

Activewear

# Activewear Study Guide

Sales of activewear are at an all-time high. According to the market research firm NPD Group, activewear sales generated \$35 billion and made up nearly 17% of the entire American clothing market in 2014. By 2018, that market share increased to 24%.

Activewear is clothing worn for sport or physical exercise and uses the latest in performance fabrics and technology to ensure that apparel can stand up to the intense demands of sporting disciplines like running, cycling, swimming, and gym-work. Activewear includes tops, shorts, tights, socks, jackets and so much more.

Brand-name activewear, including Under Armour, 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. Most activewear is made from durable fabrics that can be laundered frequently and still provide long wear.

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. When choosing activewear, consider the fabric content. Choose activewear that contains cotton, cotton blends and moisture wicking fabrics that will assist with moisture absorbency, ventilation, and comfort.

The right activewear can enhance your training and performance. Fabric and fit are probably the most important factors when choosing activewear.

## 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.

### Wicking:

Wicking fabrics are breathable synthetic fabrics that provide moisture control for an **athlete's skin during a mid to high intensity workout. In essence, 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 a number of products marketed for their wicking. Many of these products are used as a blend with each other or with cotton. Additionally, these products may be branded under a variety of names such as Dri-Fit, CoolMax, Vapor and Climalite.

- Polyester – polyester is the workhorse of the workout fabrics and is the one you **see on labels most often. Basically plastic clothing, it's durable**, wrinkle-resistant, lightweight, breathable and non-absorbent.
- Spandex – Also known as elastane and by the brand name Lycra, spandex puts the stretch in workout wear. The synthetic fabric can expand to nearly 600 percent of its size, offers an unrestricted range of motion, and then snaps back in place. Spandex is an anagram for expands.
- Emerging Performance Fabrics – The next big thing in activewear is products that provide even more benefits. Benefits include improved wicking, temperature control, UV protection and anti-odor properties. Bamboo is an example of a new, emerging performance fabric. These products may also be more expensive.

#### Cotton:

Cotton can also 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 form 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 that it is the right activewear for you and that it meets the needs you desire.

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

- Texas 4-H Consumer Decision Making Categories and Descriptions Study Guide 2017-2018
- Choose Activewear for Comfort and Safety Factsheet – North Dakota State University, written by Linda Manikowske, Ph.D.

# Backpacks

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## Backpacks

There are many types of backpacks for many different types of people. Each backpack has a different purpose for each use such as student, hikers, professionals and travelers.

### **Definition of Backpacks**

Backpacks are described as two straps that go over the shoulder to carry items in it and often have many compartments. The shoulder strap carries very little of the weight of the backpack. The load is mainly diverted to padded hip belts. Hip belts transfer the weight of the backpack from the shoulder to the hips, allowing to carry most of the load with the body's biggest muscles—the legs. To be effective, the pack's hip belt must be long enough to wrap around the front of the hip bones, not up at the waist.

Backpacks are also called: rucksack, knapsack, packsack, pack, Haversack or Bergen.

Haversack is a small, strong bag carried on the back or the shoulder, usually with only one strap originally made of canvas.

Bergen pack is a type of rucksack that is used by the military (tactical backpack). Used to hold heavy loads and more gear than a regular backpack.

Rucksack is a large, rugged backpack with pockets and belts to hold heavy loads and more gear than a backpack. Rucksacks can also have hip belts and often chest belts as well.

Knapsack a bag with two shoulder straps, carried on the back, and typically made of canvas or other weatherproof material. Knapsack comes from the German word "knappen" which means "to bite" some experts believe that the name evolved from the fact that soldiers carried food in the knapsack.

There are many types of backpack to choose from so before purchasing consider the purpose of the backpack.

### **Purpose**

It is important to consider the major purpose for which the backpack will be used when choosing a backpack. Look for the features that are important for the particular use you have in mind. Backpacks are designed with different features to serve different purposes. A hiking backpack might not be a good one to use for cycling and a traveling backpack may not be appropriate to use as an overnight camping backpack.

If you have no unique purpose in mind, be sure to select one that has enough features to serve your range of purposes.

Here are backpack characteristics to look at before purchasing:

Size & Versatility

Materials

Features:

- Safety Features
- Gadgets
- Anti-Theft

Comfort

## **Size & Versatility**

### **Size**

Look for a backpack that looks good but accommodates the items with integrity and durability.

Overnight backpacks are designed to be heavier than a day backpack.

Consider what are you going to use the backpack for –day-to-day or for weekend camping or traveling. What do you carry on a day-to-day, what are the extra-curricular activities that you are involved in and how do these things effect what type of backpack to choose? Can the same backpack be use for work and for travel or for a hike?

Select a size that will serve both purposes.

Will the backpack be used for as a carry-on luggage? Be sure it complies with airline restrictions.

### **Versatility**

Consider what the backpack is going to be used for. Do you want an old-style rucksack to throw all your stuff inside or do you want a padded area for the laptop, pocket for a water bottle and a compartment for the cell phone?

### **Materials**

There is a great variety of designs and colors for backpacks.

Consider if the backpack needs to be waterproof, is the materials easy to clean, and how durable is the material.

Is the stitching sloppy or are there loose threads?

Are there raw, exposed fabric edges, which can fray and weaken the fabric and make the zipper get stuck?

Does the zipper have a covering of fabric flaps? Zippers not protect from the weather can allow water to seep in.

## **Features**

**Cushioned interior compartments**—properly cushioned padding to protect the interior or main compartment that carries the laptop. This cushioned padding protects the devices from minor shocks and bumps.

**Extra pockets** –equipped with many pockets to ensure that the laptop or device owner can carry associated accessories as well as other devices. These pockets also serve to carry other items such as extra connection cables, converters, power bank, external hard drive, etc. These variety of pockets helps to organization items for quick and easy accessibility.

**Durable hardware and closure systems** –zippers, straps, and locks are very important for gadget backpacks.

## Safety Features

Reflectors or reflective fabrics on the pack to add visibility for travel at dusk or dawn.

## Anti-theft backpacks

**Slash-proof fabric** – eXomesh slashguard protect belongings from someone trying to cut open with knife

**Roobar anti-theft anchor lock**— Allows multiple compartments to be locked together. Secure the backpack to a pole and no one compartment would be able to detach from the pole.

**RFID-Safe Fabric**— Classified as a RFID backpack. The fabric obstructs all transmission between 10 MHz to 3 GHz and also protects from any tech-savvy thieves.

**Smart zippers** –sip sliders that are meant to overlap so that you can secure them with a padlock.

Dedicated laptop compartment inside as well as a dedicated tablet compartment

Water Resistant & Anti-scratch

## **Gadget packs**

- Carrying gadgets securely and have provisions for charging them
- Convenient storage for all items –compartments for gadgets
- Provide storage for delicate highly essential products

## **Types of gadget backpacks**

**Sling** –preferred for carrying laptops—full protection and safe from dust, shock, etc. They have a cushion padding to protect the laptop from minor bumps and shocks

**Regular Backpacks for gadgets** –equipped with more padding and have extra pockets for storage of other items such as cables, power banks, smartphones, etc.

**Case Sliders** –popular with laptop owners. Easy slide and store mechanism and have either an open flap or zipper closure. These backpacks do not have the required amount of cushioning to protect the devices and there are no handles. Suited for short-distance movement.

## **Comfort**

One size does not fit all. Be sure that the bottom of the backpack aligns with the curve of the lower back, and not more than four inches below the waistline. The backpack's shoulder strap anchor points should also rest one to two inches below the top of the shoulders.

Straps should be wide, padded and contour that distribute the pack's load over a large area of the shoulder, an abdominal strap to distribute the pack's weight evenly on the back, waist, and hips.

The American Occupational Therapy Association recommends carrying no more than 15 percent of your body weight in a backpack.

# Brewing Coffee



## Coffee Makers for Home Use

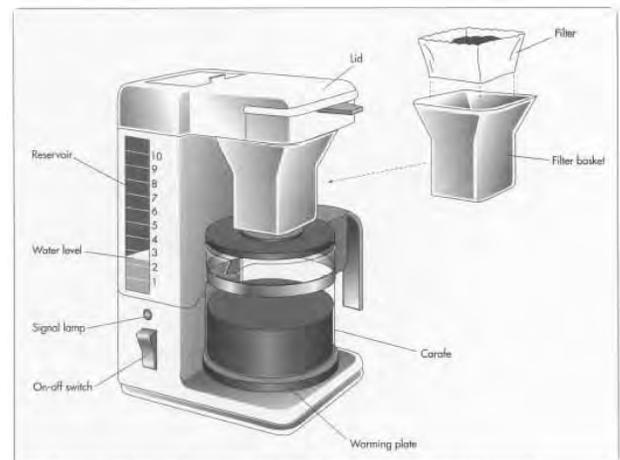
For many people, they cannot start their day until they have had their first cup of piping hot coffee. There are tons of trendy ways to brew coffee nowadays, from espresso makers to cold brew, but coffee drinkers know that an automatic drip coffee maker or the single-serve pod coffee maker are the most convenient choices. Drip coffee makers are the most common household appliances for brewing coffee at home, which can range from single serve to 12 cup carafes. Single-serve pod coffee makers are also finding their way to households with the need for a small amount of coffee.

Drip coffee makers can come in a variety of shapes and sizes, but when you hear someone talk about making a pot of coffee (e.g., several cups at once), they are usually going to be using a coffee brewer. Their simplicity makes them easy to use, durable and capable of quenching a caffeine thirst for a large family of coffee drinkers, or the college student studying for exams.

### Parts of the Drip Coffee Maker

There is a reservoir that holds the water when you pour it into the pot at the start of the coffee-making cycle. Then the water flows through the one-way valve, into the aluminum tube in the heating element, and then partially up through the tube.

In the shower head, water arrives here from the hot-water tube and is sprayed over the coffee grounds. In some coffee makers, the water comes out of the hose onto a perforated plastic disc, called the drip area, and simply falls through the holes into the coffee grounds. The hot water flows through the ground coffee beans, picking up their oil essence on the way down into the coffee pot. This coffee oil, released during the roasting process, is called *caffeol*.



In an automatic drip coffee maker, a measured amount of cold water is poured into a reservoir. Inside the reservoir, a heating element heats the water to boiling. The steam rises through a tube and condenses. The condensed water is distributed over the ground coffee in the filter through a device like a shower head. The water flows through the filter, infusing with the coffee, and falls into a

<http://www.madehow.com/Volume-3/Automatic-Drip-Coffee-Maker.html>

The filter basket holds the filter and the desired amount of coffee grounds. At the bottom of the filter basket there is a hole, which allows the water to drain through into the carafe.

The carafe, which is usually glass or insulated, holds the coffee on the warmer to keep the coffee at a desired temperature.

On the base of the coffee maker is the heating element. This component is comprised of an aluminum extrusion with two parts: a resistive heating element and a tube for water to flow through. When you turn on the switch, the resistive heating element starts heating the aluminum tube and eventually the water in the tube boils.

The resistive heating element and the aluminum tube heat the water. The heating element has two jobs:

- When you first put the water in the coffee maker, the heating element heats it.
- Once the coffee is made, the heating element keeps the coffee warm.

Benefits:

- Extremely easy to use
- Affordable to buy and use on a daily basis
- Very convenient, as it makes a whole pot of coffee at once
- Lots of options for different models, shapes, sizes and brands
- Offers easy flexibility in brewing the best-tasting coffee for your taste buds

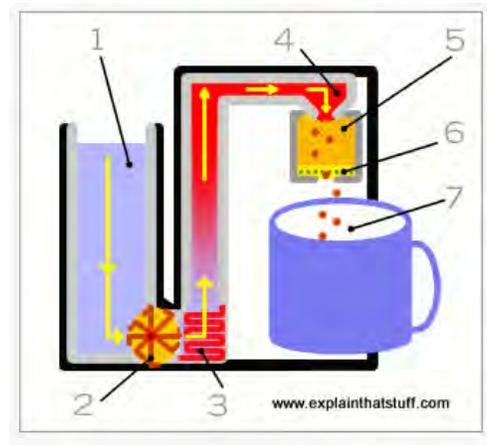
To Keep in Mind:

- Only makes basic coffee. Nothing fancy, and likely will not be satisfactory for those that prefer espresso drinks.
- Makes a lot at once. While a benefit, there may be instances where you end up wasting a lot of coffee.

Single-serve pod coffee machines have gained popularity due to their efficiency and ease in using. **They rely on grounds held inside “pods” or “capsules,” which are usually produced by the same company that makes the machine.** These force water through a small packet, either a hard-shelled capsule (also called pods) or a soft packet resembling a tea bag. Some brewers accept an adapter that takes your favorite loose grounds. Pod machines are more expensive to operate than other types because you need to buy special coffee refills. With plastic pods, there is also a lot of unrecyclable waste.

Parts of the single-serve pod coffee machine:

1. The water reservoir is what holds the water when you pour it into the pot at the start of the coffee-making cycle.
2. The pump at the bottom of the machine sucks the water and pumps it through the machine.
3. The water heats up to the perfect temperature as it flows up past the heating element.
4. The water is pumped through a narrow needle sprayer to increase its pressure.
5. The hot, high-pressure water pumps through the ground coffee in the pod, releasing the flavor.
6. A piece of filter paper at the bottom of the pod stops the coffee grounds from falling through into the coffee.
7. Coffee drips through into your personal coffee cup.



Benefits:

- Extremely easy to use and clean
- This type of coffee maker is usually very affordable
- Coffee pods come in many flavors
- Less waste of coffee if you only want to drink one cup at a time
- Great for offices, as co-workers can brew coffee precisely to their taste
- Will also brew tea or other hot beverages (cider pods, hot chocolate pods, etc.)

To Keep in Mind:

- Buying individual pods will get expensive over time
- Not great for the environment, because constant use and disposal of K-cups will produce a lot of plastic trash over time

Things to Ponder Over a Cup of Coffee

How often do you consume coffee during a day?

If you space your coffee drinking out throughout the day, consider buying a model with an insulated mug or carafe. These keep coffee hot and fresh tasting for hours.

Number of cups?

If one cup is enough to jump-start your day, choose a one or two-cup drip model, or a single-serve machine. Need more? Choose a larger automatic drip — or one of the specialty machines, such as an electric French press. Most large models brew 10 to 12 cups, although typically a “cup” is **really only** five to six ounces, not eight.

Consider the carafe

All of the drip machines come with either insulated carafes or glass pots with built-in warmers. Both have pros and cons. Glass pots are typically easier to clean because they tend to have wider mouths, and the lack of internal insulation means that glass pots will have a greater interior volume relative to their exterior volume. Basically, **it’s easier to get your hand or dish sponge** inside. On the other hand, glass pots are more fragile and have to be heated from a base plate. Those base plates run the risk of raising the temperature of the coffee, which can make coffee taste burnt.

What features do you need?

Fundamentally, all coffee machines are the same. Determine what additional features that are desired. For some people, filling the coffee machine and turning it on is too much to handle in the morning. If that describes you, consider a unit with programming that can automatically brew each morning. (You set everything up the night before.) For the forgetful people who rush out of the house in the morning, an automatic shutoff feature is also important. Also, some people prefer iced coffee or cold brew over hot coffee, especially in the summer months.

Programmable settings:

Do you want to just set your coffee up to brew and leave it? As we previously mentioned, some coffee makers will let you determine the settings in advance based on what you like and automate it for future use. From the amount of coffee brewed to the time in which it gets brewed, programmable settings can come in handy for a wide variety of situations.

Built-in grinder:

Do you prefer your coffee grounds fresh? Depending on who you ask, freshly ground beans produce a better tasting cup of coffee. Having a grinder ensures that you are always using the freshest ground beans. Of course, you can always buy a coffee grinder separately, but having one that is built into your coffee maker adds convenience and helps you save counter space.

#### Automatic shutoff:

We have all experienced that early morning rush and forgot something important while running out of the house. With the auto-shutoff feature, you can ensure that your coffee pot gets turned off and is not running all day long. This allows you to focus on what is truly important for your day, all while you have a cup of coffee in hand.

#### Multiple warmers:

For offices or commercial settings where making multiple pots at a time is often convenient, a coffee maker that has multiple warmers to keep each pot hot is worth considering.

#### Water filter:

Some high-end coffee makers will come with a water filter to help ensure that the flavor comes out just right. This is one of the more popular features that people consider when it comes to buying a coffee maker.

### Size and height considerations

Factor in counter space when choosing your model. If you plan to put your coffee maker on your kitchen countertop, be sure to measure the height available in your space. Many of the coffee makers require additional space above them to allow room for pouring water into the reservoir. Another factor is how much space are you willing to dedicate to a coffee machine.

### Temperature feature

The ideal brewing temperature for a pot of coffee is 196°F to 205°F, therefore **if you're really into** (good-tasting) coffee, you will want to make sure that you buy a machine that can brew at high heat. Hint: Most top-of-the-line machines will list their brewing temps on the box or online.

### Price consideration

When it comes to price, there is a notable range of several hundred dollars between the most and least expensive models.

## References:

- Automatic Drip Coffee Maker. (n.d.). Retrieved from <http://www.madehow.com/Volume-3/Automatic-Drip-Coffee-Maker.html>.
- Coffee Maker Buying Guide. (n.d.). Retrieved from <https://www.consumerreports.org/cro/coffee-makers/buying-guide/index.htm>.
- Gold, B., & Papantoniou, N. (2020, January 7). 10 Best Coffee Makers, According to Kitchen Appliance Pros. Retrieved from <https://www.goodhousekeeping.com/appliances/coffee-maker-reviews/g2083/top-rated-coffeemakers/>.
- Hicks, K., Lannister, R., Lannister, R., Cortez, E., Cortez, E., Webb, D., ... Jakub. (2017, November 1). How to Choose the Best Coffee Maker :: Buyer's Guide. Retrieved from <https://learn.compactappliance.com/coffee-makers-buyers-guide/>.
- Lecky, J. L. P., Reviews.com, & Reviews.com. (n.d.). The Best Coffee Makers. Retrieved from <https://www.reviews.com/home/kitchen-and-dining/best-coffee-maker/>.
- The Best Drip Coffee Maker of 2020. (2019, August 28). Retrieved from <https://www.yourbestdigs.com/reviews/best-drip-coffee-maker/>.
- Toothman, J. (2006, November 29). How Coffee Makers Work. Retrieved from <https://home.howstuffworks.com/coffee-maker4.htm>.
- Wroclawski, D. (n.d.). Best Pod Coffee Makers From Consumer Reports' Tests. Retrieved from <https://www.consumerreports.org/single-serve-coffee-makers/best-pod-coffee-makers/>.
- Wroclawski, D. (n.d.). The Ultimate Guide to Recycling K-Cups, Nespresso Capsules, and Other Coffee Pods. Retrieved from <https://www.consumerreports.org/recycling/recycle-k-cups-nespresso-capsules-coffee-pods/>.

# Carry-On Luggage

## Carry-on Luggage and Personal Item Bags

Heading out on a trip? Looking to purchase luggage that meets all airline guidelines? There are lots of items to choose from. With high demands on luggage comes higher competition, which means innovation, creativity and lots of choices. To ensure that you get from point A to point B smoothly, choosing the best carry-on luggage will make travel less stressful. Be prepared by knowing the airline guidelines and be knowledgeable of available options.

Carry-on bags are convenient for air travel because it avoids the cost and hassle of checking a bag. The golden rule is that the bag must either fit under the seat or in the overhead bin. For domestic flights, your carry-on can be no larger than 22 inches high by 14 inches wide by 9 inches deep. (The maximum linear size is 45 inches, but none of the dimensions can exceed the measurements above.)

Measure the height of your luggage from the floor to the top of the handle in its lowered position — but even rule-abiding luggage is not a guarantee that your bags will not **be relegated to the plane's underbelly, because the flight crew can impose further restrictions even after boarding has begun.** Most airlines do not have a weight limit for carry-on luggage, and if they do most do not actually weigh carry-on bags. The exception is for small commuter planes.



Figure 1. Airline carry-on rules  
Consumerreports.com



Figure 2 Sample Personal Item  
<https://thewirecutter.com/guides/best-personal-item-carry-ons/>

Personal item bags must fit underneath the seat in front of you on the plane. This type of bag can include a backpack, laptop bag, tote bag, brief case or camera bag. But to get the most out your personal item, it is beneficial to buy a bag specifically for this purpose. For U.S. domestic flights, the measurement rules range from 18 X 8 X 14 inches to 17 X 9 X 10 inches, but there is no standard size for these bags. The size also varies based on the location of the seat on the same aircraft. A growing number of airlines offer a lowest-class base-price that only includes one personal item. A few items that are important when looking to purchase a personal item bag for air travel includes durability, organization and multiple carrying options.

When purchasing a new carry-on or personal item, it would be beneficial to look at one of the sites that includes the sizes and limits for multiple airlines. One such site is:  
<https://www.smartertravel.com/personal-item-vs-carry-on/>.

### Comparing Transportation Security Administration (TSA) vs. the Airlines

The airline will determine how large or heavy bags may be to be able to board a flight. TSA does not enforce any rules regarding luggage size and weight; therefore, just because it makes it through security does not mean it will make it on the plane. The job of TSA is to screen the contents of the luggage, not to approve or reject the luggage itself. All checked bags are subject to screening and TSA agent may be required to cut off any non-TSA-approved locks. TSA has collaborated with many companies to make travel locks that can be opened by a TSA master key. At TSA security check points, passengers are required to remove any electronic device larger than a cellphone from their carry-on. TSA encourages travelers to pack their electronics in

security-checkpoint-friendly bags or cases. These bags have dedicated compartments that hold laptops or tablets, which zip open to lay flat on the X-ray conveyor belt. These compartments do not have metal zippers or pockets that block the **scanner's** view of the items within.

## The Anatomy of a Bag

Every bag comes with its own pros and cons. Take time prior to purchasing a bag to determine what your needs are and find the best travel bag that meets those needs.

### Soft-Sided or Hard-Sided

Soft-Sided luggage is usually made of a woven nylon fabric, such as Cordura or ballistic nylon, which are designed for maximum durability and abrasion resistant. If you select a suitcase made from ripstop nylon, **or “parachute” material,** **make sure that it is a high-**denier fabric, which means that it is heavier.

Pros: Lightweight and can conform into tight spaces

Cons: Not as protective as hard-sided suitcases and is vulnerable to ripping

### Hard-Sided Luggage

Hard-sided luggage is made from high-tech plastics, such as ABS (acrylonitrile-butadiene-styrene) and polycarbonate, which are lightweight and durable. ABS is the lighter of the two, but polycarbonate is more durable. Hard-sided luggage is usually designed like a clamshell, which features a 50/50 split, allowing you to pack an equal amount on each side.

Pros: Protects breakable contents and can be stacked

Cons: Scratch and scuff easily; No outside pockets

Pro/Con: Limited amount of space; Helps avoid overpacking

### Wheels or No Wheels?

#### No Wheels

There are a few occasions where “no wheels” **luggage** proves to be the best choice.

Pros: Ensures maximum interior space and traveling to locations where wheels are difficult to manage due to uneven surfaces

Cons: Can be heavy and burdensome to carry

#### Two-wheel luggage

These are called “rollers” since they utilize the same type of wheels that are found on in-line skates, which only roll forward and backward, not side-to-side. This requires the suitcase to be rolled behind you as you pull it.

Pros: Wheels are recessed, which protects them — two-wheelers are better for clearing curbs.

Cons: Can be hard to drag a two-wheel bag in a crowded space. Recessed wheels take up interior storage space.

## Four-Wheel Luggage

These have wheels that swivel 360 degrees and are known as “spinners.” They can either be pushed or pulled.

Pros: Easy to navigate in tight spaces. Large or heavy suitcases are easier to manage on four wheels and are ergonomically better for shoulders when maneuvering them.

Cons: External mounted wheels are more likely to break off. According to experts, the wheels attached with screws are more secure than those with rivets. Carry-ons with spinners may have less room inside since the maximum allowable dimensions includes the wheels.

## Zipper

There are two types of zippers: chain and coil. The chain zipper, which slides on two sets of interlocking teeth, can be made of metal or plastic. A chain zipper is much stronger than a coil zipper, which has slides on two parallel coils that is usually made of polyester. A “YKKK” zipper is widely believed in the industry to be the most reliable zipper on the market.

## Handles

For maximum comfort, look for an adjustable-length and soft-grip handle. Many travelers use the two-post handle system because of its ability to piggyback a smaller bag.

## Compartments

The number, size, and configuration of compartments can be an important consideration.

## Weight

Consider the weight of your empty suitcase. For airline travel, most of the weight you lug around should be your belongings and not the bag.

## Smart Features

Luggage now includes built-in electronics to help you stay connected. Some of the new **“connected” suitcases** help you know where it is, how much it weighs, and control who can access it by virtue of such functions as location tracking, built-in digital scales, digital locks and fingerprint recognition. (Federal airline safety rules prohibit lithium-ion batteries in checked bags, **so you need to look for a bag that has the option to remove them or “pop-out” batteries.** Pack the battery in your carry-on with the terminal contacts covered to prevent short circuits.)

## Locks

For domestic travel within the United States, luggage locks have to be TSA-compliant, which means that security agents can use a universal master key to open your lock without breaking it. If you are buying an aftermarket lock, check the packaging to see if it is TSA-compliant.

## Shopping Tips

### Measure it Yourself

Measure the dimensions yourself and make sure that they account for all parts of the bag, including wheels, outer pouches and handles. Do not trust the labels or tags that proclaim, “official carry-on size luggage.”

### Check the Interior Capacity

Many manufacturers do not disclose the interior volume. Look for features that maximize the interior space if that is what you need.

- Squared edges vs. curved corners
- Integrated outer compartments
- No wheels or handles (this opens every inch of interior space)

### Warranty

If you want to keep your bag for a long time, get one with a **manufacturer’s warranty**. A lifetime warranty to repair or replace the bag is, of course, the best option.

#### References:

Best Under Seat Personal Items to Pair With your Carry-On Bag. (n.d.). Retrieved from:

<https://thewirecutter.com/guides/best-personal-item-carry-ons/>.

Ditaranto, J. (2020, February 4). Carry-on and Personal Item Size Limits for 32 Major

Airlines. Retrieved from: <https://www.smartertravel.com/personal-item-vs-carry-on/>.

Luggage Buying Guide. (n.d.). Retrieved from:

<https://www.consumerreports.org/cro/luggage/buying-guide/index.htm>.

Travel Leisure Staff. (2020, January 4). The Best Carry-on Luggage of 2020, According to

Travel Editors. Retrieved from: <https://www.travelandleisure.com/style/travel-bags/best-carry-on-luggage>.

# Fast Food

## 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.)

**References**

American Heart Association [www.heart.org/HEARTORG/GettingHealthy?nutritionCenter/DiningOut/Tips-for-Eating-Fast-Food\\_UCM\\_308412\\_Article.jsp](http://www.heart.org/HEARTORG/GettingHealthy?nutritionCenter/DiningOut/Tips-for-Eating-Fast-Food_UCM_308412_Article.jsp)

Choose My Plate Nutrition Education Series <http://www.choosemyplate.gov/healthy-eating-tips/ten-tips.html>

- Choose My Plate
- 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?

<http://choosemyplate.gov/weight-management-calories/calories/empty-calories-amount.html>

Mayo Clinic

[www.mayoclinic.com/health/fast-food/MY01268](http://www.mayoclinic.com/health/fast-food/MY01268)

National Institutes of Health – Medline Plus

[www.nlm.nih.gov/medlineplu/ency/patientinstructions/000105.htm](http://www.nlm.nih.gov/medlineplu/ency/patientinstructions/000105.htm)

US Department of Health & Human Services - Office on Women’s Health

[www.girlshealth.gov/nutrition/fsatfood/fastfood\\_tips.cfm](http://www.girlshealth.gov/nutrition/fsatfood/fastfood_tips.cfm) –

Wright JA, Pepe MS, Seidel KD, Dietz, WH. Predicting obesity in young adulthood from childhood and parental obesity. *New England Journal of Medicine* 1997; 37 (13): 869-873.

# Fundraising

# Fundraising

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## *Consumer Decision Making Contest Study Guide*

Fundraising events are a fun and exciting way to raise much needed money for your 4-H club. They are also a great way to raise community awareness about your cause, organization or non-profit. The selection of the right fundraiser to fit the organization is critical to its success. All club members must be involved in planning and carrying out a successful fundraiser.



To help ensure your fundraising event is a winner, the following components should be incorporated into your planning:

### **1. Purpose**

What is the purpose of your event? Of course, your main purpose is to raise money, but what else are you wanting to accomplish? Do you want to gain publicity for your 4-H club, establish new donors, engage 4-H alumni? It is important to determine the purpose of the event before detailed planning begins.

### **2. Goal**

Decide as a group fundraising goals. Each fundraising event you plan should be geared to raising a specific amount of money. The amount you choose should be what you hope to net, which is the amount you plan to raise after the expenses are deducted.

### **3. Select a fundraiser**

Look for the product or project that will raise the most dollars without being labor-intensive. Don't get involved in a project with "hidden" costs (shipping, prizes, etc.) that will eat up your profits. Be aware of other fundraisers in your community. You could be in competition with other organizations selling the same product.

### **4. Budget**

List all the expenses that will be required to conduct the fundraisers. Be sure to leave a little extra room for unforeseen costs.

### **5. Leadership**

Form committees to be responsible for different components of the fundraiser. Conduct regular check-ins to make sure everyone is completing tasks assigned.

### **6. Set-Up**

Plan the event set-up well in advance. Where will it be? Will food be served? Is there a bad weather plan? When can the event be set up?

## 7. Marketing

Just like a new product, it is important you market your fundraiser well in advance to your target audience. What tools are you going to use to market the event? Social media, direct mail, flyers, newspaper, radio, etc.

## 8. Thank you

One of the most often heard complaints from donors to charitable fundraising events is, "They never even said "thank you"". Make sure your club takes time to send thank-you notes to everyone who is involved with the event, including volunteers, contributors, event hosts and vendors. It is very important you keep your donors happy since you will probably be asking for another donation.



Fundraisers can be conducted in numerous forms. Examples of fundraisers range from selling bake goods and candy, walk/run/bike-a-thons, car washes, cash saving cards, raffles, spaghetti dinners and auctions, to running concessions, and grant writing. The amount of preparation, organization and manpower needed to execute the fundraisers are different for each one. So, how do you decide which one is best for your organization?

- **Entertainment coupon books, scratch-off cards and discount cards** are well known for their high profit margin that can easily reach 100%. One of the main pros when it comes to using such fundraising activities is the fact that they are quite easy to understand and even easier to use when compared to other ways of fund raising. However, they come with some cons as well. For instance, your organization will have to pre-purchase all the necessary items and try to estimate how many of them will be sold. So, you may end up with significant leftovers. Another con related to these types of fund-raising activities is the fact they are widely used by other organizations.



- **Bake sales and car washes** are very popular fundraising events. The main pro related to them is the fact that they can create a sense of community among all the participants. These events can usually be held with very little up-front expense and require a minimal planning commitment. However, they are usually not very lucrative if you are looking to raise a significant amount of money in a short period of time. If your club is considering a car wash, the most profitable method would be to pre-sale car wash tickets in advance. Advantages include:

- Having an estimate of how many people will attend the car wash
- More profit since 66% of the ticket buyers will not attend
- In the event of rain, you are not washed out.

- **Silent auctions and raffles** are popular as well when it comes to raising significant amounts of money. If you can auction or raffle some high value items, you will generate an increased interest in your participants, and this will turn out to be a profitable aspect for your organization. However, the cons related to silent auctions

and raffles include a huge amount of promotional and organizational work. You will also have to find the right site for your silent auction or raffle and deal with all the take-down and set-up tasks. Also, you will have to solicit donations for such fund-raising events and your volunteers may find this difficult to handle.

- **Walk/Run/Bike-a-Thons** are healthy fundraisers that brings families and communities together in a fun environment. Choose your sport and get moving. You can make almost any activity into a “thon”. Participants receive sponsorship for each mile, lap, etc. they walk, run or bike. Since “thons” are peer-to-peer fundraising events, participants reach out to their network of families and friends. Donors are more likely to give if they can put a face with the donation. “Thons” are easy to plan and generate moderate to high revenue.
- **Product Sales** are the most popular type of fundraiser for schools and small youth organizations. From cookies and doughnuts to candy bars and popcorn, product sale fundraisers are generally the first type of fundraiser organizations consider. Product sales are great solutions for meeting small fundraising needs. On the positive side, they can be done quickly and require little money up front. They are also easy to understand and implement. On the negative side, product sale fundraisers often raise far less than expected. They are usually not able to raise significant money to meet larger fundraising needs. For example, consider a typical \$1 profit on candy bars and the need to sell 2,500 candy bars just to raise \$2,500. Product sale fundraisers are also very expensive (typically costing 50¢ to 65¢ of every dollar raised), they tend to be over-priced for their value, and they are not able to attract new people to be involved in the host-charity or school organization...and unfortunately, they aren't very much fun.



## References

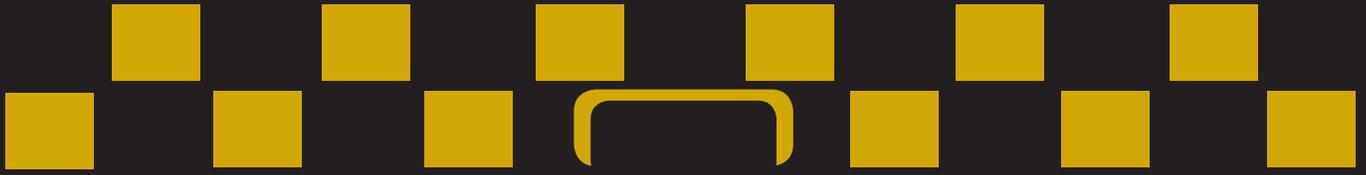
Hall, W. & Wisneski D. Texas A&M Cooperative Extension. (2002). Fund-Raisers.

“The 10 Steps to a Successful Fundraising Event,” The Fundraising Authority. Retrieved February 19, 2020 from <http://www.thefundraisingauthority.com/fundraising-basics/fundraising-event/>.

“Pros and Cons of the Most Common Fundraising Activities,” Red Hot Fund Raising Ideas. Retrieved February 19, 2020 from <https://www.redhotfundraisingideas.com/Fundraising/pros-and-cons-of-the-most-common-fundraising-activities.html>.

“What Raises More Money – Product Sale Fundraisers or Major Fundraising Events,” Carmichael, Drew, January 19, 2017. Retrieved February 19, 2020 from <https://www.champevents.com/blog/what-raises-more-money-product-sale-fundraisers-or-major-fundraising-events>.

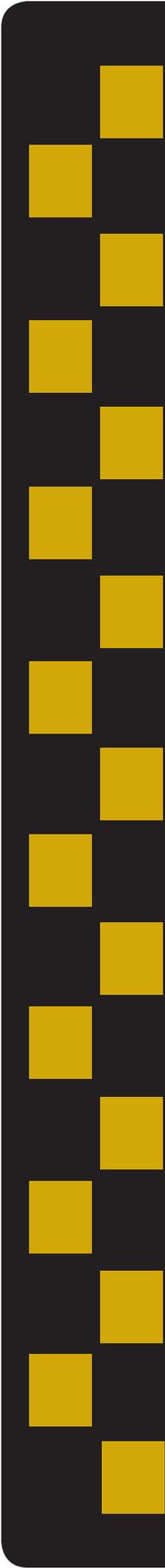
# Ground Transportation



Study Guide

# **GROUND TRANSPORTATION**

2020 - 2022 FCS Consumer Decision Making



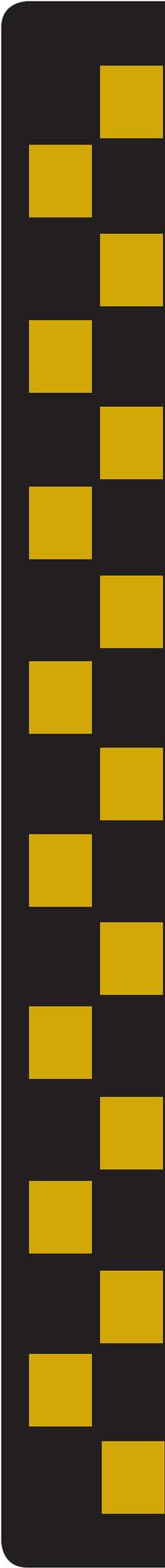
*When traveling, every consumer must decide which form of ground transportation to use. Whether traveling for business or personal reasons, there are several modes of transportation to consider. Consumers can use a combination of these modes during trips or even day-to-day if they live in a larger urban 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.

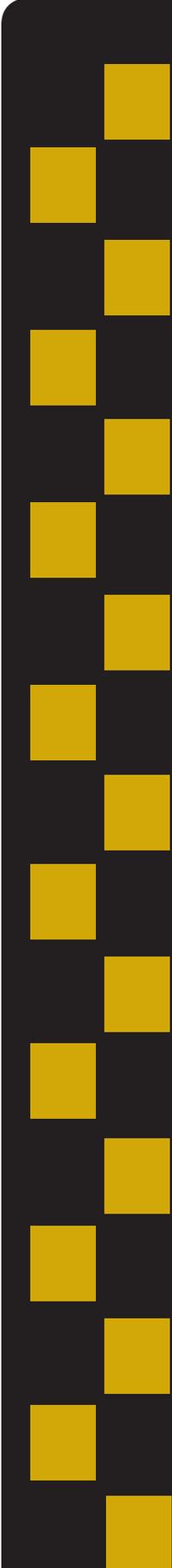
Even though the use of digital ridesharing platforms over the years has expanded, the services are still not readily available in many rural areas. This mode of transportation is best for solo travelers or small groups in larger urban areas. However, many ride sharing companies offer varying sizes of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

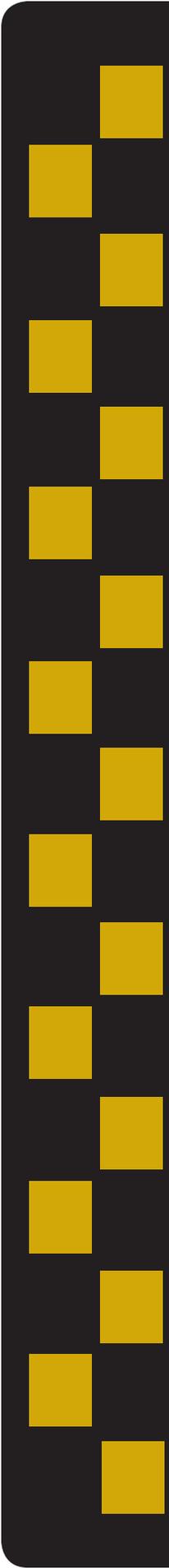
*“Despite rules prohibiting unaccompanied minors from getting a lift through ride share services, 13% of parents reported their teenager (ages 14 to 17) had used one.”*

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.

### **Sources**

"Renting a car." Consumer Information. Federal Trade Commission. Accessed from <https://www.consumer.ftc.gov/articles/0208-renting-car> on 3 March 2018.

Hahn, R. & Metcalfe, R. (2017). The ridesharing revolution: Economic survey and synthesis. *More Equal by Design: Economic design and responses to inequality*. <https://www.brookings.edu/wp-content/uploads/2017/01/ridesharing-oup-1117-v6-brookings1.pdf>

Wyman, K. (2017). Taxi regulation in the age of uber. *New York University Journal of Legislation & Public Policy* 20(1). <http://www.nyujlpp.org/wp-content/uploads/2017/04/Wyman-Taxi-Regulation-in-the-Age-of-Uber-20nyujlpp1.pdf>

Lehmann, R. J. (2014, October). Blurred Lines: Insurance Challenges in the Ride Share Market. Retrieved March 16, 2020, from [https://www.ftc.gov/system/files/documents/public\\_comments/2015/05/01717-96147.pdf](https://www.ftc.gov/system/files/documents/public_comments/2015/05/01717-96147.pdf)

Umichmedicine. (2019, April 15). National poll: Most parents concerned about safety of teens using ride-sharing services. Retrieved March 17, 2020, from [https://www.eurekalert.org/pub\\_releases/2019-04/mm-u-npm040919.php](https://www.eurekalert.org/pub_releases/2019-04/mm-u-npm040919.php)

# Place Settings

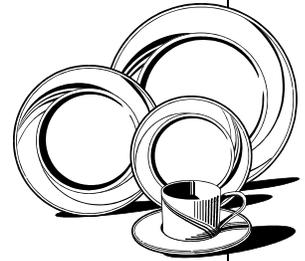


## Place Settings

The purpose of a place setting is to make the act of eating easier. A properly set table helps guests feel more at ease.

Table setting depends on:

- What food will be served
- How many persons will be seated
- What the table covering will be



Common sense tells us that a proper place setting provides the necessary utensils for eating a meal and that they will be placed in convenient positions for use. Table appointments need not be expensive, but all items should be clean and dishes and glassware should be free of cracks and chips.

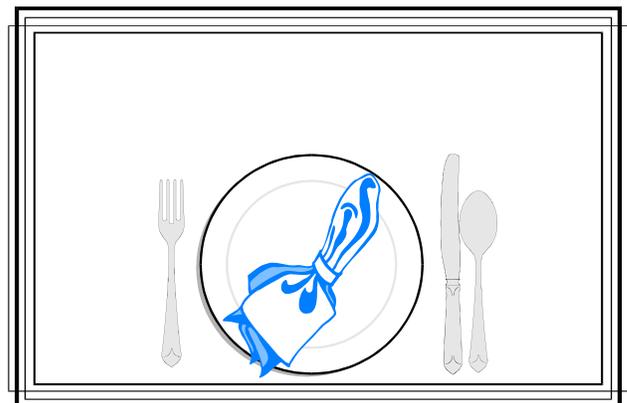
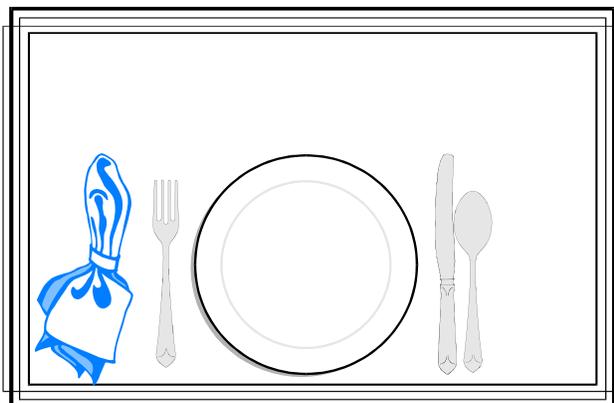
A *cover* is another name for a place setting. It consists of a combination of flatware, dishes, glasses, and linens that are appropriate for the foods served. A cover is approximately 20 to 24 inches long by 15 inches deep. It is the individual's place at the table.



Table linens may be napkins, place mats, table-cloths or runners. It is not necessary to have a mat or cloth on your table if the surface will not be damaged by heat, water or abrasion.

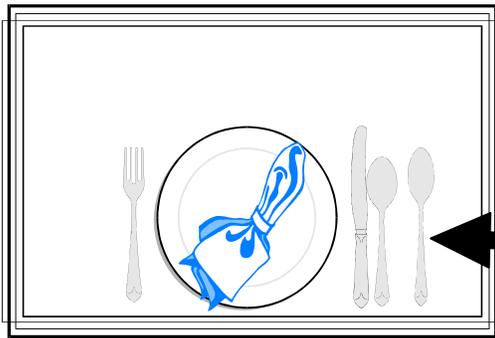
The flatware, napkin and plate for each cover are placed as though they belonged together, about one inch from the edge of the table. The plate forms the center, with the spoon and the knife on the right and the fork on the left. The cutting edge of the knife should face the plate. The bowl of the spoon and the tines of the fork are up.

### Basic Place Settings:

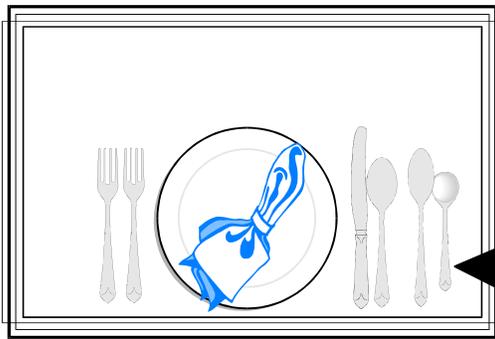


# New Mexico 4-H Consumer Decision Making Classes R-2006

Flatware is placed in order of its use. Pieces that are used first go on the outside and those that are used last are placed nearest the plate.

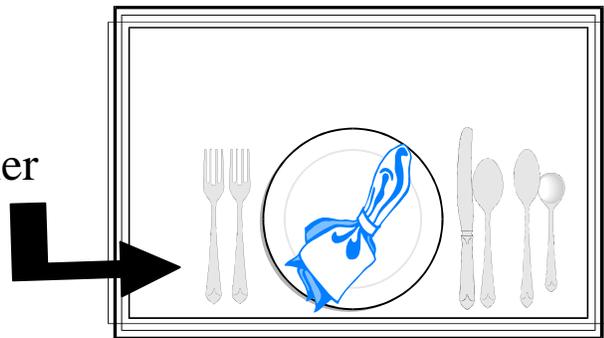


If you are serving iced tea, the teaspoon goes to the right of the other spoons.

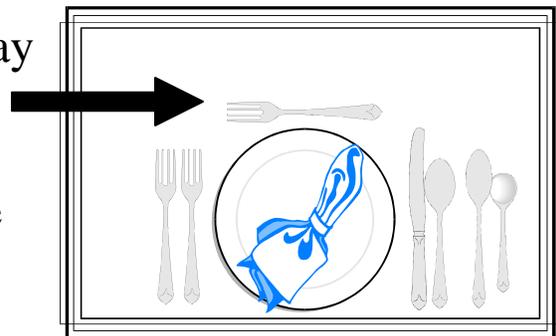


If a soup spoon is used, it is placed to the right of the teaspoon.

If a salad fork is used, it is placed to the left of the dinner fork.

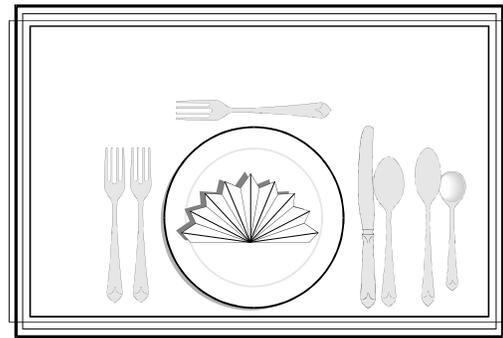
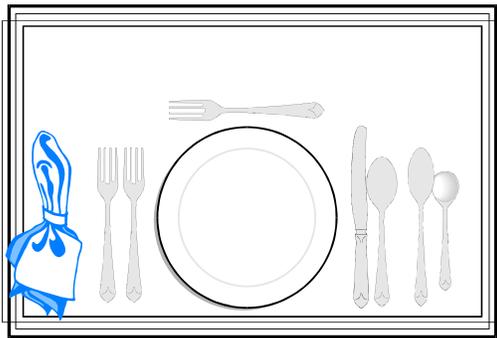
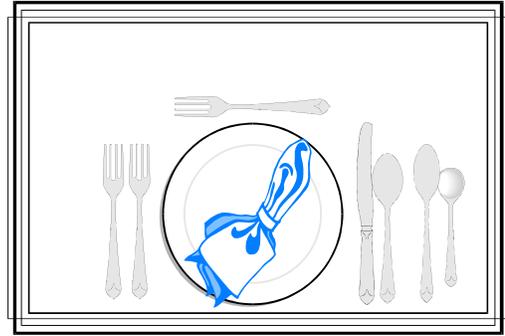


Flatware for dessert may or may not be placed on the table when the table is set. Commonly dessert utensils are placed above the dinner plate.

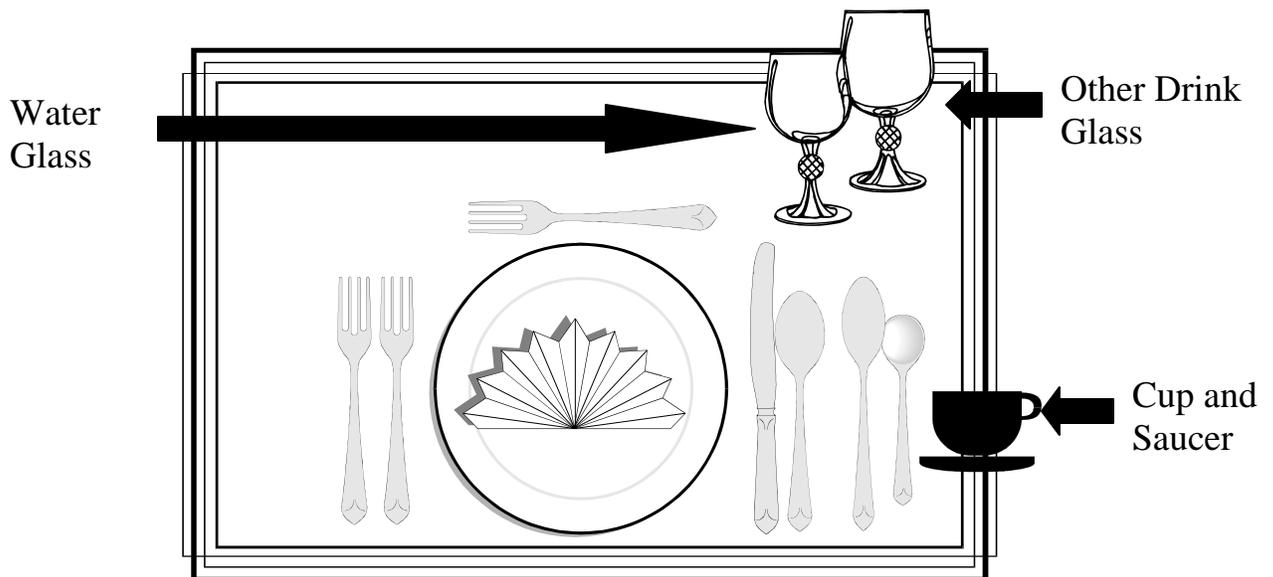


# New Mexico 4-H Consumer Decision Making Classes R-2006

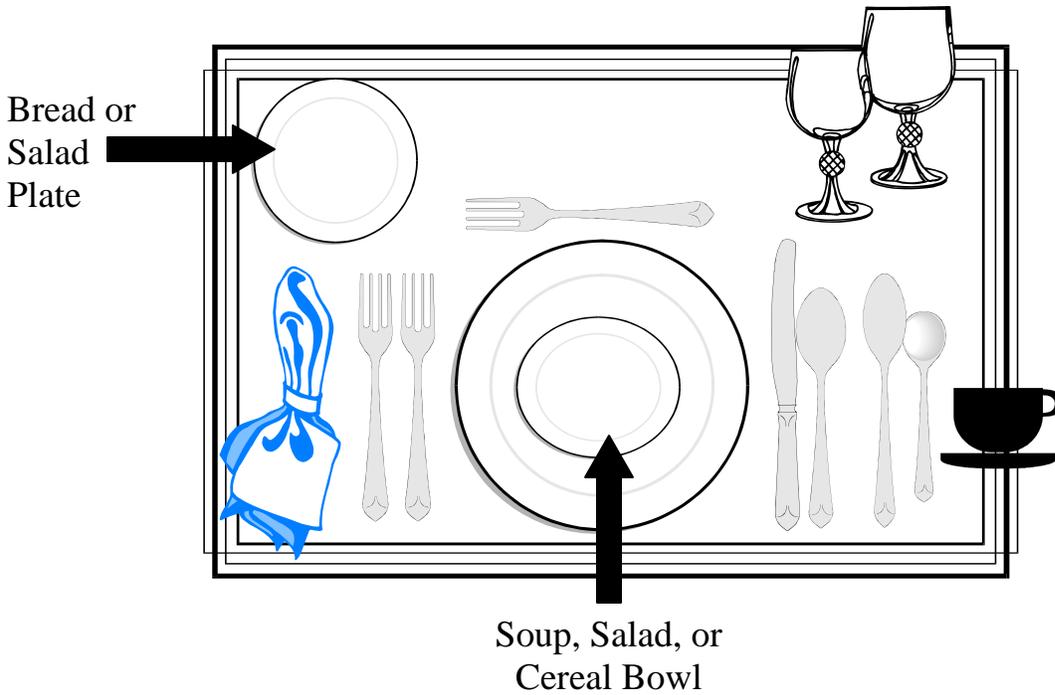
Usually the napkin is laid at the left of the fork. However when covers are close together, it can be placed in the center of the plate. Place the napkin so that the open corner is at either the lower right or lower left, whichever gives the better appearance. Traditional position is to have the open corner at the lower right. Napkins can also be rolled and placed in a napkin ring. Position it as you would a folded napkin.



The glass for water is placed at the tip of the knife; the glass for other drinks to the right of the water glass and a little nearer the edge of the table. Drinks always go to the right, just remember: Drink starts with “DR” which stands for “drink right”. The cup and saucer are placed to the right of the spoons. The handle of the cup points a little to the right of the edge of the table so that the guest can take hold of it without turning the cup.



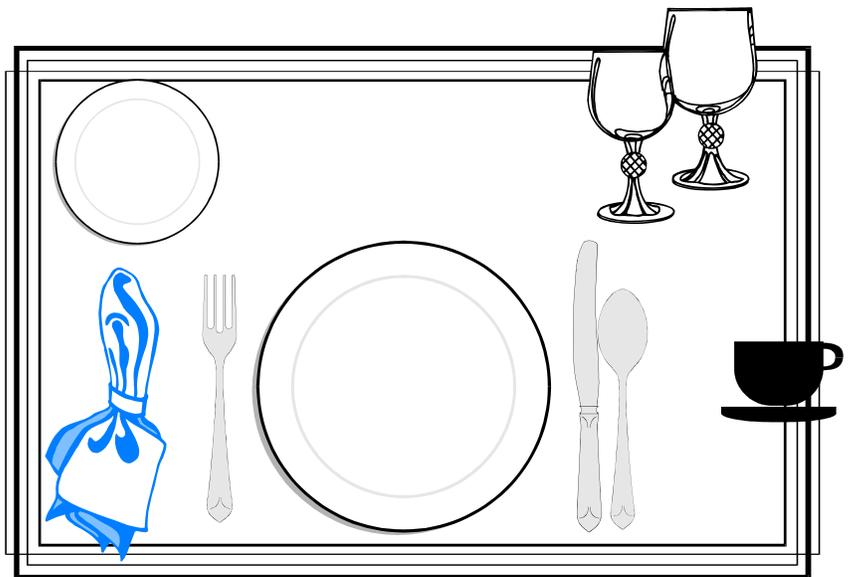
# New Mexico 4-H Consumer Decision Making Classes R-2006



Place a soup or cereal bowl on a plate. When a bread-and-butter plate is used, place it a little to the left of the tip of the fork. A single salad plate may be placed there or to the left of the fork. The additional plate should be directly opposite the drink glasses, so again, remember: Plate starts with "PL" which stands for "plate left". Bowls and plates used for early courses in the meal may be placed in the center of the dinner plate.

## A cover ready for use.

- Napkin
- Fork
- Plate
- Knife
- Spoon
- Glass of water
- Glass of milk
- Cup and saucer, or mug
- Bread and butter plate

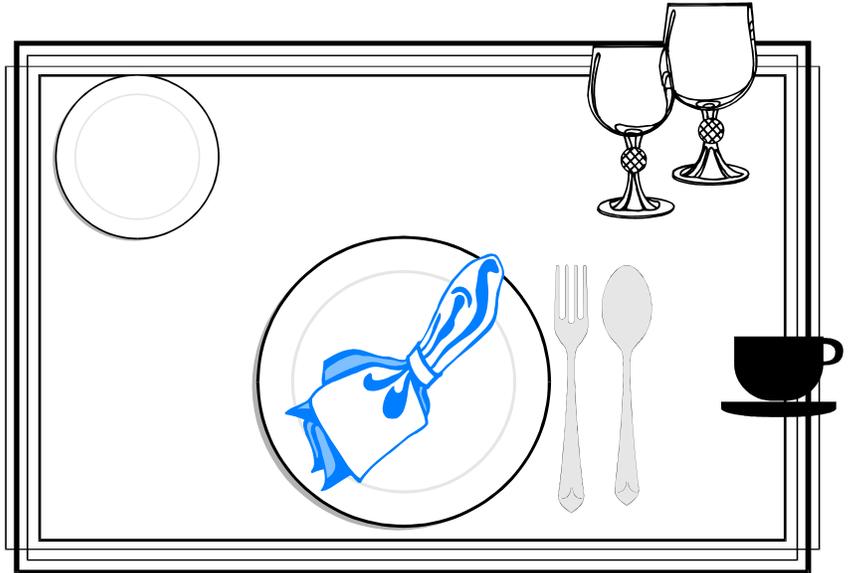


## New Mexico 4-H Consumer Decision Making Classes R-2006

Only the flatware that will be needed for the meal should be placed on the table. If the menu does not call for knives, forks may be placed at the right of the plate. Note the following illustrations.

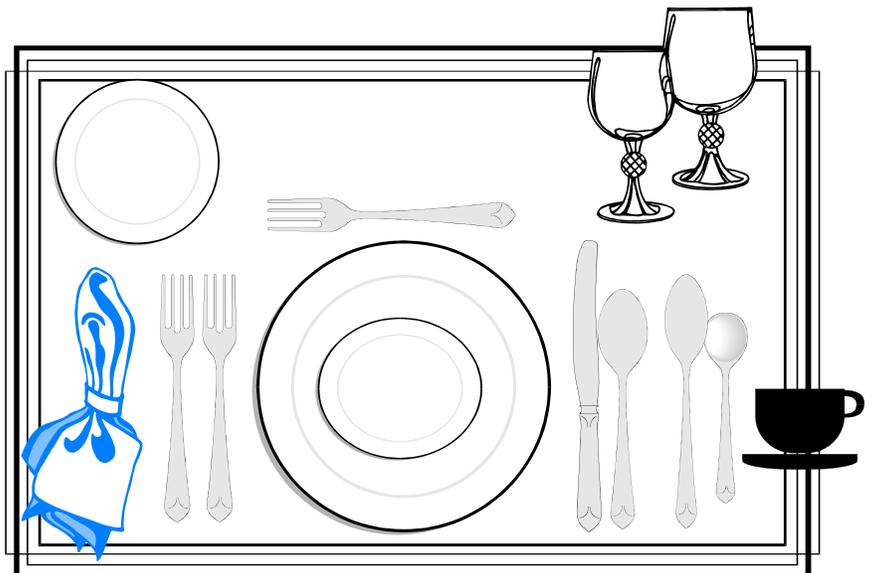
**If the menu does not call for knives, forks may be placed at the right of the plate.**

Napkin  
Fork  
Plate  
Spoon  
Glass of water  
Glass of milk  
Cup and saucer, or mug  
Bread and butter plate



**More courses call for more dishes in the cover. Consider all the foods to be served and what is needed based on the menu.**

Napkin  
Rolls (Bread Plate)  
Water (Water Glass)  
Iced Tea (Tea Glass  
& Tea Spoon)  
Soup (Soup Bowl and  
Soup Spoon)  
Salad (Salad Plate  
and Salad Fork)  
Main Course (Dinner  
Plate, Fork, Knife,  
Spoon)  
Dessert (Dessert Fork  
or Spoon)  
Coffee (Cup and Saucer)



Turner, 2006

## Guidelines for Creating Your Table Setting

Do you know that you can be a designer each time you set the table? A designer chooses and arranges things according to a plan for beauty and order. A neat, interesting, clean and attractive table setting makes any meal more enjoyable.

Actually, there is more than one way to set a table. The usual way to set a table is to put all the dishes, flatware, and food on the table before anyone sits down. When there is company or for a special meal, part of the food and dishes may be left in the kitchen and served later. Diners at a buffet or a picnic may fill their plates and glasses before they are seated. The way to set your table depends upon the way the meal is to be served. Be creative and have fun! Color texture, design and creativity are important.

For the Table Setting Contest, one place setting is to be displayed. Include table covering, dinnerware, stemware, flatware, centerpiece and menu. Select and make one food from your menu. You MUST bring a standard size card table for the display.

**Select a Theme** - What is the occasion...a family dinner, a holiday, or lunch with friends? Is this a casual or formal occasion? Select a theme which fits the occasion. Possibilities can run from a casual fishing party sack lunch to a formal Mother's Day dinner.

- Formal — use candles (lit only while being judged), more than three pieces of flatware, china (no stoneware), tablecloth and/or mats are acceptable and cloth napkins.
- Casual — be creative! Theme can be indoors or outdoors. Use any type of cover (tablecloth, paper, etc.) and any type of table service. Overall place setting should be an expression of your creativity; homemade touches are encouraged.

**Table Appointments** - These include any item used to set a table: tablecloth, placemats, dinnerware, glassware, flatware, and centerpiece. Choose table appointments to fit the occasion and carry out the theme. Paper plates, plasticware, and paper napkins may be used for a picnic but they would not be appropriate for a formal dinner. Flatware and dishware must be safe to eat from i.e., no glitter, glue, etc. is to be used on eating surfaces.

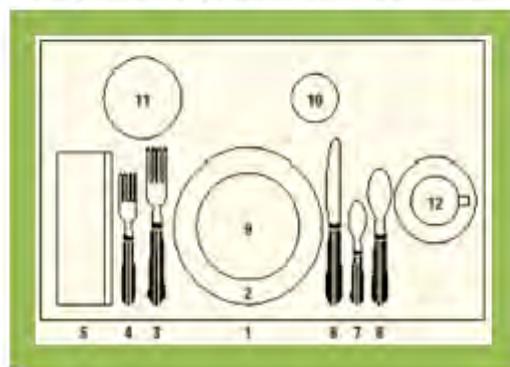
**Table Covering** - This is the background for the food and table appointments placed on it. It protects the table and makes for less noise. Placemats and/or

tablecloths may be used. Sometimes the table is left bare. Choose a covering which is appropriate for the occasion and the other table appointments. You may match or blend colors and textures in the dishes — or use something quite different for contrast.

**Place Setting** — Allow at least 20 inches of space for each person's dishes. This is called a cover and each cover is set exactly the same. A cover contains the dinnerware and flatware for the meal.

The following rules for setting a table correspond to the numbers seen in the table setting illustration shown here.

1. The flatware, plate, and napkin should be one inch from the edge of the table.
2. The plate is always in the center of the place



setting.

3. The dinner fork is placed at the left of the plate.
4. If a salad fork is used, it is placed to the left of the dinner fork.
5. The napkin is placed to the left of the fork, with the fold on the left (unless a decorative/creative fold is used). The napkin may also go under a fork or on top of the plate.
6. The knife is placed to the right of the plate with the sharp blade facing in towards the plate.
7. The teaspoon is placed to the right of the knife.
8. If a soup spoon is needed, it is placed to the right of the teaspoon.
9. The soup bowl may be placed on the dinner plate.
10. The drinking glass is placed at the tip of the knife.
11. If salad, bread and/or dessert plate(s) — or bowl(s) — is used, place at the top of the fork(s).
12. If coffee or tea is served, the cup is placed on the saucer and set to the right of the spoon. Have the handle pointing to the right.

*Note: Only the utensils needed are placed on the table.*

**Centerpiece** - The centerpiece should be coordinated with the table appointment and be appropriate for the occasion. Even though a single place setting is set, the centerpiece should be visible to all as if the entire table was set and should not obstruct anyone's view of each other. Centerpiece can be purchased or arranged by the exhibitor. Centerpiece candles are only to be lit while being judged.

### Tips and Reminders for Setting a Table

- The table should be clean; it can be left bare or a table covering can be used as the background for the food and the items may be placed on top of it. A table covering helps protect the table and muffles the noise of clanking glassware and dishes.
- Placemats or tablecloths can be used for special occasions.
- Dinnerware and flatware should be chosen as appropriate for the occasion and that complement each other. Matching or blended colors or textures in the dishes or contrast something different make a table setting look attractive.
- Table setting items should be appropriate for the meal served. Snacks on paper plates are appropriate while a home-cooked dinner should be served on attractive dishes to help show it off.
- Only the utensils needed are placed on the table.
- The centerpiece should be attractive. Simple ones, such as fresh flowers, a plant, or fruit can be used. If candles are used, they should be of the length so that if they were lit, they would be above eye level.
- The centerpiece should be low enough so that the people at the table can see over it; it should be colorful and blend with the tablecloth and the dishes; and be fresh and clean looking.

**Menu Planning** - An appropriately planned menu should follow the Dietary Guidelines for Americans and MyPlate. As a general guideline, a meal should have at

least three different food groups to help balance what the body needs every day to get all the nutrients needed. MyPlate illustrates the five food groups that are the building blocks for a healthy diet using a familiar image—a place setting for a meal. For more information about MyPlate, go to [www.choosemyplate.gov/](http://www.choosemyplate.gov/).



When planning a menu, first decide on the main dish. Select appropriate vegetables, appetizer, soup or salad. Add a bread, dessert and beverage, if desired. Breakfast, party, and picnic menus should contain two or three food groups. Other meals should contain five food groups. Participants are encouraged to develop interesting and creative menus. For example, you might name a food to fit your theme. Note: The use of alcoholic beverages in any menu will disqualify the table setting.

### Common Errors in Menu Planning

#### COLOR

- Too many foods of same color
- No contrast or variation
- Clashing or unpleasant color scheme

#### TEXTURE

- Too many soft foods
- Too many chewy foods
- Too many crispy or crunchy foods
- Lack of variety in texture

#### SIZE

- Too many mixtures
- Too many small pieces of the same size and shape
- Too many similar shapes
- Lack of variety in shape

#### PREPARATION AND TYPE OF FOOD

- No main dish
- More than one main dish
- Too many foods prepared in the same way, such as fried foods, creamed food, or foods with sauces
- Too many starchy foods
- Same fruit or vegetable more than once
- Too many high protein foods

#### NUTRITION

- Too many foods from one food group
- Missing food groups
- Contain a variety of foods not meeting the nutritional needs of those for whom it is planned

#### TEMPERATURE

- Too many foods of the same temperature
- Not enough time allotted for preparation
- Need to keep hot foods hot and cold foods cold
- Food not stored at safe temperature (special consideration needed for picnics)

#### FLAVOR

- All bland flavor
- Too many strong flavors
- Repetition of food or flavor
- No tart or acid-flavor
- Too many sweet or too many sour foods



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## Writing the Menu

The menu should be displayed on any medium of choice (card, ceramic tile, chalkboard, etc.) printed or typed by the exhibitor. The menu may be decorated and/or propped up. The following guidelines are suggested when writing or planning a menu:

- Menus should be written in symmetrical arrangement on the page with the foods listed in the order they are served. (Every menu will not include all the foods listed here.)

Appetizer  
Main Dish  
Starchy Vegetable  
Other Vegetables  
Salad  
Bread  
Dessert  
Beverage

- Foods should be grouped by courses. Extra spacing should be allowed between courses.
- Descriptive terms should be used that give information about the temperature, texture, color, or other special characteristics of the food or method of preparation such as *Chilled Apple Cider*, *Broiled Sirloin Steak*, *Cream of Asparagus Soup*
- Words should be capitalized except articles and prepositions. Words such as *or*, *and*, *of*, *with*, etc. should not be capitalized.
- Foods served with an accompaniment should have the food listed first.

*Baked Potato Sour Cream*  
*OR*  
*Cheddar Cheese Cubes*  
*Rye Chips*

- When the main dish has two or more accompaniments, the main dish should be centered on one line and the accompaniments should be on the same line on either side or written on the line below.

*Rye Crisp Chicken Soup Saltines*  
*OR*  
*Chicken Soup*  
*Rye Crisp Saltines*

- Butter, cream, sugar, or salad dressings are not written on the menu unless they are special in some way such as *Whipped Butter* or *Thousand Island Dressing*
- The beverage(s) should be listed last.
- The following is an example of how a three-course meal is properly written:

*French Onion Soup*  
*Whole Wheat Wafers*  
*Celery Sticks Assorted Olives*

*Prime Rib of Roast Beef au Jus*  
*Potato Soufflé*  
*Asparagus with Hollandaise Sauce*  
*Mixed Green Salad*  
*Hot Rolls Whipped Butter*

*Lemon Ice*  
*Coffee Hot Tea*



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# Dining Etiquette

## Posture

- Place personal items (purse, hat, gloves) in a place other than on the table.
- Sit up straight with arms and elbows off the table.
- All four legs of your chair should rest on the floor.
- Don't fidget or squirm.
- Ask for items to be passed rather than reach across the table.
- Hats and caps are to be removed upon entering a building.

## Table Service

- Hold flatware between thumb and forefinger.
- Avoid gesturing with your flatware.
- Use the flatware from the outside first.
- After using a fork, knife or spoon, place it on the plate. Never lay a used utensil on the table.
- Service is from the left and dishes are passed to the right.
- Place the napkin in your lap. When leaving the table, place the napkin to the left of your plate.



## While Eating

- Chew quietly with your mouth closed. Avoid slurping soup or noodles.
- Butter bread one bite at a time.
- Cut meat one bite at a time.
- Dip soup spoon into the bowl using a motion that moves the spoon away from you.
- Remove alien objects from your mouth with your fingers and place them on the side of your plate.
- Avoid talking with a full mouth. Take small bites.
- If the food is too hot, wait for it to cool rather than blowing on it.
- Take small portions at buffets. You may return for seconds.
- Keep table conversation pleasant and at a low volume.
- Discuss appropriate subjects at the table. Include all diners in the conversation.

## Finishing the Meal

- When you have finished eating, leave your plate and other service items where they are. Place the fork and knife on the plate resting next to each other with the tines and blade toward the middle of the plate.

- Don't pick your teeth at the table.
- Don't fuss with hair or makeup at the table. Excuse yourself to the restroom for repairs.

## Social Occasions

**Being a Good Host** - As the host, you are responsible for issuing invitations in a timely manner and having the event well organized so you can also enjoy the party. The host makes sure that all of the guests are greeted and introduced to the people they do not know. When you are hosting a social event, it's your job to make sure that all of your guests are comfortable and are having a reasonably good time. The host is in charge of the conversation and makes sure that it stays at an acceptable level. Be sure that everyone is included in the conversation. Avoid crude and hurtful jokes as well as vulgar topics that may be offensive.

**Being a Good Guest** - When you receive an invitation, you must respond in a timely manner. Arrive within a few minutes of the designated time. Try not to arrive too early. Arriving "fashionably late" is not fashionable at all. If a meal is being served, it might be ruined by your tardiness. As a guest, it's your responsibility to be respectful and pleasant. Make an effort to visit with everyone at the party.

**RSVP** - RSVP is the abbreviation for the French phrase *repondez s'il vous plait* which means *please reply*. If an invitation requests an RSVP, it is your responsibility to reply in a timely manner in the fashion the host indicates. This may be by returning an enclosed card, making a phone call or sending an email. A response is for the host's convenience, not yours. This helps the host know how many people to plan for, especially if food will be served or if space is an issue.

**Thank You Notes** - Following the party, you should phone the host or write a short thank you note expressing your appreciation of the time you spent with them. It is appropriate to return the invitation within a month or so. Thank you notes should also be sent when you receive a gift even if you have given a verbal thank you at the time.



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# Smoothies

## SMOOTHIES

Smoothies have become a popular choice for snacks and meals. While once something that you could only get from your home blender and a few basic ingredients, now smoothies can be purchased in ready-to-drink form at grocery and convenience stores, purchased frozen ingredients in pouches that you must add milk, water, or juice to, or from a fast food restaurant or coffee shop counter or drive through window. There are even entire stores devoted to selling smoothies where customers can choose everything from fruits, to caffeine, to added protein powders and vitamins and minerals.

The good news is that smoothies can be very nutritious and provide a convenient way to get a few of daily MyPlate food group needs met, as well as vitamins and minerals. However, some restaurants and food manufacturers add lots of extra sugar, fat, or other unnecessary ingredients with few vitamins, minerals, protein, or fiber. Smoothies can be economical or can be very costly. With all the options, it can be hard to know which smoothie is the best choice for you and your situation. The following information will help you choose a healthy and affordable smoothie to meet your specific needs.

### Cost

The cost of smoothies varies a lot. The packaging, brand name, ingredients, and **whether you're** buying them at a store ready-to-drink, to make at home, or at a restaurant, coffee shop or fast food location all contribute to the cost. **When you're on the go and buying your smoothie ready-to-drink** from a store or restaurant, you probably plan to drink the whole smoothie at one time. In this situation, you should compare cost per unit (i.e. large smoothie at a fast food restaurant, one bottle purchased at a store). Some smoothies may cost a little more than others, but spending a little more money to make a healthier choice is generally a better investment in your health.

**When buying smoothies to have at home, you might buy a larger, "family size" bottle containing many servings.** In this case, you can compare price per serving. To determine the price per serving, check the Nutrition Facts label to see how many servings are in the container (Servings per container). Divide the price by the number of servings to determine the price per serving. For example, a large family sized smoothie costs \$4 and has 8 servings would cost \$0.50 per serving ( $\$4/8$  servings = \$0.50 per serving). If you are mixing ingredients yourself, then you have an extra step of adding the price per serving of each ingredient together to get the total cost per serving.

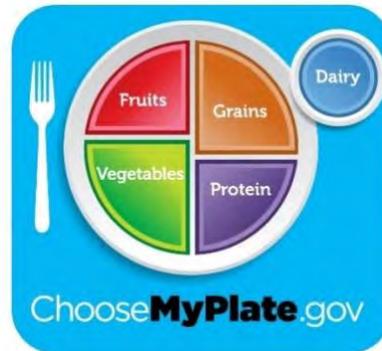
### Nutritional Value

Whether you are choosing your smoothie for a snack or to have as a meal will influence the nutritional value you should expect from your smoothie. Remember, meals are where we get most of our energy (calories) and nutrition (MyPlate food groups, carbohydrates, protein, fats, vitamins, minerals). Snacks should provide fewer calories, carbohydrates, protein, and fat, and may contain only one MyPlate food group. **Let's review each of these topics.**

MyPlate Food Groups: Smoothies typically are made primarily from fruit and/or dairy (usually yogurt or milk). Some smoothies have vegetables or additional protein.

- Smoothies that are a meal should provide foods from at least two food groups (dairy and fruit).
- Smoothies that are a snack can provide only one food group (dairy or fruit).

Remember, dairy foods provide calcium, protein, Vitamin A, Vitamin D, potassium, and much more. Vegetables and fruits are good sources of Vitamins A & C and minerals, such as potassium. Look for smoothies that have more of these healthy nutrients.



Calories: Carbohydrates, Fat, and Protein

When a smoothie will be a meal, you will need a few more calories, carbohydrates, protein, and fat than when a smoothie might be a snack. Reading the Nutrition Facts label on products lets you know how many total calories are in each serving and where the calories come from. Carbohydrates and protein provide four calories per gram, while fat provides nine calories per gram.

Calories: Consider the calories per amount you or someone plans to drink. This might be per unit (like when you buy a medium sized smoothie from a fast food restaurant, or one eight ounce serving out of a 48 ounce family sized bottle).

- Smoothies that are a meal can provide more than 300 calories. But remember, you want to maximize vitamins and minerals, for the amount of calories, fat, and sugar.
- When having a smoothie as a snack, the amount you plan to drink should provide about 300 calories or less.

Carbohydrates: **Carbohydrates are our bodies' favorite source of energy and the only source** of energy that your brain can use. It is important to get carbohydrates from your food, but our bodies like some sources more than others. Look on the nutrition label to see how much total carbohydrate, sugar, and fiber per serving of smoothie.

*Fiber:* Carbohydrates from fiber are beneficial to your health by causing you to feel full for longer and helping with digestion. Eating enough fiber can also reduce your risk for heart disease. Smoothies that use whole fruits will have more fiber than smoothies that use fruit juices. Look for smoothies with more fiber.

*Sugars:* Carbohydrates from sugar are present in naturally sweet foods like fruits, but may also be added as an additional ingredient to further sweeten the food. Many smoothies contain fruits like bananas, berries, oranges, and pineapple. Some

contain fruit juices. These fruits provide a quick energy boost from the natural sugar and often bring some vitamins and fiber along with them. Added sugars only supply calories with few or no nutrients and no dietary fiber. Sugars are listed on the nutrition label under carbohydrates. Added sugars may be listed in the ingredient list as dextrose, cane sugar, and high-fructose corn syrup. When comparing smoothies, you want to look for the smoothies with less sugar, particularly when the smoothie will be a snack.

**Fat:** Our bodies need fat to provide energy and carry nutrients, but not too much. Some types of fat are better for our health than others. Saturated fat and trans fat are bad for your heart health. The 2015 Dietary Guidelines for Americans by the United States Department of Agriculture (USDA) and the Department of Health and Human Services (HHS) recommends that you limit saturated fat to less than 10% of calories, and avoid trans fat. Look for smoothies lower in saturated fat and contain 0 grams trans fat. If you look at the ingredient list, you do **NOT want to find “partially hydrogenated oils” listed, as these are sources of trans fat.**

**Protein:** Protein does so many things in your body, but it is best known for helping you build muscle. Protein also may help you feel full for longer. When a smoothie is going to be a meal, you will definitely want it to have some protein. If a smoothie will be a snack, it may not have much protein, and that is perfectly okay. In general, choose smoothies with more protein.

**Vitamins and Minerals:** Vitamins and minerals are listed on nutrition labels as a percent daily value (%DV). The goal is to get 100% of the DV from foods each day. A vitamin and mineral-rich smoothie provides all four that are listed on the Nutrition label: Vitamin A, which is good for eyes and skin; Vitamin C, which helps the immune system protect from disease; Calcium, which helps build strong bones; Iron, which helps circulation and energy levels. When a smoothie has calcium in the amount of 10% or more, it probably contains some foods from the dairy group, such as milk or yogurt. In general, you want to choose smoothies with more vitamins and minerals.

**Salt:** Our bodies need sodium (salt) to function, but getting too much leads to high blood pressure and is harmful to your health. The 2015 Dietary Guidelines for Americans and MyPlate recommend that you consume no more than 2300 milligrams (mg) of sodium per day. Be sure to check the label and look for smoothies that are lower in sodium.

**Ingredients:** Smoothies are typically made from fruit, fruit juices, dairy (milk or yogurt), and some might contain vegetables. **Much of the “designer” type smoothies contain more additives** than is necessary to get your daily nutrition needs met.

***Fruit juices:*** **It’s best if a smoothie contains** whole fruit. If a smoothie contains juice, it is best if that is 100% fruit juice.

***Sugar, sugar substitutes/non-nutritive sweeteners:*** There are several sugar substitutes and non-nutritive sweeteners that are used to make foods sweet with fewer calories. The non-nutritive sweeteners on the market today used in soft drinks, with table top version listed in parentheses, include aspartame (Equal® or Nutrasweet®), sucralose (Splenda®), acesulfame potassium (Sunette®) and saccharin (**Sweet’n Low®**). All of these non-nutritive sweeteners have been approved by the Food and Drug Administration (FDA). However, the long-term health effects for children and adolescents are unknown, so it may be best to avoid smoothies that use these non-nutritive sweeteners.

Stevia comes from a plant, tastes very sweet, and is used as sugar substitute in some foods. A highly processed form is allowed to be used in foods in the United States. Because the long-term health effects of stevia are unknown, particularly for children and adolescents, it is best to avoid smoothies that use stevia.

*Caffeine:* Caffeine, a stimulant, is added to some smoothies and must be listed as an ingredient if it is added. Caffeine is not necessary for health, and little is known about the safety of caffeine for children and adolescents. It is best to avoid caffeine in smoothies.

*Additional B Vitamins:* Many smoothie companies add additional B Vitamins that they **advertise as “giving you more energy.”** Vitamins do not provide energy, but they help your body use the energy you get from carbohydrates, protein, and fats. We can get plenty of B vitamins from the foods we eat. We do not need additional vitamin supplements and powders, unless recommended by your doctor.

*Amino acids like Taurine, Arginine, and Creatine:* Many smoothie companies add additional **amino acids that they advertise as “giving you more energy,” “helping with recovery,” or “building muscle.”** Protein from food is made up of amino acids, and we can get plenty of protein from the foods we eat. We do not need additional amino acid supplements and powders, unless recommended by your doctor.

*Other Additional Ingredients:* If you eat a well-balanced diet, you truly do not need additional ingredients in your smoothie other than those that add taste, not calories. Cinnamon, turmeric, ginger, coconut water, vegetables like kale or spinach, or raw cacao can add lots of taste for more satisfaction and variety.

Smoothies vs. Juicing: What is the difference exactly between smoothies vs. juicing? They both contain fruit and in many cases veggies. When prepared on the spot, both juices and smoothies are made with real fruit and veggies (instead of purees, syrups, or powders).

The difference between smoothies vs. juicing is in the production. Juices are pressed using a juicer, which means that the pulp of the fruits and veggies is separated from the juice. Juicing provides a very nutrient-dense beverage in a smaller amount of liquid. Juicing usually means no **“pieces” or “chunks”** in your drink, but that also means no fiber.

Studies have shown that blending fruit in smoothies leaves you with more antioxidants than when you juice the same ingredients. That is because you find antioxidants (such as Vitamin C, Vitamin E, enzymes, and beta- carotene) primarily in the fibrous membranes of fruit.

Smoothies will make you feel full sooner than juices will. Because of the pulp, skin, and fiber in fresh, natural smoothies, the volume of the drink is higher which makes you feel full. A juice, on the other hand, does not contain the same amount of pulp, which will not make you feel as satisfied. For those who need a low-fiber diet, however, juicing may be a better option. But, it is easy to over-consume with juices, which also means a higher intake of calories.

Both beverages contain sugar and so both can raise your blood sugar levels. However, the effects are more dramatic and rapid with juices.

Juicing can also be more expensive, as you have to use a greater volume of produce.

Reading a Smoothie Label: Practice by reading these various smoothie labels. Pay attention to sugars, calories, fat, protein, ingredients, serving sizes, etc.



Item

**McDonald's®**, McCafé  
Mango Pineapple  
Smoothie

Price	\$2.25
Size	16 oz
Calories	250
Fat (g)	1
Saturated Fat (g)	0
Trans Fat (g)	0
Carbohydrates (g)	57
Sugar (g)	52
Fiber (g)	1
Protein (g)	3
Sodium (mg)	45
Vitamin A (%)	35
Vitamin C (%)	25
Calcium (%)	8
Iron (%)	2
Caffeine (mg)	0



Item Bolthouse® Farms,  
Green Goodness

Cost per bottle	\$3.12
Bottle size	15.2 oz
Serving Size	8 fl oz
Cost per oz	\$0.21
Cost per serving	\$1.64

Nutrition information (per  
8 fluid oz serving)

Calories	130
Fat (g)	0
Saturated Fat (g)	0
Trans Fat (g)	0
Carbohydrates (g)	30
Sugar (g)	26
Fiber (g)	1
Protein (g)	2
Sodium (mg)	20
Caffeine (mg)	0

Yoplait Frozen "Ready to Blend" Smoothie

**Nutrition Facts**  
 Serving Size ½ pouch (107g)  
 8 FL. OZ Prepared  
 Servings Per Container 2

Amount Per Serving	As packaged	Prepared
<b>Calories</b>	70	110
Calories from Fat	10	15
<b>% Daily Value**</b>		
<b>Total Fat</b> 1.5g*	<b>2%</b>	<b>2%</b>
Saturated Fat 0g	<b>0%</b>	<b>0%</b>
Trans Fat 0g		
<b>Cholesterol</b> 0mg	<b>0%</b>	<b>1%</b>
<b>Sodium</b> 30mg	<b>1%</b>	<b>4%</b>
<b>Total Carbohydrate</b> 14g	<b>5%</b>	<b>7%</b>
Dietary Fiber 2g	<b>8%</b>	<b>8%</b>
Sugars 10g		
<b>Protein</b> 2g		
Vitamin A	0%	4%
Vitamin C	25%	25%
Calcium	50%	60%
Iron	4%	4%

\* Amount as packaged. As prepared with skim milk, one serving provides 1.5g total fat, less than 5mg cholesterol, 80mg sodium, 20g total carbohydrate (10g sugars), and 5g protein.  
 \*\*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	2,000	2,500
Total Fat	Less than 65g	65g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

**Ingredients:** Strawberries, Blueberries, Water, Raspberries, Nonfat Yogurt (skim milk, yogurt cultures), Sugar, Fructose, Calcium Phosphate, Milkfat, Corn Starch, Banana Puree, Natural Flavor, Nonfat Milk, Gelatin, Xanthan Gum, Pectin, Carrageenan, Sucralose, Citric Acid.

**CONTAINS MILK INGREDIENTS.**

DISTRIBUTED BY YOPLAIT USA, INC., MINNEAPOLIS, MN 55440

**\*\*one full serving of fruit = ½ cup of fruit**

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## References

ChooseMyPlate.gov. USDA. Retrieved from [www.choosemyplate.gov](http://www.choosemyplate.gov).

*Dietary Guidelines for Americans, 2015 - 2020*. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://health.gov/our-work/food-nutrition/2015-2020-dietary-guidelines/guidelines/>.

Juicing Basics. Michigan State University Extension. Retrieved from [https://www.canr.msu.edu/news/juicing\\_basics](https://www.canr.msu.edu/news/juicing_basics).

**Juice or Smoothie: What's Healthier?** Karen Ansel, MS, RDN. Retrieved from <https://blog.fitbit.com/healthier-juices-smoothies/>.

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# Subscription Shopping

2020 - 2022  
FCS  
Consumer  
Decision  
Making  
Study Guide



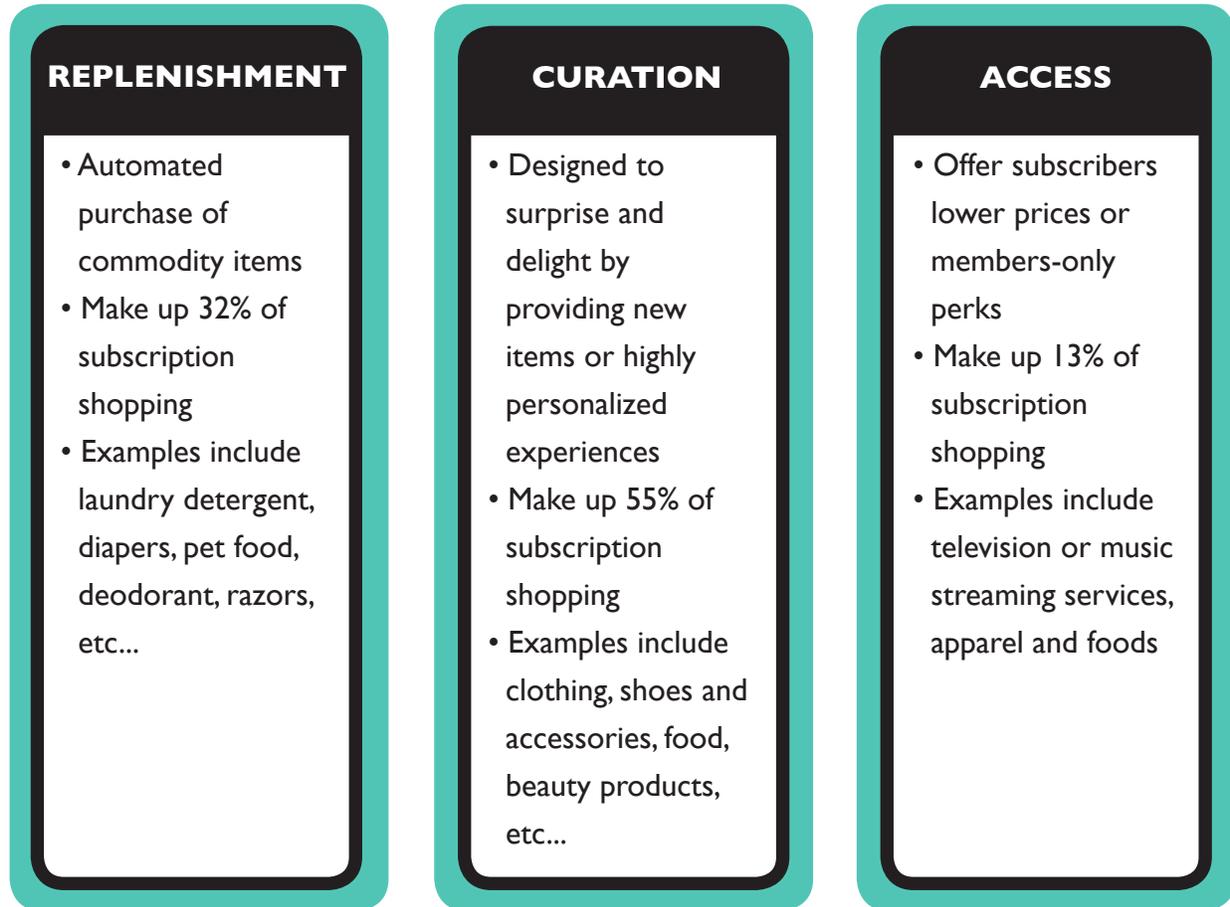
*Subscription  
Shopping*

**S**ubscription shopping is defined as a recurring delivery of niche products that are generated by subscription -based, e-commerce businesses. Since 2015, the subscription, e-commerce market has grown by more than 100 percent a year. The largest of these retailers generated more than \$2.6 billion in sales in 2016, up from a mere \$57.0 million in 2011. These businesses include a wide range of categories, such as beauty products, meal kits, pet food and supplies, women’s and men’s apparel, video games, baby supplies and vitamins -- just to name a few. There are over 7,000 subscription box companies globally. Of these 7,000 companies, 70% are found in the United States. Researchers predict that by 2021, 75% of all companies that sell direct to consumers will offer some type of subscription-based service.

**O**f all of the commerce that can be attained through subscription shopping, entertainment is one of the most dominant aspects of subscription services. Streaming subscriptions can be found in 55% of the homes in the U.S. Homeowners spend \$2.1 billion each month on these subscriptions alone. However, subscription shopping is not just limited to streaming entertainment services and will vary between gender demographics. Below is a list -- by gender -- of the top ten most popular subscription services:

	<b>WOMEN</b>	<b>MEN</b>	<b>OVERALL</b>
<b>1</b>	Amazon Subscribe & Save	Dollar Shave Club	Amazon Subscribe & Save
<b>2</b>	Dollar Shave Club	Amazon Subscribe & Save	Dollar Shave Club
<b>3</b>	Ipsy	Harry’s	Ipsy
<b>4</b>	Birchbox	Blue Apron	Blue Apron
<b>5</b>	Sephora Play!	BarkBox	Birchbox
<b>6</b>	JustFab	LootCrate	Sephora Play!
<b>7</b>	Blue Apron	Birchbox	Harry’s
<b>8</b>	BarkBox	HelloFresh	BarkBox
<b>9</b>	StitchFix	Home Chef	JustFab
<b>10</b>	AdoreMe/ShoeDazzle	Instacart	HelloFresh

Subscription products and boxes offer a convenient, personalized and cost-efficient way to buy what you want and need. There are three types of subscription services:



While subscription services offer a convenient, personalized and lower-cost way to buy the goods and services you want and need, it has not caught on with every demographic. Only 53% of consumers know about even one of the top services. Conversion is weak with only 55% of those who consider a service ultimately subscribe as they are reluctant to sign up for a long-term commitment. Replenishment (65%) services have a higher conversion rate than other service types -- curation (52%) and access (51%). Of those that do participate in subscription services, the majority of consumers are younger, affluent urbanites, between the ages of 25 and 44, with incomes between \$50K and \$100K. Over 60% of women make up the majority of the market, although men are rapidly increasing in their participation of this type of shopping experience. Of the online shoppers:

- 15% have signed up for one or more subscriptions to receive products on a recurring basis -- frequently through monthly boxes
- 35% of subscribers have at least two subscriptions
- Men (42%) are more likely than women (29%) to have three or more active subscriptions
- The ability to limit store trips was the top reason for subscription participation

*H*ave you ever wondered why subscription shopping is so effective? What makes this system work for today's consumer? Subscription shopping research has indicated that there are three, main explanations:

### **MORE IS LESS**

By curating products according to the personal preferences of the consumer, the consumer's decision-making process is greatly simplified. This also eliminates the buyer's feeling of remorse after having to choose among a large quantity of product options. By offering a limited number of well-priced, quality items, a consumer can quickly tailor their selection to meet their taste preferences and have it delivered to their front door in a very, short amount of time.

### **UNPREDICTABILITY**

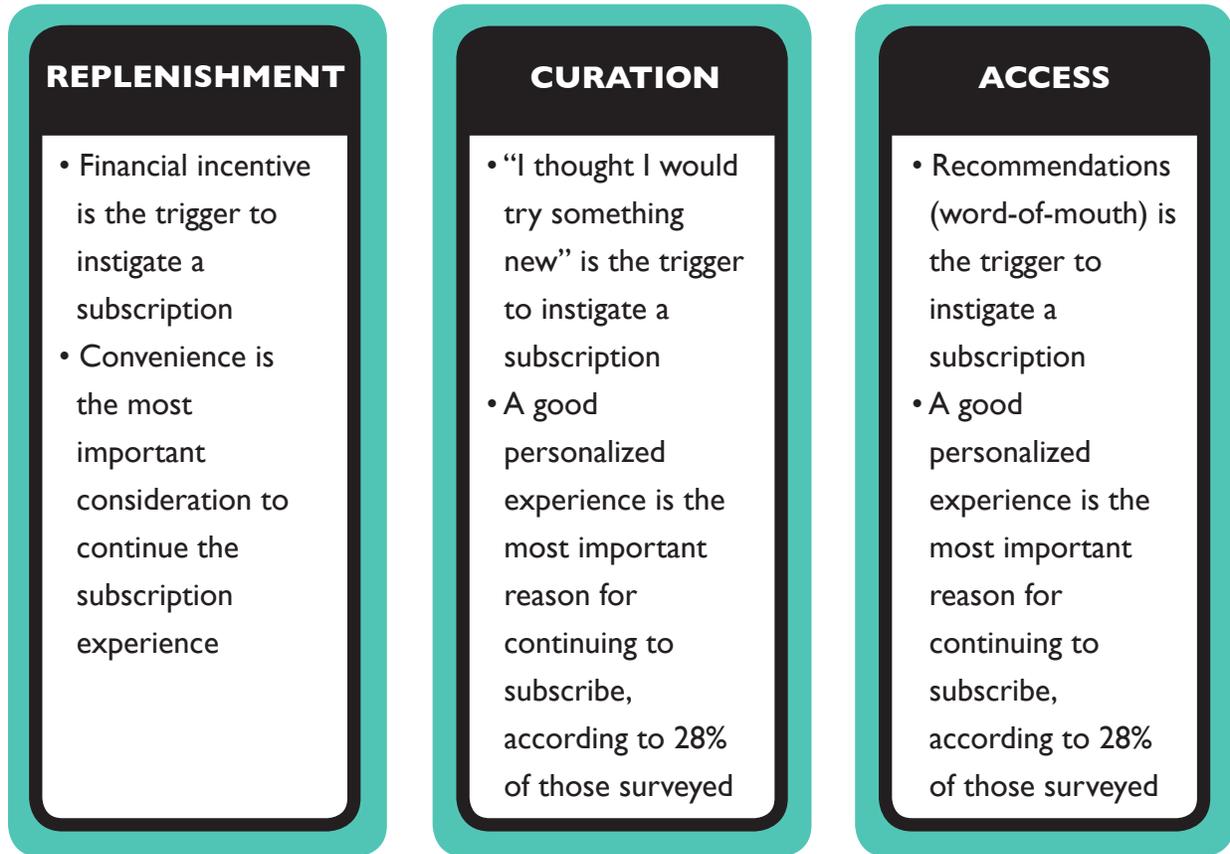
Also known as the "thrill of the hunt," unpredictability refers to the rush of dopamine (a neurotransmitter found in the brain that plays a role in pleasure, motivation and learning) that we get when there is both the anticipation of a reward and when the reward is actually received.

### **EXPERIENCE**

Consumers demand a great end-to-end experience. This includes not only the interaction between the consumer and retailer throughout the experience, but the "moment of truth" -- consumer point of contact with the project. They are willing to subscribe only when they get tangible benefits, such as lower costs or increased personalization.

*T*here is also a psychological component to subscription shopping. Psychologists refer to this as "novelty seeking." According to a 2006 survey by Bunzeck and Duzel, reward and pleasure seeking systems (like subscription boxes) play into the basic elements of human psychology. The researchers identified the area in the brain that is responsible for alignment associated with reward and pleasure seeking. Researchers further noted that humans especially desire services that are both convenient and novel. As a matter of fact, 54% of subscription shoppers find the novelty of the items available for purchase very appealing. **page three**

Finally, there are important triggers that must be experienced by the consumer in order to instigate and continue a subscription shopping experience.



Churn is the cancellation of services that do not deliver a superior experience, including getting value for the money spent. Consumers are much more likely to cancel when they can't customize order volumes to match their actual requirements. Nearly 40% of subscribers have canceled a subscription. These cancellations are equal in all areas of subscription shopping -- replenishment, curation and access. More than one-third of consumers canceled a subscription in less than three months of subscribing. Over half canceled within six months of their initial subscription. Meal kit categories seem to have the highest churn rates. Over 60% of consumers cancel these subscriptions within the first six months. Replenishment services have the highest long-term subscription rates with 45% having subscribed for at least one year. This is one of the challenges facing subscription shopping services as there is a high cost to replacing lost subscribers.

Interest in subscription shopping continues to grow. There are three, significant trends that can be attributed with the creation of subscription shopping:

- Increase in popularity of e-commerce
- Rise in use of social media
- Growth of consumer comfort with paying for value over time

Churn rates are just one of the trends that retailers will have to tackle in the coming years. There are also a number of other trends that consumers will see in regard to subscription shopping. These are as follows:

- Focus on increasing the quality of the end-to-end experiences
- Increase in the number of men subscribing
- Expansion of the worldwide market
- Emphasis of quality over quantity
- Continuation of popularity of niche products
- Domination of word-of-mouth marketing and online reviews in triggering new consumers
- Exploration into subscription shopping services by more traditional retailers
- Extend use of artificial intelligence to match the product to customer's desire
- Struggle continues with churn-effect

**RESOURCES:** *(retrieved January 21, 22 and 23, 2020)*

- <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/thinking-inside-the-subscription-box-new-research-on-ecommerce-consumers>
- <https://www.forbes.com/sites/gregpetro/2019/04/12/why-subscription-boxes-are-here-to-stay/#23f09a957037>
- <https://clutch.co/logistics/resources/subscription-box-service-statistics> <https://pitchbook.com/news/articles/the-science-and-data-behind-the-subscription-box-craze>
- Stitch Fix
- Gwynnie Bee
- Thread Up
- Owl Cart
- Dia.com
- Infinitely Loft
- Trunk Club
- Rent the Runway
- Toy Library
- Book of the Month

# Clothing Subscriptions and Rental Boxes

From Gwynnie Bee® and Stitch Fix® to Thread Up® and Trunk Club®, there are many different subscription boxes in the area of clothing. There are boxes designed for both men and women. Some of the boxes are “try before you buy” and others are rentals. Some carry only plus-size, petite, tall or maternity clothing. Some are name-brand clothing, exclusives, high-end and even second-hand. Some are for a specific type of clothing or accessory, such as athletic wear, bras and lingerie, shoes, socks, designer jewelry, leggings or handbags. Regardless, there are several things that one needs to consider before subscribing:

## MEMBERSHIP

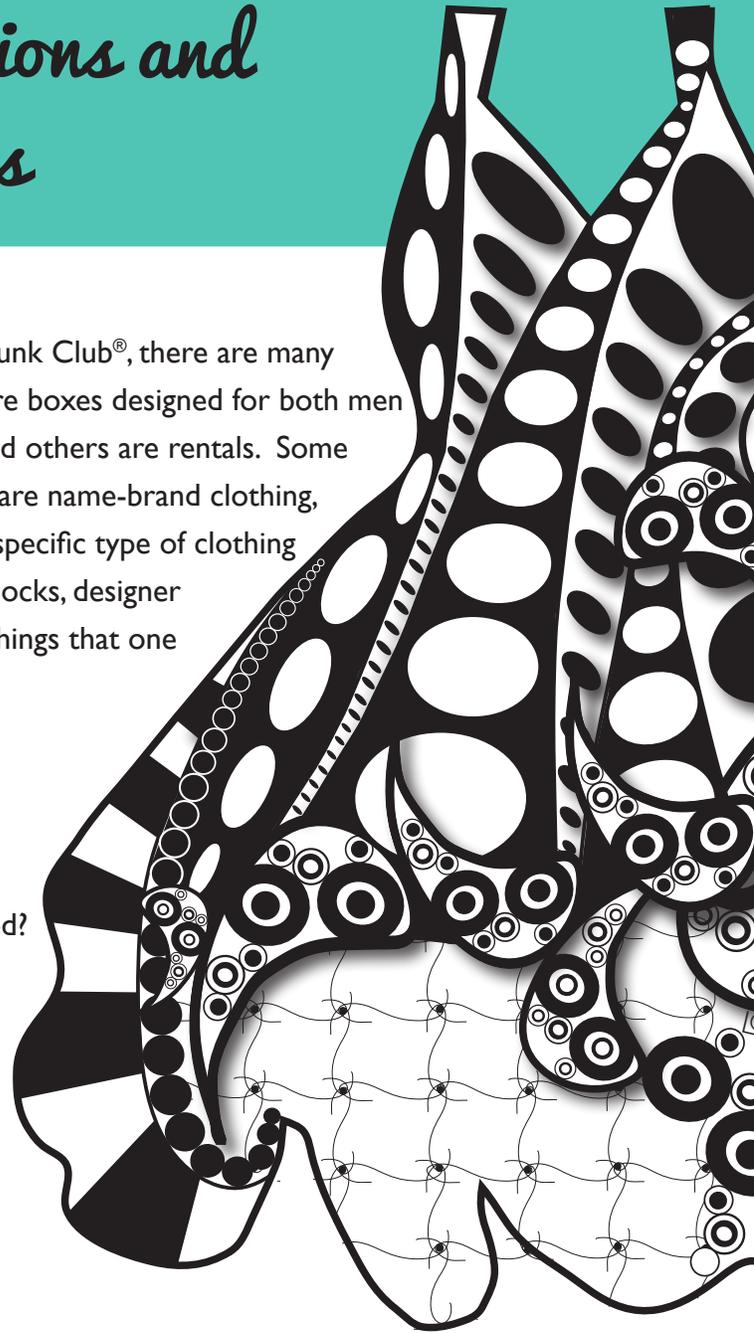
- Is membership fee/monthly subscription required?
- Is a style profile offered/encouraged?
- Is a members-only discount on purchased clothing offered?
- Are there different types of membership plans?
- Can you buy single items?

## BILLING

- What does it cost? Is it in my budget?
- Is there a styling fee?
- If I purchase something from my subscription box, is the styling fee applied to this purchase?
- If I don't like anything from the subscription box, is the styling fee waived or rolled over?
- What is the cancellation policy?
- Do you receive a discount if you purchase everything in your box?
- What is the price range of the clothing?
- How and when is my credit card charged?
- Is rental insurance included in the event that the clothing gets damaged or heavily soiled?

## SHIPPING AND RETURNS

- What is the cost of shipping and returns?
- What are the shipment dates? Can I select alternatives, if and when I need to?
- Is there a cost for shipping an exchange?
- What is the return policy?



## SHIPPING AND RETURNS *continued*

- How many days to decide if an item is going to be kept or returned?
- Can the return date be changed?
- Can this subscription be set up for automatic deliveries?

## GENERAL

- Can you request specific pieces?
- What is your customer service policy?
- Can you add extras to your order?
- How do I make a referral to a friend?
- Is there an incentive for referring new clients?
- What is the procedure for giving feedback to the personal stylist?
- Can you request to keep the same stylist or change the stylist?

**R**ental subscriptions have some similarities, as well as some major differences, than a subscription box. With rental subscriptions, customers select which articles of clothing that they want to rent. Rental services expand beyond clothing to include other projects such as toys (Toy Library) and books (Book of the Month and Owl Cart), for example. With other clothing subscription services, a personal stylist selects the articles of clothing based on your membership plan and information in your style profile. Like other services, rental subscriptions allow you to experiment with different styles and try on items in the comfort of your own home. Most will offer a variety of sizes, including plus, petite, tall and maternity. All give you the option to purchase those rental items that you love -- most at a discounted price. When using a rental subscription, one should consider the questions above regarding membership, billing, shipping and returns and other general information. The following should also be taken into consideration when deciding if rental subscriptions are the best option:

- When does the rental item have to be returned?
- Can I rent the same item again?
- Do items have to be “booked” in advance? If so, how far in advance?
- If you required to build a “virtual closet”, how many items must I select?
- Can priority be given to specific clothing items?
- If I really like an item, may I purchase it? If so, is there a discount?
- Are backup sizes sent to ensure a perfect fit? If not, how may size exchanges can I make?
- How are the garments cleaned between wearings?
- Am I responsible for cleaning a garment before I send it back?

# Meal Kit Delivery Subscriptions

**F**rom innovative start-up concept to billion-dollar industry, meal-kit delivery subscription services are an increasingly popular option for those looking to reduce the stress of home meal preparation. First introduced to the U.S. in 2012, there are now more than 150 meal-kit delivery subscriptions for American consumers to choose from.

## WHAT IS A MEAL-KIT DELIVERY SUBSCRIPTION?

A meal-kit delivery subscription is a fresh food subscription service. The company sends customers pre-portioned and sometimes partially-prepared food ingredients and recipes to prepare home-cooked meals. The consumer places an order and the pre-measured ingredient meal-kits are delivered directly to their door.



- Saves time in meal planning and shopping for food
- Simple recipes and clear food preparation instructions
- More economical than dining out or food delivery
- Saves time in food preparation
- Good food quality and taste with varying menus
- Helps you adhere to a healthy diet with healthy recipes
- Home cooked meals are usually lower in fat, cholesterol, sodium and calories
- Diet preferences: Many services offer choices such as children's meals, vegetarian, paleo, low-carb, and vegan and others offer organic and non-GMO food sources
- Inexperienced chefs and kitchen newbies who want to cook for themselves can learn basic (and even not-so-basic) culinary skills
- Can introduce you and your family to new foods, new cuisines and exciting menu possibilities

## CHOOSING THE BEST OPTION

When choosing the best meal-kit delivery subscription service, there are several things to consider before making the final decision.

### EASE OF ENROLLMENT

Is online enrollment quick and easy?  
Is the website easy to navigate?

### SUBSCRIPTION REQUIREMENTS

How many meals do you have to order and how often – weekly or monthly? Requirements can range from 2 meals / 2 plates to 12 meals per week or a certain number of meals each month.

### PRICE PER MEAL

Meal-kits can vary in cost from around \$7.00 / serving to \$10.00 - \$12.00 / serving. Sales, bulk discounts, and introductory offers can lower the cost.

### SHIPPING

How much is the shipping fee? Most services charge shipping but some include it with a certain purchase amount.

### FLEXIBILITY

Can you choose to skip a week or pause your subscription easily? Can this be done via website or app or do you have to call or email? Can you cancel at any time? What are the service's terms?

### NUTRITION

Is nutrition information readily available and easy to locate? Are the portion sizes adequate? Does the service offer recipes for those with dietary restrictions or preferences?

### MEAL PLANS

What kind of meal plans are offered? 2-person, family, veggie, diabetes-friendly, etc.?

## **MENU SELECTION**

How many meal choices are offered each week for you to select from? Is there a wide range of meals within the varying meal plans?

## **CUSTOMER SERVICE**

Is it easy to contact customer service?  
Is there a FAQ section?  
Does the meal-kit subscription have good customer ratings?

## **PACKAGING**

How well does the company pack their boxes, and how much of the packaging is recyclable? Is the box well-packed with enough insulation and cooling packs—and no room for the meals/ingredients to shift around?

By keeping these things in mind, you can select a meal-kit delivery subscription that meets all your needs while providing great value for the money.

### **RESOURCES:** *(retrieved February 16, 2020)*

- <https://foodboxhq.com/blog/history-future-of-meal-kits/>
- <https://www.verywellfit.com/complete-guide-to-meal-kit-delivery-services-4136742>
- <https://www.moneyunder30.com/meal-delivery-comparison>
- <https://www.pcmag.com/categories/meal-kits>
- <https://www.cnet.com/news/the-best-meal-kit-delivery-services-in-2020-blue-apron-home-chef-hellofresh/>
- <https://thewirecutter.com/reviews/best-meal-kit-delivery-services/>

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Toothpaste

# Toothpaste



Georgia 4-H Cotton Boll and Consumer  
Judging

You can keep all of your teeth healthy and looking good by brushing and flossing and by having regular professional checkups! You should brush your teeth with a soft toothbrush and pick toothpaste that meets your needs.

But which toothpaste should you buy? There are more than 110 toothpastes on the market today! Toothpaste companies try their hardest to sell their brand promising whiter teeth, less sensitive teeth or plaque free teeth! How do you choose?

You should choose a toothpaste to meet the needs of your teeth. Here we will discuss some of the basic things toothpaste can do for us: cleaning vs. plaque fighting, giving us fluoride vs. fighting gingivitis and tartar and if cost should be a determining factor.

## **Cleaning**

Toothpaste's cleaning ability depends on how good it is at removing surface stains resulting from different food and drinks. Your teeth are cleaned by the abrasive ingredients in the toothpaste rubbing against your teeth. One abrasive that can be found in toothpaste is baking soda. Some toothpastes use between 50-60% while others use as little as 1%. You should be careful when choosing toothpaste that has a rough abrasiveness. Tooth enamel is the hardest substance in your body, but once any decay or cracks have formed, enamel will not heal on its own. Tooth enamel can usually take the harshness of a rough abrasive, but your dentin can be damaged by harsh abrasives. Dentin is the softer tissue below your gum line that's exposed as your gums become damaged by improper brushing.

## **Plaque**

Bacteria are always present in your mouth. When they are not removed by brushing and flossing, bacteria stick to your teeth and multiply into larger and larger colonies called plaque. Plaque forms as a soft, sticky film on your teeth. Plaque even begins growing minutes after you brushed. This sticky plaque damages teeth in two ways. First, food particles, especially sugars, stick to it. The plaque uses that food to grow more bacteria and to produce acid. Second, the plaque holds the acid against the tooth surface. If it is not removed, the acid will eventually eat through the tooth enamel, causing a cavity. When you use toothpaste that attacks plaque, it actually fights the germs that cause cavities.

## **What is fluoride?**

It is very important for you to brush with toothpaste that contains fluoride. Fluoride is the ingredient found in toothpaste that actually fights cavities (not the germs). When plaque acids start to dissolve tooth enamel and create the first trace of a cavity, fluoride can help minerals in your saliva reenter the tooth to repair the damage.

You should brush with fluoride toothpaste for 2 minutes at least twice a day using a soft bristled toothbrush. (Most people only brush for a minute-at best!) It is very important to find toothpaste that releases its fluoride within the first minute of brushing. A lucky thing is that most of them do.

So how do we know if toothpaste meets the criteria for quick release of fluoride? Read the label! Look for the ADA (American Dental Association) seal. Read it to see what properties it covers (plaque, tarter, etc.).

### **Gingivitis**

When your gums begin to swell and the bones supporting your teeth get infected this results in tooth loss. This can happen if you don't brush your teeth! The first sign of this disease is called Gingivitis. Gingivitis is marked by swollen, bleeding gums and bad breath. This stage is painless and, unfortunately, many people do not seek help from a dentist. As this disease worsens, the bones supporting the tooth and ligaments become affected and the teeth eventually fall out. Researchers recently found that stannous fluoride (an ingredient in some toothpaste) can reduce gingivitis by perhaps 10-20%. However, this chemical may leave a stain on your teeth that a dentist or hygienist must remove.

### **Tackling Tartar**

Tartar is plaque that has combined with food particles and minerals in saliva to form a hard, yellowish mass only a dentist or hygienist can remove. If you keep plaque away by brushing thoroughly and flossing daily, you may form less tartar between cleanings. Some people do make tartar rapidly, either because of body chemistry or because they do not brush their teeth enough or they brush their teeth wrong. Tartar control toothpastes can help. They contain a chemical that slows the buildup of new tarter above the gum-line. Take note: No tartar control toothpaste can reduce tartar that's already on your teeth or remove tartar that is below your gum line - where tartar causes gum disease.

### **Sensitive Teeth**

As gums recede and expose dentin, the newly uncovered section of tooth may be very sensitive to heat, cold or pressure. Some toothpastes on the market can now block the nerve endings causing the pain. Take note: toothpaste for sensitive teeth is generally appropriate for only a few weeks!

### **Cost**

Toothpastes vary in price from 44 cents to \$10.28 per month, based on the national price average for brushing twice daily. Price does not always correlate to performance!

When weighing claims that toothpaste makes, take the ADA seal seriously! It's a sign for consumers that says exactly what the toothpaste will do. If a toothpaste does not carry the ADA seal, the toothpaste may be making untrue promises or exaggerating.

## **Types of Toothpaste**

There are many “specialty” toothpastes on the market that consumer can select from. Each is designed to meet individual needs. These include:

- *Whitening Toothpaste* -- Whitening toothpastes contain chemical or abrasive ingredients to help remove and/or prevent stains from forming on the teeth. When used regularly, whitening toothpastes can reduce the appearance of stains and make your teeth look whiter.
- *Antimicrobial* -- Antimicrobial toothpastes may contain stannous fluoride, an antibacterial agent that also provides anti-cavity and sensitivity benefits.
- *Tartar Control Toothpaste* -- Tartar-control toothpastes may contain sodium pyrophosphate which helps to keep tartar from forming on teeth or better yet, sodium hexametaphosphate, which helps prevent tartar and stain, above the gum line. But if you already have stubborn tartar, tartar control toothpaste won't remove it. You'll need a professional cleaning from your dental hygienist. It's beneficial to start using tartar-control toothpaste after a dental checkup.
- *Desensitizing Toothpaste* -- Tooth sensitivity often results from weakened enamel or the exposure of roots due to receding gums. Desensitizing toothpastes work by creating a barrier and blocking irritants from reaching the nerves. Avoid whitening toothpaste if you have sensitive teeth as the chemical they contain may cause irritation or worsening of your symptoms.
- *Fluoride Toothpaste* -- Fluoride is important to your dental health and can be added to any type of toothpaste. Not only does fluoride strengthen teeth against dental cavities but it remineralizes teeth worn by acid and fights sensitivity. Fluoride toothpaste is an excellent choice for those who need a little extra help protecting themselves from cavities -- especially children and seniors. Fluoride toothpastes are also recommended for those without the benefit of community water fluoridation.
- *Gum Health Toothpaste* -- Dental plaque found under the gum line can lead to gum disease. Although gum health toothpastes are not a professional gum disease treatment, they can control dental plaque and help prevent the possibility of gum disease in the future.
- *Fresh Breath Toothpaste* -- Like many mouthwashes, fresh breath toothpastes are designed to mask bad breath but do not actually treat halitosis.
- *Natural Toothpaste* -- For those who are uncomfortable brushing with chemicals, natural toothpastes may be an option. These contain all-natural ingredients but have varied results. Some natural toothpastes may not contain fluoride, so you should check the label before buying the product.
- *Children's Toothpaste* -- These toothpastes have been developed to meet the special needs of children. As children are extremely susceptible to dental cavities, their toothpastes often contain fluoride. Younger children should only use a small amount of toothpaste to avoid ingestion and prevent dental fluorosis and should be always supervised during brushing. Many children's toothpastes are especially high in sugar, so be sure to keep an eye on their labels.

- *Baking Soda Toothpaste* -- Baking soda has traditional significance because it was once used to clean teeth. Although baking soda has no therapeutic value, some prefer it because they enjoy the fresh feeling they get after brushing with it.
- *Gels* -- Some gels contain mouthwash which may be why some prefer the consistency or taste of a gel over a toothpaste. While gels may make your mouth feel fresher, there's no proof that they clean teeth better than toothpastes. Also, many gels do not contain fluoride.
- *Tooth Powders* -- Dry powders are also available to clean your teeth but they are often more abrasive than toothpaste.
- *Organic* - Organic toothpaste is derived from the use of all natural ingredients such as mint and other similar herbs that are also natural breath fresheners. They are not formulated to be like a form of “soap” for your teeth like regular toothpaste is. Organic toothpaste contains all of the needed elements without the potentially harmful chemicals. Organic toothpaste can be a wise and healthier choice for those who would like to minimize the amount of chemicals they use for oral health. The all -natural solutions in organic toothpaste contain natural antibacterial ingredients such as spearmint and peppermint oils. These help to eliminate bacteria and keep your mouth healthy.

#### **Overall Recommendations of What to Look for When Buying Toothpaste:**

- *ADA Accepted.* When selecting a toothpaste, usually you would look for a product that is ADA accepted. This means that the product has been tested clinically and it is as safe as well as efficient toothpaste or dental product.
- *Fluoride.* The ADA advises everyone to use fluoride toothpaste. Fluoride in toothpaste helps to fight off cavities in your teeth. For the best protection, find a toothpaste with at least 1,000 parts per million fluoride
- *Pick a product that cleans well.* Most people, who do not have special requests of their toothpaste, can choose toothpaste that fits in their price range and personal preference.
- *Plaque or tarter control.* For plaque removal, the best bet is to brush correctly. Plaque and tarter control toothpaste can help people who have problems with plaque built that is excessive.
- *Sensitive teeth.* Less abrasive toothpaste might be a better choice for those people who have tooth or gum erosion or sensitive teeth. Potassium nitrate, is very effective ingredient for sensitive teeth. Potassium nitrate should be listed in the ingredients of good sensitive toothpaste.

- *Whitening:* Containing polishing or chemical agents that remove surface stains, this toothpaste is able to help maintain the natural color of your teeth.
- *Taste.* Some consumer may like bold, fresh-flavored toothpaste, but others may not. Remember that the flavor of the toothpaste has an effect on how much we brush. Avoid heavily sweetened toothpaste.
- *Organic.* Look for one without fluoride, sodium laurel sulfate or saccharin.

Choosing toothpaste can be a daunting task. There are so many brands and types of toothpaste on the market, and so many advertising claims, that it can be difficult to work your way through the confusion. Understanding the facts behind the hype can make your decision on which toothpaste to choose a bit easier to make. Read the label before purchasing your toothpaste. Look for any unfamiliar ingredients while ensuring that the ingredients that you want are present. Then, choose a toothpaste that best meets your individual needs.

Sources:

Consumer Reports

American Dental Association

Prepared by: Cheryl Varnadoe, Georgia 4-H Faculty, February, 2018



# Wearable Technology

# Wearable Technology



Prepared By:  
Matthew Hibdon  
FCS Classic Committee Chair

## 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 pedometers to watches to headphones.

Wearables can meet a variety of needs for consumers: fitness trackers, fashionable accessories, communication devices, sources for additional news and social media, hands-free connectivity, and increasing accessibility for individuals.

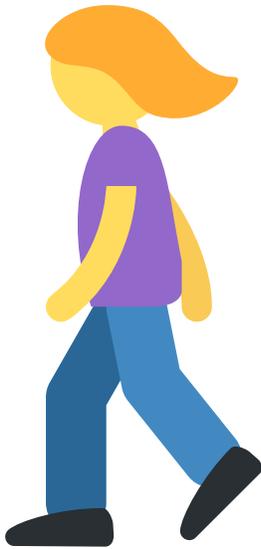
## HOW DOES WEARABLE TECHNOLOGY WORK?



Wearable gear, in the form of watches, pendants, clip-on devices, headwear, and more, integrates the form and function of multiple devices. Most of these work in a similar manner. Multiple sensors capture changes in 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 cloud storage for further processing and reporting.

## WHAT ARE EXAMPLES OF WEARABLE TECHNOLOGY?

Pedometers, fitness trackers, smart watches, wireless headphones, and action cameras are all popular wearables.



### PEDOMETERS

Pedometers are some of the original technology in this industry. While their main feature is only to track 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.

### SMART WATCHES

Smart watches primarily tell time while also displaying information supplied by the wearer's smartphone, such as email, SMS, 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.



## WHAT ARE EXAMPLES OF WEARABLE TECHNOLOGY? (CONTINUED)

### 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.



### WIRELESS HEADPHONES

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.

## A VARIETY OF APPS (& APPLICATIONS)

Driven by the healthcare industry, the corporate sector, and consumer demand, the wide array and number of applications ranging from health and fitness monitoring to employee monitoring and safety will increase very quickly. According to *The Wearable Life 2.0* report from PricewaterhouseCoopers (PWC), health is consumers' number one motivator for purchasing wearable technology. The next top two factors in making the decision to buy wearables are affordability and the perception that using the devices will lead to increased productivity by the wearer.

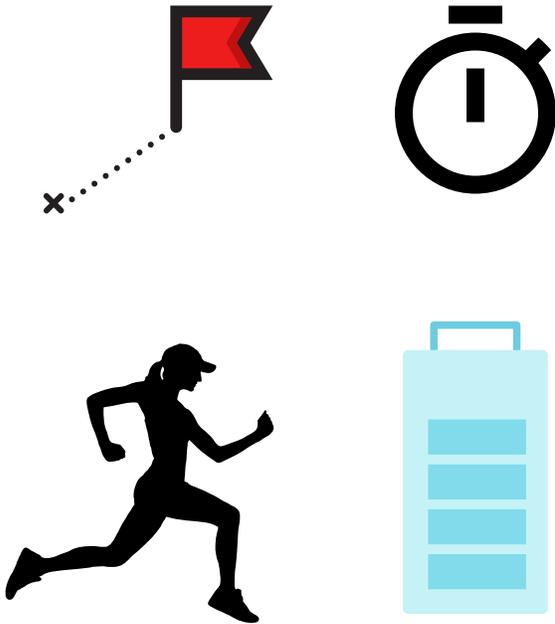


## HOW CAN WEARABLE TECHNOLOGY IMPROVE YOUR HEALTH?

Fitness trackers gather in-depth information about wearers' physical activity that they would not otherwise know, helping them monitor their progress towards or away from their health, fitness, and athletic goals. Most fitness wearables sync with apps that help users stick to healthier eating and sleeping habits as well. Wearables can also make it easier for people with chronic diseases (like diabetes) to more accurately track their health and maintain proper levels of medication.



## WHAT ARE SOME IMPORTANT FEATURES TO LOOK FOR IN AN ACTIVITY TRACKER?



A heart rate monitor, timer, GPS tracker, and convenient connectivity features are some basic essentials to consider. Although most fitness trackers monitor steps taken, the advanced models take speed and altitude into account. Accelerometers are small motion sensors inside wearables that detect the orientation of the device. By analyzing motion and GPS information, the device can assess if the user is sitting, standing, or running. Additionally, the accelerometers can be used to interact with apps and/or games. An attractive interface and automatic charting of performance data are both helpful. For example, some trackers convert physical activity to calories burned. A long-lasting battery is another advantage, as is a waterproof design for use while swimming.

## WHAT CONSUMERS MUST DO

Make sure that any wearable device you wear already has a good track record. Keep your own information protected by using strong passwords and changing them regularly. Ask the question, "Do I need another device (i.e.- a mobile phone) to make my wearable device have full functionality? Since the price of wearables can vary depending on the type of device, consumers must be aware of what features they most need in relation to the price for those features. The same goes for battery life. Consumers must look for a wearable that has enough battery life to meet their needs. They may consider: the type of charger needed, the length of time to a full charge, and if the device is still useable with a minimal or empty charge.

## WHAT ARE RISKS OF USING 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.
- **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. The potential to help people get and stay healthy using wearables grows every year.

Consumers have only started to see the power of wearables. Understanding the past and current state of wearable technology will help you navigate the future wearables market and make informed decisions.

