



Gamma Tocopherol

ex

Eisai

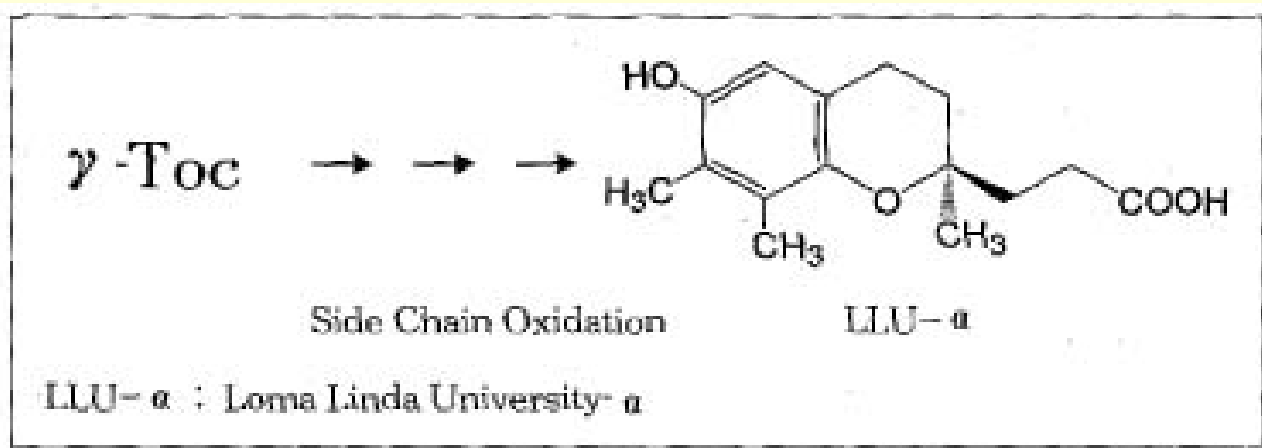
Natural sodium diuretic agent with no side effect.

Vitamin E has eight homologues

Chemical structure	Name	Number of methyl groups	Molecular weight
<p>← chromanol ring side chain →</p>	<i>α</i> -tocopherol <i>β</i> -tocopherol <i>γ</i> -tocopherol <i>δ</i> -tocopherol	5, 7, 8-trimethyl 5,8-dimethyl 7,8-dimethyl 8-methyl	430.71 416.69 416.69 402.66
<p>← chromanol ring side chain →</p>	<i>α</i> -tocotrienol <i>β</i> -tocotrienol <i>γ</i> -tocotrienol <i>δ</i> -tocotrienol	5, 7, 8-trimethyl 5,8-dimethyl 7,8-dimethyl 8-methyl	424.67 410.64 410.64 396.61

What is Gamma Tocopherol?

- One of natural vitamin E and rich in plant oil
- Efficacy was **not** so recognized like alpha-tocopherol.
- Gamma-Tocopherol has **sodium diuretic effect**
(Eisai found it!)
Recommendable dosage: 100 – 150mg / day



Many foods naturally contain Gamma Tocopherol

- Gamma Tocopherol is rich in plant oil.

	Alpha-toc	Beta-toc	Gamma-toc	Delta-toc	Total (mg/100g)
Corn oil	21.5	1.0	90.6	3.7	116.8
Soybean oil	8.9	1.7	77.1	27.3	115.0
Cottonseed oil	45.5	0.5	43.3	0.5	89.8
Rapeseed oil	19.1	0.3	43.2	1.2	63.8
Rice bran oil	39.5	2.3	5.2	0.6	47.6
Sunflower oil	62.7	1.8	2.2	0.6	67.3

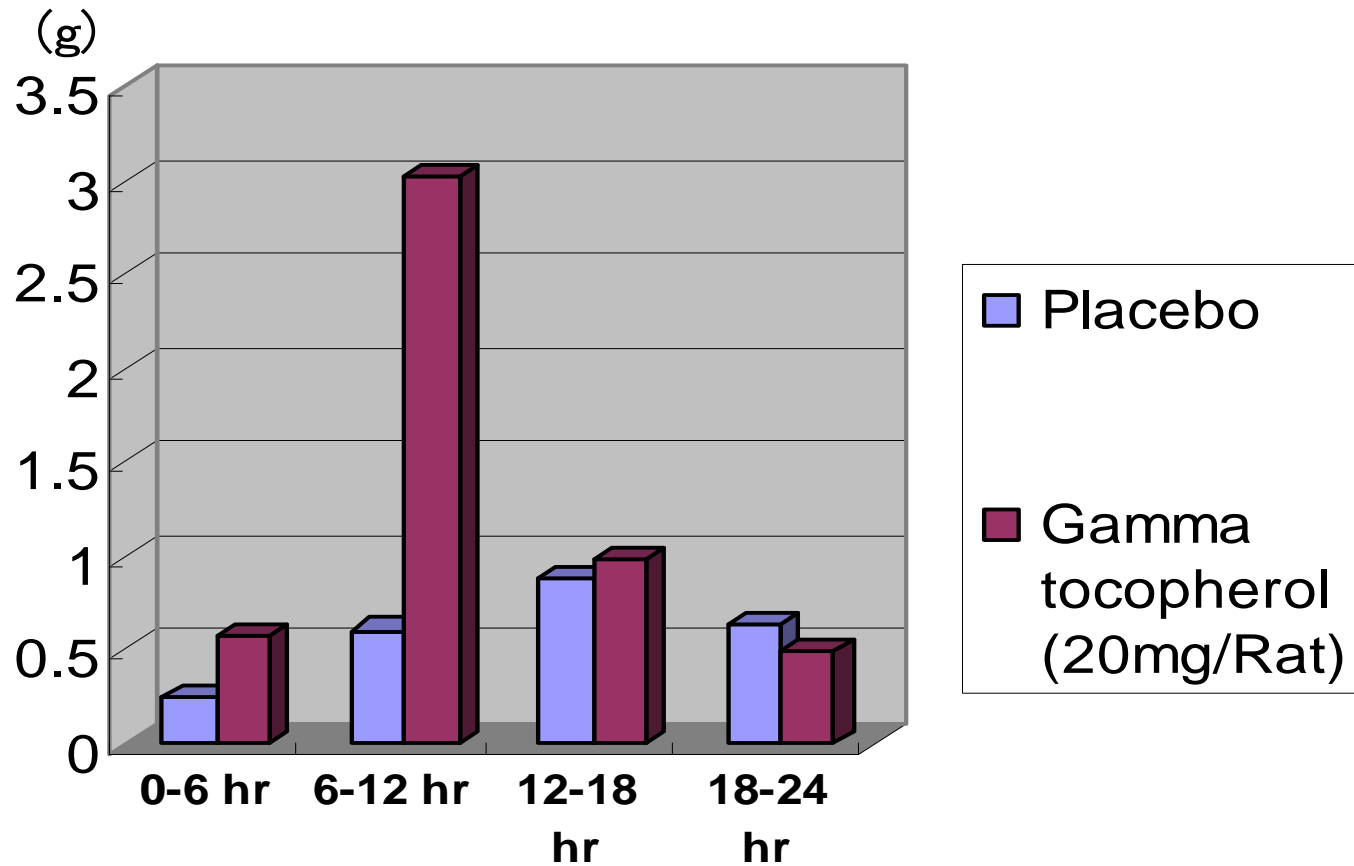
It takes 110g Corn oil, 230g Cottonseed oil or 1800g of Rice bran oil to get 100mg of Gamma tocopherol

Biological action

- Selectively excrete Na (Eisai found it!)
 - Natriuretic hormone effect
 - Promotes the elimination of excess Na in body

Only **Natural** Gamma Tocopherol have the above actions !

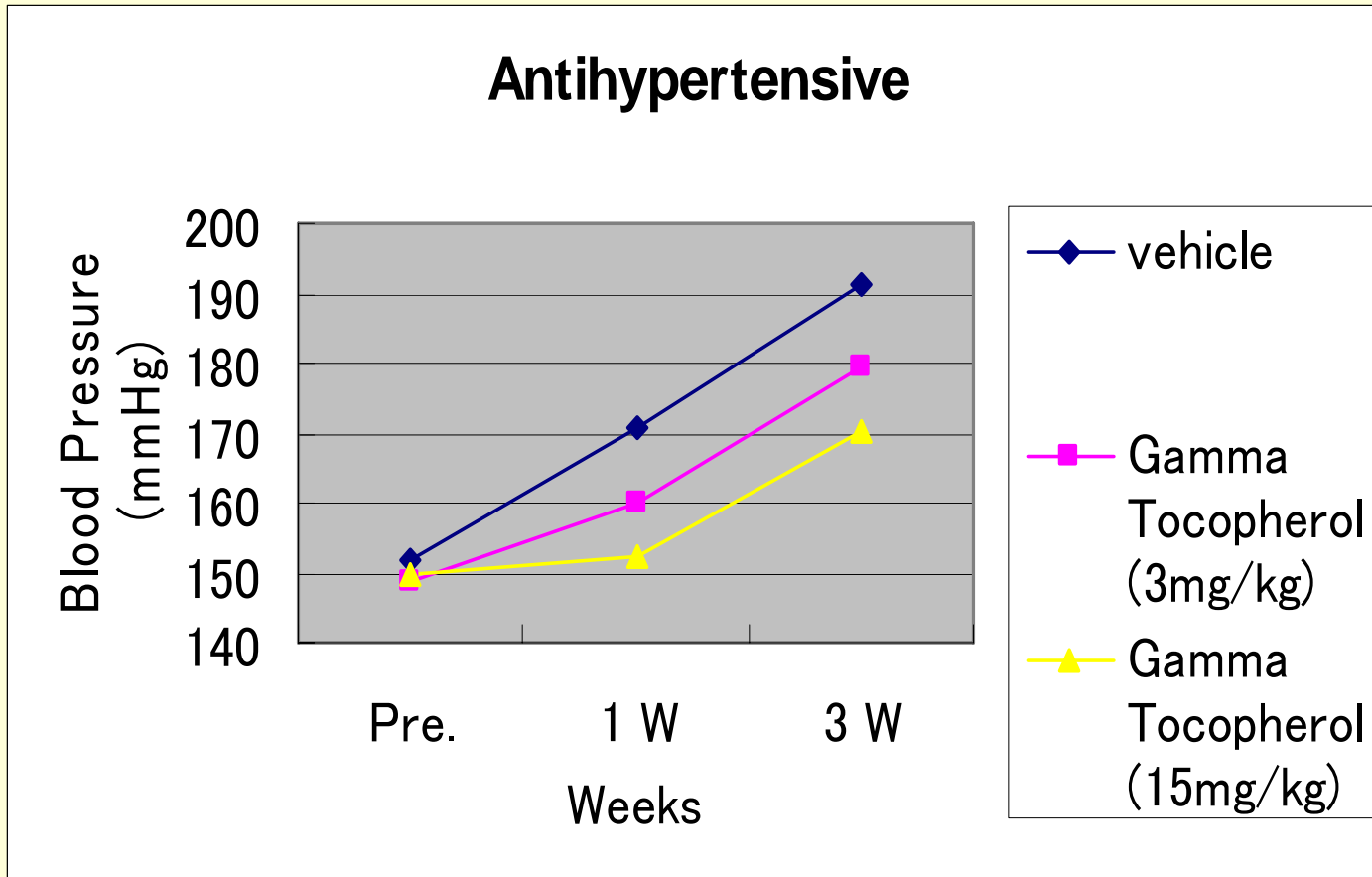
The excretion amount of sodium in urine



Rat which was intake high salt

Reduce High Blood Pressure

Gamma-Tocopherol is selectively excrete Na, it is very helpful and effective for people who like to eat salty food and but have high blood pressure.



Male Dahl rat
(5 weeks old)

Dahl: High
blood
pressure with
salt sensitive

Gamma Tocopherol 90

- Gamma Tocopherol 90 is a concentrate with more than 90% of **Gamma Tocopherol**.
- As it is in oily state, it is recommended for soft capsule usage.

Gamma Tocopherol Powder 30

Usual vitamin E is oil type and difficult to use for tablet, hard capsule...


However, Gamma Tocopherol powder 30 is emulsion type powder with more than 30% of Gamma Tocopherol and has good flow ability and better absorption.

It is suitable for health food as tablet and hard capsule.

Commercial product with Gamma Tocopherol

Product	Functional food	Producer	Cota Sante, Japan				
Brand	One Lady	Content	120 tablets/bottle				
		Concept	The source of energy and beauty from soy bean				
		Point	<ul style="list-style-type: none"> ○ For people to keep young ○ For people to take unbalanced diet ○ To take 2-4 tablets/ day ○ Ingredients in 3 tablets <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">Isoflavone(30%)</td> <td style="text-align: right;">51mg</td> </tr> <tr> <td>Gamma Tocopherol</td> <td style="text-align: right;">105mg</td> </tr> </table>	Isoflavone(30%)	51mg	Gamma Tocopherol	105mg
		Isoflavone(30%)	51mg				
Gamma Tocopherol	105mg						
Price	J.\6,700(1 bottle)						

Product	Functional food	Producer	Natural harmony, U.S.A.
Brand	CELLASENE	Content	60 tablets/bottle
		Concept	To increase basal metabolism
		Point	<input type="radio"/> To control fat metabolism <input type="radio"/> Ingredients Gamma Tocopherol , fish oil, ginkgo biloba extract etc...
		Price	J.\6,800(1 bottle)

Product	Functional food	Producer	LifeExtension, U.S.A.						
Brand	Life Extension Super Booster	Content	60 capsules/bottle						
		Concept	A multinutrient formulation that provides key ingredients that are missing from multivitamin supplements						
		Point	<p>○A multinutrient formulation that provides key ingredients that are missing from multivitamin supplements.</p> <p>○Ingredient in 1 capsule:</p> <table> <tr> <td>Gamma Tocopherol</td> <td>210mg</td> </tr> <tr> <td>Gamma Tocotrienol</td> <td>35.5mg</td> </tr> <tr> <td>Vitamin K</td> <td>10mg</td> </tr> </table>	Gamma Tocopherol	210mg	Gamma Tocotrienol	35.5mg	Vitamin K	10mg
		Gamma Tocopherol	210mg						
Gamma Tocotrienol	35.5mg								
Vitamin K	10mg								
Price	US.\$55.80(1 bottle)								

Product	Functional food	Producer	Wakunaga, Japan
Brand	Vitalurea	Content	120 tablets/bottle
		Concept	Reduce frequent urination
		Point	<p>○Ingredient in 2 tablets:</p> <p>Gamma Tocopherol 400mg</p> <p>Phytosterol 400mg</p> <p>Extraction of Saw palmetto 10mg</p> <p>Beefsteak plant 120mg</p>
		Price	J. \ 5600(1 bottle)

Product	Functional food	Producer	DHC, Japan
Brand	Daizu Isoflavone	Content	60 tablets/bottle
		Concept	The source of energy and beauty from soy bean
		Point	<p>○ Ingredient in tablets:</p> <p>Gamma tocopherol 40.5mg</p> <p>Isoflavone 20mg</p> <p>Fish collagen 20mg</p> <p>vitaminB1 2.5mg</p> <p>Glucosamine 15mg</p> <p>etc...</p>
		Price	J. \ 1100 (1 bottle)

Product	Functional food	Producer	Kobayashi Phamaceutical Co., Ltd., Japan
Brand	Morenashi help	Content	90 tablets/bottle
		Concept	Reduce frequent urination
		Point	<p>○Ingredient in tablet:</p> <p>Gamma Tocopherol 32.3mg</p> <p>Extraction of pumpkin seeds 150mg</p> <p>Extraction of parsley 10.2mg</p> <p>Yellow beeswax 2.5mg</p> <p>Plant oil 15mg</p> <p>etc...</p>
		Price	J. \ 2200(1 bag)