SAKURA Science Program

Tea to prepare for emergencies

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Tea soothes the hearts of disaster victims

Can make the various types of tea from the same leaves

Tea leaves	Green tea	Black tea
Catechines	Catechines ⇒	Theaflavins, Thearubigins
Chlorophyll	Chlorophyll ⇒	Pheophytin
Vitamine C	Vitamine C ⇒	Nothing(Oxide, Hydrolyzate)
Aroma	Fresh, Grassy ⇒	like frowerly or fruity

Comparison of chemical contents of green tea and black tea infusion

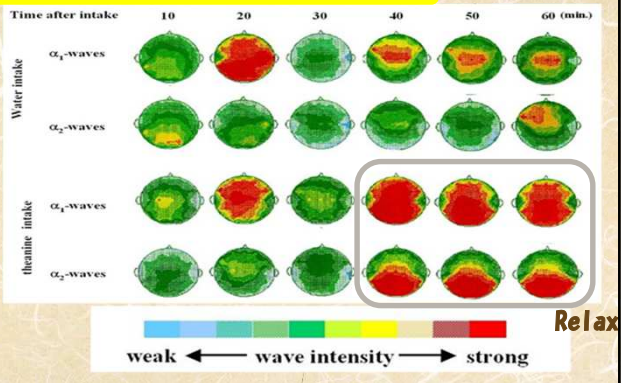
The chemical contents of green tea and black tea infusion (Dry weight %)

	Green tea	Black tea
Total Catechin	30-42	3-10
Theaflavin	0	2- 6
Polyphenol	2	3
Flavonol	8	24
Theanine	3	3
Organic Acids	2	2
Caffeine	3-6	3-6
Vitamine C	4	0

The expected benefits of tea in times of disaster

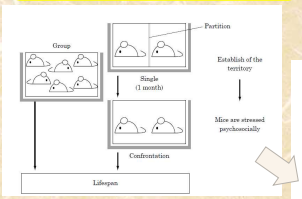
① Replenishing fluids
② Relieving stress
③ Warming the body
④ Replenishing vitamin C
⑤ Inspiring conversation

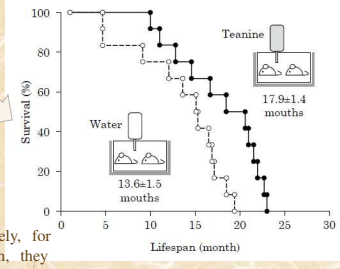
Effect of theanine on relaxation



Electroencephalographic measurement of alpha waves shows higher frequencies among human subjects taking theanine as compared to those taking water.

Effect of Theanine on Psychosocial Stress





Group and confrontational housing

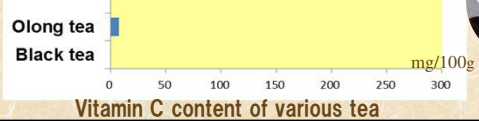
After the two mice were housed separately, for one month, in a cage with a partition, they were housed confrontationally by removing the partition. Generally, group housing mice have long lifespan more than the stressed mice.

Prolonged lifespan of mice by theanine intake

Green tea contains a high amount of vitamin C

Eating tea can replace vegetables

The level of vitamin C which has been shown to prevent scurvy and the common cold, is decreased during the fermentation stage.



Vitamin C content of various tea

50mg/100g

6mg/cup

Anti-bacterial action in polyphenol

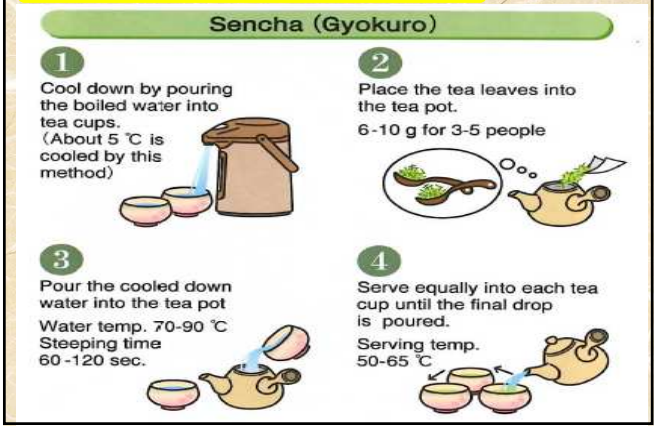
Theaflavins > Catechins

Comparison of minimum growth inhibiting concentration of tea polyphenol against bacteria (Hara. Y & Watanabe. M. 1989)

	B.subtilis	*B.slearothermophilus*	*D.nigrificans*
	minimum growth inhibiting concentration(ppm)		
EGC	>800	300	>1000
EC	>800	800	>1000
EGCG	>800	200	>1000
ECG	>800	<100	>1000
TF1	>1000	200	>1000
TF2A	500	300	>1000
TF2B	450	300	>1000
TF3	400	200	>1000

The Classification of Tea in the World

How to Brew Japanese Green Tea ?



Peace of the world from one bowl