

Welcome to Blue Willow Heaven Coffee of the Black Hills



Coffee Tips for the Connoisseur or Java Junkie

From: <http://blackbearcoffee.com>

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The majority of information in this booklet is from resources at <http://www.blackbearcoffee.com>.

Coffee Legend

Legend has it that a goat herder named Kaldi, in what is now Ethiopia, would periodically notice his goats frolicking and almost dancing. He connected this activity to a small tree with low hanging, red and green, cherry like berries.

People then proceeded to eat the beans and leaves and to create a variety of dishes and beverages from the fruit and leaves of what we now call the Arabica coffee tree. Many trace the beverage made from roasting the two seeds inside the berry to the 16th century when coffee, as we know it, was born.

I hope you will visit us often at Blue Willow Heaven Coffee of the Black Hills. We have many blends and coffee flavors for you to try.

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Top 10 Coffee Producing Countries

The following is based on the number of 132 pound (60 Kilogram) bags produced during the 1997-98 crop year, according to the U.S. National Coffee Association.

Brazil (22.5 million bags)

After arriving from French Guiana in the early 18th century, coffee quickly spread and thrived in Brazil. Today Brazil is responsible for about a third of all coffee production, making it by far the heavyweight champion of the coffee-producing world. Though many connoisseurs believe that Brazil's emphasis on quantity takes a toll on quality, many also praise the country's finer varieties. Brazil is the only high-volume producer subject to frost. The devastating 1975 frost, in particular, was a boon to other coffee-growing countries. Two 1994 frosts raised prices worldwide. **Top Coffees:** Bahia, Brazil Bourbon Santos [Coffee Review]

Colombia (10.5 million bags)

Colombia is the only South American country with both Atlantic and Pacific ports...an invaluable aid to shipping. The crop's economic importance is such that all cars entering Colombia are sprayed for harmful bacteria. Colombia's coffee grows in the moist, temperate foothills of the Andes, where the combination of high altitude and moist climate makes for an especially mild cup. **Top Coffees:** Medellin, Colombian Supremo [Coffee Review], Bogotá

Indonesia (6.7 million bags)

The Dutch unwittingly gave coffee a nickname in the late 17th century, when they began the first successful European coffee plantation on their island colony of Java (now part of Indonesia). Top-grade Arabicas are still produced on Java as well as on Sumatra, Sulawesi, and Flores, but the Indonesian archipelago is most notable as the world's largest producer of robusta beans. **Top Coffees:** Java Estate [Coffee Review], Sumatra Mandheling [Coffee Review], Sulawesi (Celebes Kalossi)

Vietnam (5.8 million bags)

French missionaries first brought coffee to Vietnam in the mid-1860s, but production remained negligible as late as 1980. In the 1990s, however, Vietnamese coffee production has been ratcheted up at a furious pace. At least one trader worries that the industry is growing too quickly for its own good. "The crop's growing so fast that there's not an equivalent growth in processing, so you're looking at quality problems," he said from Daklak, Vietnam's main coffee-growing region. **Top Coffees:** Robusta

Mexico (5 million bags)

Coffee came to Mexico from Antilles at the end of the 18th century, but was not exported in great quantities until the 1870s. Today approximately 100,000 small farms generate most Mexican coffee, and most of the beans come from the south. Mexico is the largest source of U.S. coffee imports. **Top Coffees:** Mexican Altura Coatepec [Coffee Review], Liquidambar MS, Pluma Coixtepec

Ethiopia (3.8 million bags)

The natural home of the Arabica tree and the setting for most of coffee's origin legends, Ethiopia is Africa's top Arabica exporter and leads the continent in domestic consumption. About 12 million Ethiopians make their living from coffee, whose name is said to be a derivation of "Kaffa", the name of an Ethiopian province. **Top Coffees:** Ethiopian Harrar Longberry, Sidamo, Ethiopian Yirgacheffe [Coffee Review]

India (3.8 million bags)

According to legend, India is the birthplace of coffee cultivation east of Arabia. Today coffee production is under the strict control of the Indian Coffee Board, which some say reduces economic incentive and thereby lowers quality. **Top Coffees:** Mysore, Monsooned Malabar

Guatemala (3.5 million bags)

German immigrants initiated serious coffee cultivation in Guatemala in the 19th century. Today the country's high-grown beans, particularly those grown on the southern volcanic slopes, are among the world's best. **Top Coffees:** Guatemalan Antigua, Atitlan, Huehuetenango

Côte d'Ivoire (3.3 million bags)

In the mid-1990s Côte d'Ivoire was the number five coffee producer and second largest robusta producer. Why the decline? Some speculate that an emphasis on volume and a lack of investment and planning have lowered quality and per-acre productivity. Today most exports end up as mass-market coffee in Europe, especially France and Italy. **Top Coffees:** Robusta

Uganda (3 million bags)

Though Uganda grows precious little Arabica, it is a key producer of robusta. That humble, hardy bean accounts for 75 percent of the country's export revenue and provides employment for 80 percent of all rural workers. Efforts to diversify aside, Uganda is likely to remain loyal to coffee production for the foreseeable future. **Top Coffees:** Bugisu



The top ten coffee growing regions are labeled in **Yellow**.

Learn more about coffee at: <http://www.nationalgeographic.com/coffee/ax/frame.html>; or the National Coffee Association USA at: <http://www.ncausa.org/i4a/pages/index.cfm?pageid=1>

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The Difference Between Arabica and Robusta

Most roasted coffee beans tend to look alike, but don't let looks fool you. (Remember when your Mom said that very same thing?) The same goes for coffee. There are many varieties of coffee beans. The two primary beans I will discuss are Arabica and Robusta.

If you read the previous chapter on the top 10 coffee countries, you have an idea which countries grow Robusta. Some countries produce both types of coffees; like Brazil and India.

So what is different between the two? Robusta is easier to grow and much of it can be grown in lower altitudes. It is also less vulnerable to weather and pests, which makes it easier to cultivate and less expensive. The fruit of the Robusta grows much faster than the Arabica, which yields more crop per tree. It yields fruit in 2 years vs Arabica fruit yields in 4 years.

Robusta is primarily grown in Indonesia and Africa; whereas Arabica is grown in Latin American. Robusta has a strong, harsh taste, oftentimes grainy with a nutty aftertaste. It also contains twice the amount of caffeine as Arabica beans. The Robusta bean is smaller and more circular in shape, while the Arabica is larger and more elliptical in shape.

Not all Robusta beans are alike; just as not all Arabica beans are alike. Some Robusta is of high quality, valued for their espressos. However, the majority of Robusta is used as a blend, or for instant coffee. You will find most of your ordinary coffee in the supermarket are 100% Robusta, or a blend of Robusta with little percentage of Arabica. That is why they can sell it so much cheaper than the true 100% Arabica coffee.

It is known throughout the coffee world that a coffee that gained the "superior" label are a mixture of a good Robusta beans and Arabica beans.

Colombia only produces the Arabica bean. Papua New Guinea is also known for their Arabica bean.

Arabica beans are much more sweeter in taste; more like berries, fruit, and sugar. The acidity in the Arabica bean is higher and have a winey taste, which is its superior characteristic.

It can take two years for an Arabica fruit tree to mature, sometimes longer since they are only grown at High Altitudes. You can also find Arabica in supermarkets, but just because it's labeled Arabica does not mean it's a high quality Arabica bean.

The coffee experts are those who know their coffee plantations and how well the owner takes care of their crops. There are just as many “bad” Arabica beans as there are “bad” Robusta beans.

All in all, the Arabica bean is considered a higher quality fruit.

Roasting Coffee Tips

You should always roast up to at least 400 degrees or more. 390 degrees and less leaves a sour taste to coffee.

Words to Describe various coffees. Know these and you'll become a professional cupping cupper. (Whatever)

Body - Mouthfeel

Body = sensation of heaviness in mouth

Mouthfeel = sensation of texture: buttery, gritty, oily, smooth, thin, watery, lean, astringent

When coffee approaches medium to dark brown roast - body **INCREASES** and **Mouthfeel** becomes **ROUNDER AND FATTER!** French Roast would be **lean and gritty**.

Aroma = Peaks in medium to medium dark roasts. Lessons and simplifies in very dark roasts! **Qualities** of coffee is immediately apparent in the aroma than in the taste.

Complexity = Strong sensations like acidity and sweetness coexist. Complexity is at it's peak in Medium to Dark Roasts.

Depth, dimension = Depth describes resonance (deep, full, reverberating) or sensual power, **BEHIND** the sensations. So -- consider if the coffee opens up a sensation of ringing, echoing to the palate, or simply present themselves to the palate **BEFORE** standing **PAT** or **FADING**.

Origin, distinction, varietal distinction, varietal character. All of these describe the Depth and dimension of coffee.

Powerful, dry, berry-toned acidity would describe **Kenyan** coffee.

Ringing acidity notes and clean balance describe Costa Rica coffee.

Extravagant floral and **citrus tones** describe the depth - dimension of **Ethiopian Yirgacheffe** coffees.

Low Key, malty richness describe the depth - dimension of **Sumatra**.

Sweet and **Round** are good blenders.

Varietal distinction - This will be best displayed in light to medium tones.

Balance = Coffees where acidity is strong, but not overwhelming. The body is substantial (real and tangible), and no taste idiosyncrasy dominates.

Storing Coffee Tips

There is so much controversy on the storage of coffee. Can you freeze it? Some say yes, others say no, don't freeze it. Well, nothing is proven so here's my take and summary from what others have said.

Buy your coffee beans fresh. The most important thing is not to let the coffee come into contact with the air around you. Don't let it come into contact with moisture. Last, but not least, don't let coffee beans come into contact with light.

What? If I open the bag, it will let the air in, which will cause oxidation in the coffee beans. Moisture? How does fresh roasted coffee get moisture, you ask? If you keep taking it in and out of your refrigerator, or freezer, it will create the condensation of water from room temperature air. Which means, if you open the bag and allow light to come into contact with the beans, it will increase the chemical activity on the surface of the beans.

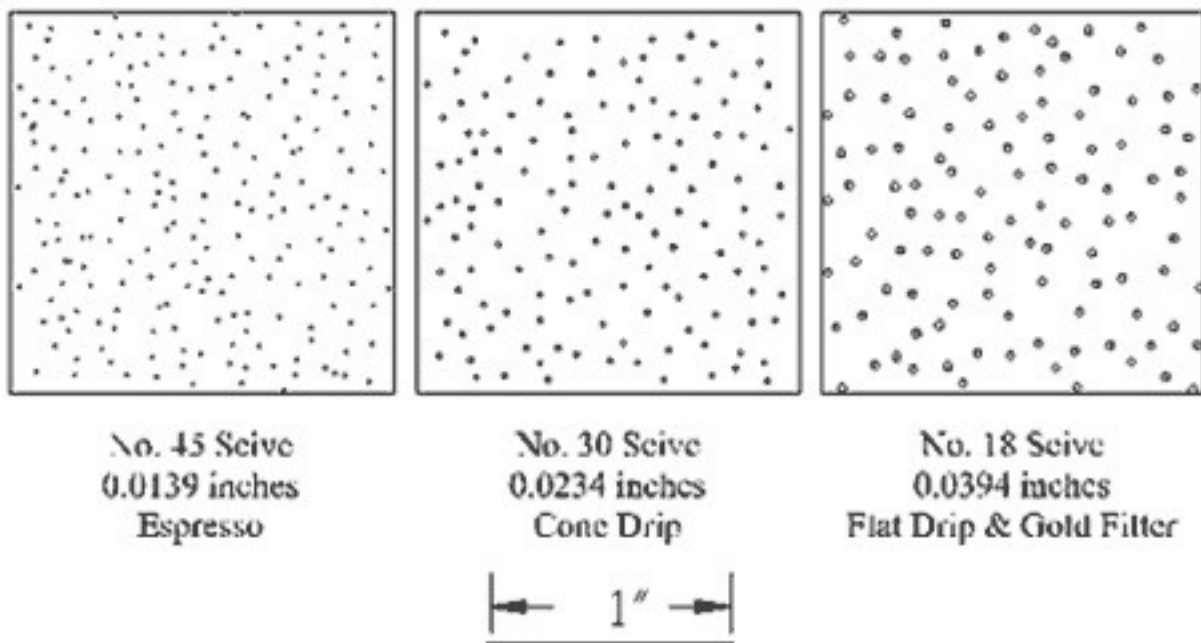
Here is what I found if you purchased more coffee than you can use in a week: Grind it immediately; divide into individual portions for a day; put into sealed bags, and store in an airtight container in the freezer as soon as possible. Use only what you need at any one time, and never let the other packages thaw or refreeze. That's the best advice I can give you.

Someone else did this, so I decided to try it. It was just as much a surprise for me to find out that by grinding the coffee, and freezing it in small portions, it kept the flavor of the fresh roasted coffee much better than freezing the beans and grinding them once they were at room temperature.

Never grind frozen beans in your burr grinder as it will eventually rust the burrs.

Grind size

The picture below is the type of grind you should use for the various types of brewers. The size of the particles depends on the brewer used. You may not think it's important, and you may have heard that the finer the grind, the more flavor. That is misleading and untrue. **The finer you grind your coffee, the more over-extraction you have.** If you use an espresso grind in a cone drip coffee pot, it will slow the flow of the water and be over-extracted and bitter. If it's a coarse grind, the water will flow too rapidly, and then you get under-extracted coffee. If you use a French Press, you need a coarse grind, and you need more coffee as you would the drip method. Experiment to your taste. Increase the grind size to eliminate sediment.



Grinders

What's the best grinder to buy? Take it upon yourself to research. A blade grinder, chops, spins and cuts your coffee beans inconsistent. It spins so fast that it leaves a powdery residue, which gives your coffee a bitter taste. It also tends to burn your coffee beans.

The next type is a burr grinder. Burr grinders are very consistent and never burn the coffee. Most can be adjusted from coarse to powder fine. They are slow, but great to have! (You may remember the old hand crank burr grinders your grandmother had. See picture below.)

Then there is the disc and conical grinders. These provide the most consistent grind of all. Unfortunately, they are more expensive. However, if you are a coffee connoisseur and purchase high quality coffee, you will find one that suits you and your pocket book.

The best one I have found is the Baratza Encore. This is a conical burr grinder which has 40 steps of adjustment. You can find it at Amazon or here at Burman Coffee.

http://www.burmancoffee.com/miva/merchant.mvc?Screen=PROD&Store_Code=BCT&Product_Code=BM&Category_Code=G

Another one, slightly less expensive, is the Capresso 560 Infinite Grinder.

<http://www.amazon.com/Capresso-560-01-Infinity-Grinder-Black/dp/B0000AR7SY>



Preparing Your Coffee

Let's talk about how most people make their coffee. You removed the coffee pot, turn on the cold tap water, and fill the pot up. Pour the water in the coffee tank and press brew to the proper setting. You just purchased some fabulous coffee you had at a coffee shop yesterday. It was \$14.95 a pound, but worth every cent! While the coffee is brewing in the drip coffeemaker you "patiently" wait for it after retrieving your cup from the cupboard. Ah... finally, it's done.

You can already anticipate that first taste. Putting the coffee to your lips, you take a slight slurp of it... Huh? This isn't what I had in the coffee shop yesterday! They must have given me the wrong coffee. Quickly looking at the bag, you see that it is the correct name of the coffee. Why does it taste so different?

There is an easy answer to a great cup of coffee! Get yourself some filtered water. We never use tap water to make our coffee. It is fresh from H₂O to Go. If you don't have access to that, you can always use a Brita water filter. Using the proper water can make a big difference in your coffee. Do not use distilled water!! All minerals have been removed and you still need minerals for a perfect extraction.

Another overlooked source is water temperature. Brewing at the correct temperature will affect the extraction of the coffee. Your brewing temperature should be 195° F - 205° F. Never use boiling water!

Brewing Your Coffee

Earlier we discussed the different grinds of coffee and how easy it is to over-extract if the grind is too fine, which is referred to as bitter coffee. Your challenge is to get the size of the grind and the extraction time as perfect to your taste as possible. The important thing is that the brewing time is controlled. I have read many times that 90% of the solubles are extracted during the first phase of the brewing process. So, it is possible to use a finer grind (not too fine), and shorten the extraction time. Here is where practice, patience, and experimentation come in to give you the perfect brewed cup.

When to grind and brew your beans once roasted

It is a good practice to never grind and brew fresh roasted beans the day of roasting. It is best to allow the fresh beans to sit and degas and age a couple of days. For an automatic drip brew coffee maker, I will let the beans age for 2 to 3 days. Some beans you may even want to let them rest for up to a week. As far as espresso goes, I prefer a lighter roast compared to darker espresso roasts. When drinking an espresso I like to let fresh roasted espresso beans sit for approximately 4-5 days.

Various Coffee Brewing Methods

Brew and Filter method is where the beans are ground somewhat coarse, placed in a container, some hot water added, and the container covered. Let it steep for 3 minutes. Longer steeping will cause it to over-extract. Stir the coffee at least 3 times during the 3 minute steeping.

Once the steeping has finished, pour it through a gold filter. It is suggested, with this method, not to use a paper filter because the paper filter will absorb some of the essential oils. You always want to extract the flavor compounds near the center of the coarse ground particles; even though the outer compounds near the surface of the particles have more exposure to the hot water. Once again, it is trial and error to your taste.

French Press is where the coarse grounds are placed in a container and hot water added. The cover is a disc, with a rod attached in the center, which is placed over the water and ground coffee. The cover has a mesh screen under the cover. You let the coffee steep for four minutes; then slowly press down on the rod, which pushes the grounds to the bottom of the container. Now you can pour your coffee into a cup.

Drip Coffeemakers are not the most desirable method of brewing coffee. The main reason is because there is less time for the water and grounds to be in total contact, usually between the 3 and 4 minute mark. If it goes over the 4 minutes, which most drip coffee brewers do, you are once again over-extracting. (Take time to watch your drip coffee maker if you have one, and notice that at first it goes right through the coffeemaker which results in under-extraction. The last of it goes through more slowly, resulting in the over-extraction.) There is an ideal extraction time that is preferred, and which we have briefly touched on. A cone filter will do a better job than the flat filter designs, but in a drip coffeemaker, even the cone filters fail. Keep in mind that different coffees will produce different extraction rates, whether they are all ground the same or not.

Only if a drip coffeemaker allows you to adjust the time of extraction would it be considered OK. The other thing that is mentioned in several articles I read was the fact that you should use a gold filter rather than paper filters. According to some, different coffees produce various extraction rates. It is said that the darker the roast, the longer the extraction time.

Percolator coffee pots are the worst. Think about how a percolator works, continually circulating the boiling water through the ground coffee, which results in over-extraction. Enough said. Get rid of it if you have one!

Brewed Coffee

One of the questions I ask people when we talk coffee is: When you brew your coffee, do you leave it on a burner? 95% will answer yes. You should be answering NO! You need to pour the coffee into a pre-warmed carafe or if you have an air pot, preheat that and pour your brewed coffee into that. When you leave it on the burner your coffee will do exactly what it's sitting on: burn, without the er.

Last, but not least, think about how you drink your coffee. Do you sip it, slurp it, or gulp it? The true way of savoring the taste of your coffee is to literally slurp it, sucking it through your teeth and letting it spray into the mouth, allowing the tongue to appreciate every volatile flavor.

One last little tidbit no one really knows about. Did you know that the smells in the air can affect the taste of your coffee? Try drinking a cup of coffee at the same time you are grinding some flavored coffee. The overpowering aromatic compounds of fresh ground coffee will affect the taste of the coffee you are drinking. The next time you have an odor in the air that affects the taste of your coffee, establish what it is. Whatever the odor, it will continue to affect your sense of taste for a time because the linings of your breathing passages have been absorbed with the other smell.

Connoisseur's Brewing Ratio												
Cups of Coffee	COFFEE TO BE USED					WATER TO BE USED						
	BY WEIGHT		BY MEASURE			Fluid Ounce s	Cup s	Pint s	Quart s	1/2 Gal	CCs (milliliter s)	Liter s
	Ounce s	Gra ms	Tea Spoon s	Table Spoon s	Cup s							
1	0.38	10.6	6	2	1/8	6	3/4	3/8	3/16	3/32	177	0.18
2	0.75	21.3	12	4	1/4	12	1 1/2	3/4	3/8	3/16	355	0.35
3	1.13	31.9	18	6	3/8	18	2 1/4	1 1/8	9/16	9/32	532	0.53
4	1.5	42.5	24	8	1/2	24	3 1/2	1	3/4	3/8	710	0.71
5	1.88	53.2	30	10	5/8	30	3 3/4	1 7/8	15/16	15/32	887	0.89
6	2.25	63.8	36	12	3/4	36	4 1/2	2 1/4	1 1/8	9/16	1065	1.06
7	2.63	74.4	42	14	7/8	42	5 1/4	2 5/8	1 5/16	21/32	1242	1.24
8	3	85.1	48	16	1	48	6	3	1 1/2	3/4	1420	1.42
9	3.38	95.7	54	18	1 1/8	54	6 3/4	3 3/8	1 11/16	27/32	1597	1.6
10	3.75	106. 3	60	20	1 1/4	60	7 1/2	3 3/4	1 7/8	15/16	1775	1.77
11	4.13	116. 9	66	22	1 3/8	66	8 1/4	4 1/8	2 1/16	1 1/32	1952	1.95
12	4.5	127. 6	72	24	1 1/2	72	9	4 1/2	2 1/4	1 1/8	2130	2.13

To determine the amount of water to be used with fractional amounts of coffee, multiply the amount of coffee by the following factors: 16 (0.0625 is the inverse factor) for

ounces of coffee to get fluid ounces of water: 16.6945 (0.0599 is the inverse factor) for grams to get CCs of water.

For example: if you have 1.2 ounces of coffee, you would multiply 1.2 times 16.0 to get 19.2 fluid ounces of water needed. 92.6 grams of coffee would require 1562 CCs (1.56 liters) of water. Use the inverse factor to determine the amount of coffee to use with an unlisted amount of water.

Surface texture influences how you perceive color. So even the fineness of grind influences color perception.

Notwithstanding, ground samples provide a much clearer method of evaluating color, which is why roasters use ground samples when implementing a color measurement system like Agron, or the like.















Here are swatches taken from the same photo above. Note the extreme difference in patchy surface color from lighter to darker roast. This specific lot of coffee is quite nice at the darker roast levels (pungent spicey/pepper notes with intensely tangy bitter-sweet chocolate). But it is at the "ugly" City roast where this coffee has true Dota Tarrazu "origin character", i.e. winery fruited notes with interesting almond and hazelnut roast taste, grape, grape skins in the finish, cherry. Roasting is not a beauty contest, and many commercial and home roasters make the mistake of roasting coffee until surface texture is even, and variation from seed to seed is more uniform.

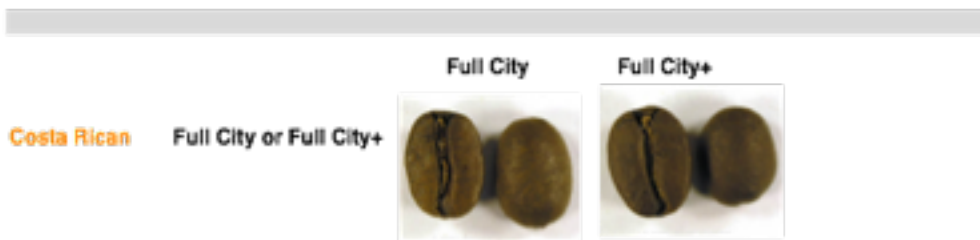
You need to roast it for cup flavors, not for roasted coffee appearance. What that specific cup character is, you decide. But at the Vienna roast pictured above (448 f finish roast temperature in the Probat L-12), tangy roast notes have eclipsed the "origin flavors" of the coffee. I would also say that this lot of our special peaberry selection is

less uniform than even I expected ... but I was happy with the cup, and that is what counts! Coffee makes you constantly overcome your prejudices and re-evaluate your own "received wisdoms" when it comes to judging cup flavors.

From Sweet Maria's website. <http://www.sweetmarias.com/index.php>

Blue Willow Heaven Blends, By Roast Type (Visual)

		City	City+
Colombian Sumatra	City+ Full City+		
		Full City	Full City+
Colombian	Full City - Full City+		
		Full City+	City+
Colombian Peru	Full City+ City or City+		
		City	Full City+
Colombian Guatemalan	City or City+ Full City+ or Vienna		
		Full City	Vienna
Guatemalan	Full City to Vienna		
		City+ or	to Full City+
Mexican Altura	City+ to Full City+		



Peru Bolivian	City or City+ Full City or Full City+	<div>City+</div> 	<div>Full City</div> 
Sumatra	Full City+	<div>Full City+</div> 	
Guatemalan Sumatra	Full City or Full City+ Full City or Full City+	<div>Full City</div> 	<div>OR Full City+</div> 

Coffee Health Positive Factors

Antioxidant - Antioxidants protect the body against toxic free radicals that cause cancers. They also control blood pressure and premature aging.

Stimulant - Caffeine can accelerate exercise performance, boost energy and increase memory function. It can also help calorie burning through changes in metabolism.

Analgesic - It contains one of the most common ingredients for headache cure.

Diuretic - Caffeine makes kidneys work better. They produce more urine which takes toxins out of the body.

Medical facts accepted as positive on coffee health:

Liver protection from cirrhosis and cancer.

Diabetes-2 prevention. Coffee has Chlorogenic acid. It increases body's insulin.

Indication of lowering the chance of developing Parkinson and Alzheimer.

Coffee Health Negative Factors

- Coffee can cause **Dehydration**. Coffee is diuretic. Extra water must be taken to prevent loss of body fluids.
-
- Coffee can cause **Insomnia**. Too much coffee fills the body with caffeine. It causes sleeplessness.
-
- Coffee can cause **Addictiveness**. Coffee causes dependence. That means headaches, fatigue or other symptoms when caffeine is not taken. It acts like the known drugs (heroin, cocaine, etc.) but in a much milder way.

It is recommended by most doctors to stay away from coffee during a stress attack. Coffee is also suspected of high blood pressure. Another limitation suggestion is for pregnant women to avoid coffee.

The above was taken from: <http://www.turkishstylegroundcoffee.com/coffee-education/coffee-health/>.

Once again, I hope you visit our coffee home and come back often. We are always open and would love to roast **your** coffee to your liking. I am in this business to help others know there is a difference between the varieties of coffee.

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