use only a sprinkling of flavoring packets instead of the entire packet.

Watch what you drink. What you drink is as important as what you eat. Teenagers often drink more carbonated and caffeinated beverages and eat more fast foods. This, along with peer pressure related to eating and exercise, make teenagers particularly vulnerable to becoming sedentary, overweight, and obese. An obese teenager has a greater than 70% risk of becoming an obese adult.

Many beverages are high in calories, contain added sugars and offer little or no nutrients, while others may provide nutrients but too much fat and too many calories. For example, a large regular soda (32 ounces) has about 300 calories. Instead, order diet soda, water, unsweetened iced tea, sparkling water or mineral water. Also, skip the shakes and other ice cream drinks. Large shakes can contain more than 800 calories and all of your saturated fat allotment for the day.

Drink water. This is a better choice over sugary drinks. Regular soda, energy or sports drinks, and other sweet drinks usually contain a lot of added sugar, which provides more calories than needed. Water is usually easy on the wallet. You can save money by drinking water from the tap when eating out. When water just won't do, enjoy the beverage of your choice, but just cut back, avoiding the supersized option.

Don't forget dairy. Many fast food restaurants offer milk as an option for kids' meals, but you can request it! Dairy products provide calcium, vitamin D, potassium, protein, and other nutrients needed for good health throughout life. When you choose milk or milk alternatives, select low-fat or fat-free milk or fortified soymilk. Each type of milk offers the same key nutrients such as calcium, vitamin D, and potassium, but the number of calories are very different. Older children, teens, and adults need 3 cups of milk per day, while children 4 to 8 years old need 2 ½ cups, and children 2 to 3 years old need 2 cups.

The American Heart Association recommends some examples of healthier alternatives to common fast food picks.

| Instead of...          | Try...  |
|------------------------|---|
| Danish                 | Small bagel   |
| Jumbo cheeseburger     | Grilled chicken, sliced meats or even a regular 2 oz. hamburger on a bun with lettuce, tomato and onion |
| Fried chicken or tacos | Grilled chicken or salad bar (but watch out for the high-calorie dressing and ingredients)              |
| French fries           | Baked potato with vegetables or low-fat or fat-free sour cream topping                                  |

|              |   |
|--------------|---|
| Potato chips | Pretzels, baked potato chips  |
| Milkshake    | Juice or low-fat or fat-free milk or a diet soft drink (Limit beverages that are high in calories but low in nutrients, such as soft drinks.) |

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- Make Half Your Grains Whole
- Salt and Sodium
- Make Better Beverage choices
- Enjoy Your Food, But Eat Less

Choose My Plate – Calories: How Many Can I Have?

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## Fast Food Mobile Apps

Cost is a consideration when buying fast food and many these restaurants frequently offer specials, combos, or reduced price menus. Many fast food restaurants have mobile apps and offer deals exclusively through these apps. By consumers simply downloading an app to their devices, they can easily save money at their favorite restaurants. Consumers should be alert though of tactics that create target coupons for their favorite menu items to entice them to order more often and that apps collect user data. Be aware of the privacy policies of each app. Increasingly, loyalty programs and reward points are being used by more fast food mobile apps. These programs often offer exclusive discounts or even free menu items. These fast food deals may last for a limited time, so make sure you check the app's current promotions before you order. Here are some examples of offers that may be available to consumers through apps:

| Restaurant     | Sample Offer   |
|----------------|--|
| Burger King    | \$2 Whopper Wednesdays   |
| Chick-fil-A    | Chick-fil-A One members earn points for purchases.             |
| Domino's Pizza | Any large specialty pizza for \$12.99                          |
| McDonald's     | Free breakfast biscuit with minimum purchase of \$1            |
| Popeye's       | Free regular side, small drink or apple pie with email sign-up |
| Sonic          | Half-off drinks and Slushies for app orders                    |
| Wendy's        | \$2 off any Premium Combo                                      |

These apps often allow consumers to place orders ahead of time and can reduce the amount of time that people have to wait on their food. Consumers must be aware of additional fees that can be added to their meal cost by opting for delivery verses in-person pick-up. Fast food apps can offer their own delivery service in select markets, and many restaurants work with third-party food delivery apps like Postmates, UberEats, DoorDash, and Grubhub. When ordering fast food for delivery through third-party apps, consumers must also be aware of delays that may occur during delivery that could have impacts on the taste and quality of their meals as well as food safety if the food is not transported in a method that keeps it at the ideal temperature.

# **Ground Transportation**




Study Guide

# **GROUND TRANSPORTATION**

2023 - 2025 FCS Consumer Decision Making





*When traveling, every consumer must decide which form of ground transportation to use. Whether traveling for business or personal reasons, there are several modes of transportation to consider. Consumers can use a combination of these modes during trips or even day-to-day if they live in a larger urban area. In addition to the recommended guidelines below, consumers should always try to plan ahead for travel delays/emergencies, stay aware of their surroundings, and utilize common sense.*

### **Rental Vehicle**

Renting a vehicle is a common practice for when consumers need flexible and on-demand transportation during travel. Rental arrangements can be made in advance of travel or on the same day, if vehicles are available. This makes it ideal for larger groups that might require a large van or sports utility vehicle.

Renting a vehicle provides flexibility for consumers who must travel outside of urban areas, where some other modes may not be available. When consumers rent, they are paying for the vehicles, even while not in use. Parking and fuel costs also must be considered when using a rental vehicle. Overnight or multiple hourly parking rates can greatly increase the cost of this transportation mode. Often times, variable vehicle sizes are available to accommodate different group sizes and/or space needs; however, there is no guarantee that a certain make or model of vehicle is available at a given location. These vehicles can be picked up and returned to any of a rental company's locations (airports or freestanding stores), but extra fees may apply if the vehicle is returned to a location other than the original rental site.

In addition to location-based fees, consumers can also face charges for navigation equipment, going out of state in the vehicle, mileage overages, roadside assistance services, toll roads, supplemental insurance coverage, refueling, early/late returns, additional driver(s), and damage to the vehicle. Most rental companies will only rent to consumers age 21 and older, and many charge premium fees to drivers who are between 21-24 years old.



## Ride Sharing

While the concept of ride sharing is not new, the latest revolution in this mode of transportation happened because of technological advancements and the increased availability of smart phones that support electronic payments and serve as Global Positioning System (GPS) receivers. Uber and Lyft have emerged as two of the most popular digital ridesharing platforms amongst consumers. Unlike vehicle rentals, this mode of transportation is only paid for on a “per use” basis and there are no additional fuel or parking charges directly to the consumer.

Even though the use of digital ridesharing platforms over the years has expanded, the services are still not readily available in many rural areas. This mode of transportation is best for solo travelers or small groups in larger urban areas. However, many ride sharing companies offer varying sizes of vehicles to accommodate up to four to six passengers.

***“One (1) in three (3) parents say their 18-year-old has used a ride sharing services, either alone or with another teen.”***

Michigan State University Study

Ride sharing services are generally available twenty-four hours a day, seven days a week, but consumers may have to wait on a ride if there is a high demand for drivers. Some companies allow consumers to schedule pick-ups at specified times and locations using a mobile application, but most consumers use the services in a less planned manner.

Consumers should carefully pay attention to an industry practice called “surge pricing” which can increase the price of their rides during high-demand times or in busy areas (after a sporting event, concert, etc.) There is no additional charge to consumers under the age of 25, but some younger consumers may be limited in their ability to use ridesharing. It requires the use of a smart device with data connection, a mobile application, and a form of pre-payment authorization (credit card, debit card, and/or company-specific gift card) just for a ride pick-up.



## Ride Sharing *continued*

Ride sharing comes with its own set of concerns. Insurance liability is one as personal vehicles are used to transport customers. Personal safety is another. According to the C.S. Mott Children's Hospital National Poll on Children's Health at the University of Michigan, one (1) in three (3) parents say their 18-year-old has used a ride sharing service, either alone or with another teen. And despite rules prohibiting unaccompanied minors from getting a lift through such services, one in eight parents (13 percent) reported their teenager -- 14-17 -- had used one. Parents' top concerns involved driving safety and risk of sexual assault by a driver.

Specifically, the concerns were that the driver would not be driving safely,

*“Despite rules prohibiting unaccompanied minors from getting a lift through ride share services, 13% of parents reported their teenager (ages 14 to 17) had used one.”*

Michigan State University Study

with three in four parents polled worried about issues such as speeding or a driver being distracted by a phone. Over half of parents were also worried about the ride share driver being impaired from alcohol or drugs while half were concerned that their teen would not wear a seat belt.

Two thirds of parents also shared concerns that a ride share driver might sexually assault their teen. This concern was more common among parents for their

daughters than for their sons (79 percent versus 55 percent) and for teens aged 14-17 compared with 18-year-olds (69 percent versus 58 percent.)



## **Metered Taxi Cab**

Taxi services have been a part of the ground transportation lineup since the early days of automobiles. Depending on the city, this mode of service can be accessed by calling a taxi company, using a mobile application, using a taxi cab stand at a hotel or airport, and by simply waving one down on the street.

Taxis are usually subject to state and/or local regulations, including but not limited to metered fare restrictions. These standardized fare rates allow for easier budgeting by consumers because they can plan for charges based on initial rates, distance, and any location surcharges. Unlike ride sharing companies, taxi companies allow cash payments instead of only electronic payments. This mode of transportation is best for solo travelers or small groups. While most taxi cabs are smaller passenger cars or vans, taxi companies in some locations may offer varying sizes of vehicles to accommodate more than four passengers.

Taxi cabs are only paid for on a “per use” basis with no extra fuel or parking charges to the consumer. There are no additional charges for customers under the age of 25. They are often available 24 hours a day, seven days a week.

## **Shuttle Services**

A shuttle is a mode of transportation, often in a 12-passenger or larger vehicle, used to carry groups of passengers from one destination to another. For consumers traveling alone, this could mean less privacy since several other consumers will be sharing the same vehicle. For consumers traveling in groups, shuttles can offer an inexpensive alternative to renting a larger vehicle when going to popular destinations (downtown areas, theme parks, etc.).

These hired shuttles can offer fixed rates per seat/per person in the vehicle and generally must be arranged prior to the date of travel. Both solo and group travelers who are staying at a hotel in a city should check with local hotels about complimentary shuttle service to/from the airport and destinations within a certain distance from the hotel. Even though it is a complimentary service to hotel guests, consumers who opt for this will incur the costs of the hotel room. One major drawback to both hired and complimentary shuttles is that there are usually limits due to hours of service, number of available shuttles,



## **Shuttle Services *continued***

and distance of destinations. Although there are no direct parking or fuel fees for consumers, this is the least flexible ground transportation option.

## **Public Transportation**

Public transportation includes, but is not limited to, buses, ferries, trains, trolleys, trams, and rapid public transit systems. The consumer's cost for this mode of transportation is often lower other ground transportation options. Travel can be incentivized through discounted or free fares for certain groups of consumers such as students, senior citizens, or persons with disabilities.

By using fixed routes with multiple access points, public transportation makes it easy for small or large groups of consumers to travel between destinations. There may be multiple payment options: online, mobile application, credit card, debit card, multi-trip passes, and cash. There are no additional fuel costs to the consumer, but fares may vary depending on distance traveled or time of day. Limited hours of service may exist on weekends and holidays. Alternate routes due to weather, and delays/closures due to maintenance issues in part of the transit system are possible. Unlike other forms of ground transportation, this is generally not always "door-to-door" service. Consumers may have to rely on navigating routes based on transit maps, time schedules, and connections to another bus, train, etc.

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# **Wearable Technology**

# Wearable Technology



2023 Revised Edition By:  
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## WHAT IS WEARABLE TECHNOLOGY?



Wearable technology describes any electronic device that consumers can wear on their body. “Wearables” have currently grown to include items ranging from smart watches to medical technology to jewelry to clothing.

Wearables can meet a variety of needs for consumers today and represent one of the largest growth areas for consumer electronics.

## HOW DOES WEARABLE TECHNOLOGY WORK?

Wearable gear integrates the form and functions of multiple devices. Most of these work in a similar manner but some in a variety of options. Multiple sensors capture changes the wearer's position, temperature, etc. and translate them into data. Then, microprocessors extract, transform, and load data to a transmittable format. Finally, transmitters wirelessly send data to a local device or cloud storage for further processing and reporting.





# GENERAL FACTORS TO CONSIDER BEFORE PURCHASING WEARABLE TECHNOLOGY

With so many brands offerings comparable wearable devices, choosing the right one takes careful research and planning. There are features to compare, different prices to consider, and product reviews to check. Before purchasing, you should consider the following factors:

## PURPOSE

Before you purchase any wearable tech, it's important to consider why you want it. Do you want an easier way to track your health, fitness or sleep habits? Do you want a device that can help you stay safe or keep you in touch with others? Knowing the qualities that you must have from your purchase will help you narrow down the number of choices.

## BUDGET

With more companies offering smart wearables, there are affordable and low-cost devices as well as new and innovative products available. Carefully compare the features you need in relation to the product price in order to get the best product that is within your budget.

## CAPABILITIES

Most smart wearable devices come with basic activity and biometric tracking capabilities. However, other capabilities, such as heart rate tracking, movement sensing, GPS tracking, and blood pressure monitoring, are less universal. Some devices offer both Wi-Fi® and Bluetooth® connectivity, while some only offer one or the other. Wearable devices can be water-resistant, waterproof, or swim proof. The list of capabilities varies by device type. Knowing which ones are ideal for your activities and needs is critical to your purchase decision.

## USER EXPERIENCE

If a wearable device is uncomfortable to wear, the potential health benefits you can enjoy are undermined. Likewise, if the wearable device's user interface is frustrating or hard to navigate, you may stop using your device altogether. To find out this information, check out consumer reviews of the product.

## BATTERY LIFE

The battery life of wearables varies greatly ranging from days, weeks, or even months on a single charge. In some devices, longer battery life comes with tradeoffs including limited capabilities. Consumers should consider the length of battery life, the type of charger needed, amount of time needed to charge the device and emergency communication capability with minimal or empty charge. Wearables should also be energy-efficient.

## PERSONAL STYLE

For some people, clunky devices or headsets are the image that comes to mind when they think about wearable technology. While many brands specialize in offering affordable devices that prioritize practicality over looks, some companies do pay more attention to the style and fashion aspects of wearable technology. Today, wearable consumers have many choices, with tech devices that offer state-of-the-art technology along with fashion.

## COMPATIBILITY

Consider if your new wearable will take the place of any of your existing devices and how it integrates and works with other devices you already own. Even if it is lightweight and convenient, another wearable is another device to carry and keep track of. Considering how your new wearable affects your existing network of devices results in better planning and results in a better buying decision.

## PRODUCT REVIEWS

Before you make the final decision on any device, reading reviews assures about its reliability and effectiveness, as well as answers any last-minute questions you might have. Product reviews from tech experts are helpful to learn more about the product's capabilities and specifications, while consumer reviews can reveal any potential issues or annoyances with the user experience. Reviews are especially important to consider if you are buying from a less reputable, new, or unknown brand to be certain the advertised experience is delivered.

## WHAT ARE EXAMPLES OF WEARABLE TECHNOLOGY?

Here are the most common current types of wearable technology:

- **Fitness trackers:** Smart wearable that can assist in developing healthier habits by giving a pat on your back. Monitors your heart rates and your movements and keeps track of your calorie burns and step counts and more.
- **Smart watches:** Connected watches that let the wearer answer phone calls, track fitness, track sleep, and much more.
- **Smart jewelry:** Tech jewelry including rings, bracelets, pins, charms, and necklaces that offer the functions of a smart watch or various special functions such as monitoring stress levels.
- **Advanced medical tech:** Includes a wide range of devices including wearable electrocardiograms (ECGs) that send your heart rhythm to your cardiologist, glucose monitors, and other lifesaving on-body technology.
- **Head-Mounted Displays (HMDs) and Smart Glasses:** Including VR headsets and other displays that create a more immersive gaming or web-surfing experience and wearable devices that utilize augmented reality to add digital displays and quick actions including video capability to glasses.
- **Action cameras:** Small, rugged, waterproof digital cameras designed for capturing immersive action shots that allow you to jump right in and become part of the adventure.
- **Wireless Headphones or Earbuds:** High-tech over-the-ear or in-ear devices that do more than transmit audio and sync up with your phone, tablet, computer, tv or other Bluetooth-enabled devices.

While there are similar criteria to consider across all types of wearable technology, each category has its own set of features and functionalities for consumers to know about.

# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?

## FITNESS TRACKERS

Fitness trackers are some of the original technology in the industry. The earliest trackers were pedometers which had the main feature of only tracking movements and steps. Pedometers have historically been the most widely available and mass-produced type of wearable technology.

Fitness tracking wristbands are a more modern and complex device that built upon the success of pedometers. They measure and record data related to the wearer's physical state and performance, such as heart rate, speed and distance traveled, sleep patterns, and more. Consider any extra costs for internet, location, etc., and ease of use of a mobile app and syncing.

**Features:** detailed understanding of workout sessions; tracks heart rate, sleep cycle, blood oxygen saturation, and calories burned; detailed reviews of particular exercises or sports; hydration monitor; steps; distance traveled; GPS; compass; accelerometer; temperature; media player; and more.

### Consider:

- o Uses
- o How to access/share data
- o Durability
- o Accessories
- o Your lifestyle
- o Cost
- o Charging method
- o Water resistance



# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?

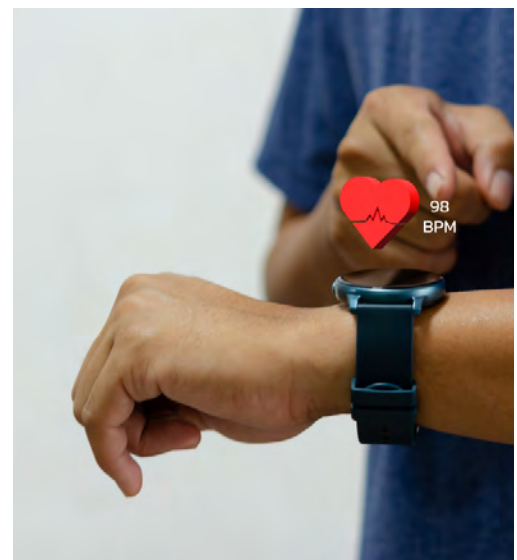
## SMART WATCHES

Smart watches primarily tell time while also displaying information supplied by the wearer's smartphone, such as email, social media notifications, SMS/MMS, call info, and media controls. Some smart watches also make and receive calls, take pictures, include games, allow for contactless payments, and provide some of the features of a fitness tracker. More advanced smart watches pair with other wearables (like wireless headphones) without even requiring the use of a smartphone or other primary device.

Features: Showing time, tracking weather data, fitness tracking, games, media player, compass, GPS, speaker, camera, phone, altimeter, accelerometer, barometer, and endless apps to make this a true mini-phone or computer (with proper connectivity).

Consider:

- o Uses
- o How to access/share data
- o Durability and Water resistance
- o Accessories
- o Your lifestyle
- o Cost
- o Need for separate cellular plan?
- o Ability to customize interface
- o Charging method



# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?

## SMART JEWELRY

**Features:** safety signals and alerts, calorie burn, distance traveled, active minutes, sleep duration and quality, guided meditation, stress resistance monitoring, medical monitoring, location sharing and more.

**Consider:**

- o Cost
- o Does the jewelry item need to be "smart"?
- o Eco-friendly and recyclable product material
- o Non-corrosive material
- o Easy to sync app
- o Easily operable app
- o Comfortable to wear
- o Personal style of wearer
- o Water resistance



# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?



## ADVANCED MEDICAL TECHNOLOGY

**Features:** wearable electrocardiograms (ECGs) that send your heart rhythm to your cardiologist; temperature sensors; blood pressure monitors; biosensors; physical movement tracking; glucose level monitoring; Ultraviolet (UV) light exposure, and much more.

### Consider:

- o Cost
- o Health and medical needs in consultation with your physician/specialist
- o Health and medical history
- o How to access/share data
- o Easily operable app?
- o Comfortable to wear
- o Size/weight
- o Water resistance
- o Durability
- o Need for additional accessories?

# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?



## HEAD-MOUNTED DISPLAYS (HMDS) AND SMART GLASSES

**Features:** Equipped with a small display or projection technology embedded into eyeglasses or sunglasses or mounted on a hat or helmet; superimposes images on a real-world view without blocking the user's vision; can view output of devices like drones in real-time; include cameras and headphones; can project a computer screen into the corner of your eye; can be prescription glasses; other AR features

### Consider:

- o Cost
- o Uses and practicality
- o Comfortable to wear
- o Size/weight
- o Water resistance
- o Durability
- o Charging method
- o Portability
- o Need for a subscription to access features?



# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?

## ACTION CAMERAS

Rugged action cameras can mount to a helmet, chest harness, tripod, or sporting equipment, and capture video under conditions that most electronic devices are not designed to handle. As technologies continue to develop, some of the features originally designed for action cameras (water resistance, added accessories to enhance the user experience, etc.) are becoming standard for other wearables and smart devices. Action cameras can be used to record video on family vacations, hikes with friends, or underwater wildlife in their natural environment.

**Features:** Ability to wear and/or mount

### Consider:

- o Uses
- o Internal or external memory
- o How to access/share footage
- o Durability
- o Video quality and frame rates
- o Accessories
- o Editing tools and connectivity
- o Your lifestyle
- o Camera features
- o Cost
- o Water resistance



# WHAT SHOULD YOU LOOK FOR WHEN PURCHASING WEARABLE TECHNOLOGY?

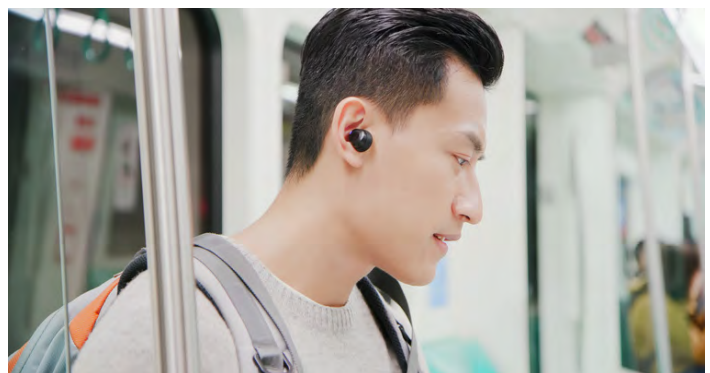
## WIRELESS HEADPHONES OR EARBUDS

Wireless headphones were already on the market before the term “wearables” became popular; however, they are still a large part of the wearables industry, sometimes referred to as “hearables.” Wearable headphones rely on Bluetooth technology to connect to consumer’s devices and are commonly available in two styles: in-ear (canalphones, canalbuds, and earbuds) or over-the-ear. Some wireless headphones also include internal microphones. The microphones allow consumers to use the wearables to communicate with others. By using wearable headphones with an internal microphone, consumers can conveniently control voice-activated devices and meet with others on professional video conferences on compatible devices.

**Features:** Use Bluetooth technology to connect to consumer’s devices; commonly available in two styles: in-ear (canalphones, canalbuds, and earbuds) or over-the-ear; some include internal microphones; sound quality; long battery life; noise cancellation; etc.

### Consider:

- o Design
- o Comfort
- o Uses / needs
- o Sound quality
- o Cost
- o Durability
- o Water resistance



## WHAT ARE RISKS OF WEARABLES?

Consumers under eighteen (18) years old should use wearables under adult supervision. There are three main categories of risks that wearable tech companies and consumers face:

- **Cyber security:** The data transmitted via wearables must be properly secured; otherwise, companies are at risk of class action lawsuits, costly fines, and injury to their reputation. Consumers should make a point to review company privacy policies and stay educated about how their data could be used. Consumers who want to upgrade their wearables should first be certain to remove all personal information from their existing device. Consider recycling these items to prevent e-waste, donating them or reselling them.
- **Bodily injury risks:** Malfunctioning devices can cause injuries, illnesses, and even death to wearers or patients. Manufacturers of defective devices may even face product liability lawsuits.
- **Technology errors and omissions risks:** Companies can be held liable for economic losses from the failure of their devices to work as intended. Some wearable technology may require continual software updates to work at optimal levels.

## THE FUTURE FOR WEARABLES

The future for wearables is very bright. Every day brings new advances in technology resulting in exciting, new wearables in the marketplace.

Use these tips to help you make the best consumer decision when purchasing wearable technology that is currently on the market and to think critically about future products.