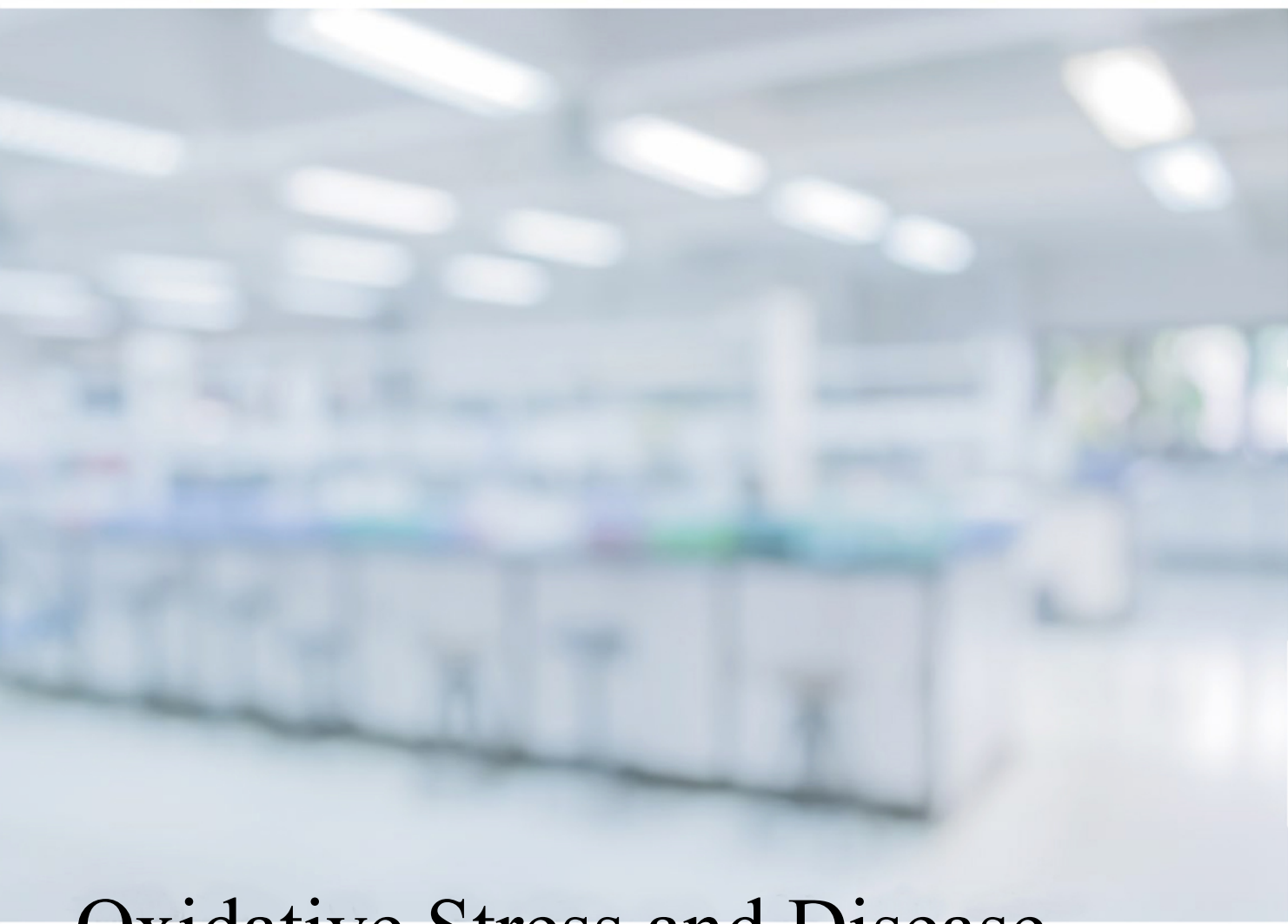


ACADEMIC MATERIALS

Academic materials



Oxidative Stress and Disease

ver 1.2

Institute for Advanced Study, Center for Basic Scientific Research, Gifu University, Tokai National University Institution

Joint Research Lecture, Antioxidant Research Department, Antioxidant Research Institute

Gifu University Antioxidant Laboratory

Research objectives

Sunburns, hay fevers, acne, etc. that occur throughout the year, especially from early spring to summer, are all related to oxidative stress, which affects the quality of life and appearance, and causes a lot of mental stress. Besides, the old person smell and cognitive disorder that comes with aging are also related to oxidative stress, which unknowingly affects people around you.

Oxidative stress is caused by a variety of factors and is related to many diseases. Therefore, routine inhibition of oxidative stress is good not only for yourself, but also for the people around you. As the saying goes, “almost all diseases are related to oxidative stress”, in other words, “inhibition of oxidative stress every day can prevent and treat a variety of diseases.”

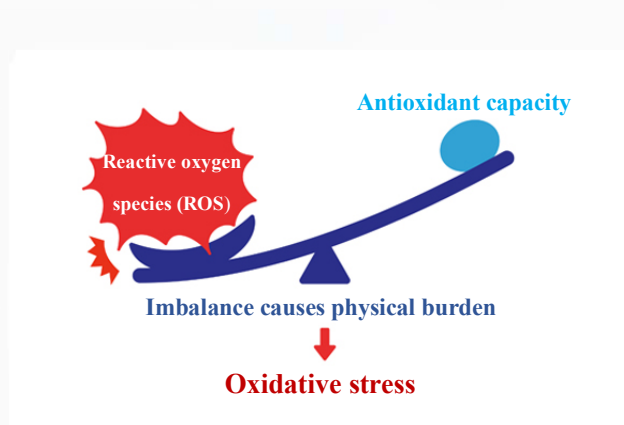
Through various experiments, the lab aims to link the inhibition of oxidative stress with the prevention and treatment of diseases, and clarify its mechanism, with an ultimate goal to gain a lot of scientific evidence and contribute to a “healthy and longevity society”.

What is oxidative stress?

The active energy needed to move the body is generated from daily food and oxygen absorbed through breathing by a small organ called mitochondrion inside cells.

However, it also synchronously produces a by-product called reactive oxygen species (ROS), which has higher reactivity. It is not only produced during energy generation, but also caused by various factors such as ultraviolet rays and radiation, infections caused by bacteria and viruses, air pollution and other external factors, as

well as lifestyle habits such as smoking and excessive drinking, diseases, and stress. This reactive oxygen species can destroy DNA, lipids, proteins and enzymes that are essential for health maintenance of the body. Therefore, to protect the body, it is necessary to remove this reactive oxygen species. This removing capacity called “antioxidant capacity” actually exists in our body. However, it’s impossible to completely remove reactive oxygen species. What matters is the balance between the continuous production of reactive oxygen species, the ability to protect it and its antioxidant capacity. With the increase of active oxygen, once it’s out of balance, the body will feel unwell. This status is called “oxidative stress”.



I think everyone has seen rusty nails and discolored apples. These are all “oxidative phenomena” due to exposure to oxygen in the air. This is exactly what is happening in the body under oxidative stress.



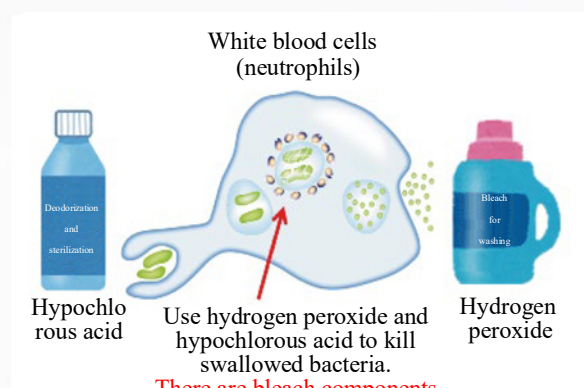
• Discolored apple



• Rusty nail

What is reactive oxygen species?

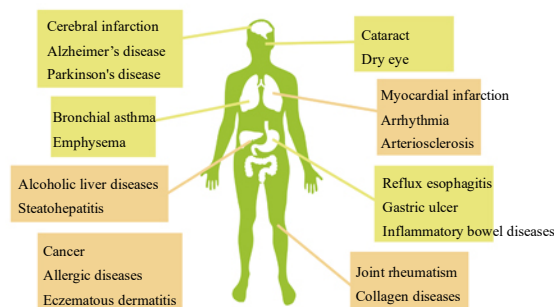
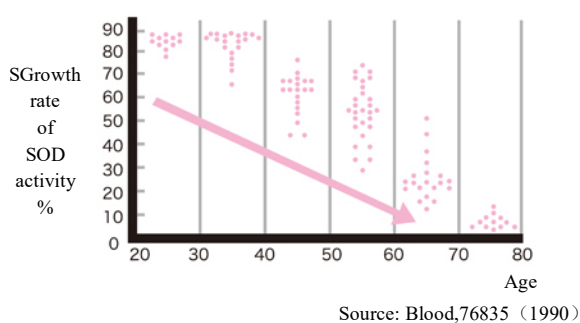
The reactive oxygen species producing oxidative stress refers to “oxygen that is more activated than oxygen in the air, that is, oxygen with higher reactivity”. With high reactivity, it damages DNA and lipids, proteins, etc. in the body, and also causes inflammation. However, it not only has negative effect. This strong power can also be used to clear bacteria and viruses that invade the body, playing an important role in immunity. Let's describe it with familiar things around you.



There is a bleach that is commonly used in washing, whose raw material is hydrogen peroxide. There are also daily used deodorants and sterilizers, and its raw material is hypochlorous acid. Actually, both of them are reactive oxygen species, which are also produced in our body. Bleaches, deodorants, and sanitizers are all produced using this powerful bactericidal ability, and it is the white blood cells that work as the immune system that utilize this property in the body. Once invading bacteria are discovered, white blood cells engulf them and release hydrogen peroxide and hypochlorous acid to destroy the bacteria. Does the wound turn red, swell, or cause pain once it occurs? This is an inflammatory reaction caused by the accumulation of white blood cells for repair and release of a large amount of reactive oxygen species to the site. If it is believed that if a large amount of accumulated white blood cells releases both bleach and disinfectant into the blood, all parts of the body will start to “rust” as mentioned earlier. As a result, diseases will appear throughout the body, and the consequence would be unthinkable.

Relation with diseases

As mentioned earlier, our bodies have “antioxidant capacity” that fights oxidative stress. We are born with antioxidant capacity, which reaches its peak around the age of 20 and then gradually declines with age. As a result, once oxidative stress increases, the body rusts and causes inflammation and cell damage. The rusted status of the body, also known as the often said “aging” phenomenon, is even related to a variety of diseases. It is reported that there are more than 150 diseases related to oxidative stress.



At present, many diseases in the world are undergoing antioxidant therapy and research. However, despite detailed studies on its structure and preventive effect in test-tube and animal experiments, there are few drugs for prevention or treatment through antioxidant effects. Antioxidant substances that are versatile, have no side effects, and are effective in the prevention and treatment of many oxidative stress diseases, are highly anticipated. If the antioxidant capacity can be improved and the oxidative stress can be reduced, we can expect to prevent and improve aging and a variety of diseases.

Antioxidant compound developed

Scientific name: “Twendee X”



“Twendee X” is an anti-oxidant compound developed under the leadership of Haruhiko Inufusa, a specially-appointed professor of the lab, with 8 active ingredients including vitamin C and amino acids.

It is an antioxidant formula product approved by radiation physicist Dr. Helmut (Germany) and ICDD (France) of oxidative stress measurement companies as *a substance with no side effects and the highest level of antioxidant capacity in the world.*

In 2019, it was recognized by the Medical Creation Committee of the Japan Society for the Prevention of Cognitive Disorder as Grade A in
※ “Twendee X” is being sold with the name “Oxicut” by the manufacturer and dealer TIMA Tokyo Co., Ltd.

Active ingredients of “Twendee X” (raw materials)

All ingredients are natural inherent composition in our body.

Name of raw materials: Coenzyme Q10 (Made in USA) / Vitamin C (Sugar), L-Glutamine (Rice, Corn), L-Cystine (Chicken), Crystalline Cellulose, Stabilizer (Hydroxypropyl Cellulose), Magnesium Stearate, Fumaric Acid (Aromatic Hydrocarbon), Succinic Acid (Fumaric Acid), Microsilica, Calcium Carboxymethylcellulose, Vitamin B₂ (Glucose), Niacin (Amino Acid)

Scientific name: “Twendee Mtcontrol”



“Twendee Mtcontrol” is a product researched for further expanding the use of “Twendee X”, whose initial form was completed in 2015.

Infertility has become a social problem specially in recent years. Both men and women have factors causing infertility, but it’s increasingly clear that most of them are caused by oxidative stress.

※ “Twendee Mtcontrol” is being sold with the name “Mtcontrol” by the manufacturer and dealer TIMA Tokyo Co., Ltd.

Active ingredients (raw material) of “Twendee Mtcontrol”

Name of raw materials: Maltose (home made), Coenzyme Q10/Vitamin C (Sugar), L-Glutamine (Rice, Corn), L-Cystine (Chicken), Crystalline Cellulose, Stabilizer (Hydroxypropyl Cellulose), Fumaric Acid (Aromatic Hydrocarbons), Succinic Acid (Fumaric Acid), Magnesium Stearate, Microsilica, Lactoferrin (containing some milk components), Calcium Carboxymethylcellulose, Vitamin B₂ (Glucose), Niacinamide, Calcium Gluconate, Calcium Pantothenate, Vitamin B₁, Vitamin B₆, Folic Acid, Biotin, Vitamin B₁₂

Safety of Tw Safety of Twendee

INC Research Co., Ltd. (<http://www.ina-research.co.jp/>) was entrusted to carry out the safety testing in 2007.

Carry out testing

Relevant effects of repeated administration in experimental mice in one week (INC Research test number: GL43080)

Chromosomal abnormality test using mammalian cultured cells (INC Research test number: BV07158)

Repeated oral administration toxicity test in experimental mice in 4 weeks (INC Research test number: BV07156)

Back Mutation Experiment Using Bacteria (Except Cystine) (INC Research test number: BV07352)

Side Effects Test in Human Clinical Studies (INC Research test number: NRP07-001)

All tests' safety has been confirmed. In addition, the report shows that the maximum safe intake per day is 2g or more per 1kg of body weight.

Patents obtained

Based on empirical data, patents are being filed in various countries around the world, led by the Japanese Patent Office Patent No. 5777821 "Composition for preventing cell damage effects", and various countries around the world (35 EU countries including Germany, the United States, Canada, China, Australia, Korea, and other European and Asian countries) have obtained formula patents.



※ Patent for Twendee Mtcontrol is being filed at present

In addition, several patents for the effects of the following items are also being filed.

- Whitening effect, sunscreen effect, reduction of snoring due to inflammation in the body (sleep apnea syndrome)
- Improve systemic capillary blood flow (improve muscle strength and endurance during exercise, inhibit gray hair, restore male function, etc.)
- Inflammatory bowel diseases (rheumatoid arthritis, etc.), metabolic diseases caused by oxidation (prevention of Alzheimer's disease, etc.)
- Degenerative diseases caused by oxidation (improve symptoms of Parkinson's disease), systemic diseases caused by oxidation (improve symptoms of chronic fatigue syndrome)
- Dyscrasia caused by cancer (improve weight loss and fatigue at the end of cancer), improve diabetic peripheral nerve disorder
- Adjust biological clock (prevent jet lag syndrome), improve gestational hypertension syndrome, morning sickness (intensive morning sickness), gestational pruritus
- Fatigue recovery, etc.

Start of oxidative stress research

Dr. Helmut Durschlag of the Institute of Biophysics and Physical Biochemistry, University of Regensburg, was one of the survivors of the Chernobyl nuclear accident; due to his personal experience, he spent his life searching for substances that could reduce health hazards caused by radiation exposure through the lysozyme-irradiation experiment. In 2011, Dr. Helmut focused on the hypoglycemic effect of Twendee X and its formula. It is reported that from the lysozyme-irradiation experiment, the amount of Twendee X is about 1/7 of vitamin C, and has almost the same antioxidant effect as vitamin C. At this time, he asserts that Twendee X is the most powerful antioxidant in the world. To this end, in 2013, Inufusa opened the Antioxidant Research Department (now the Joint Research Lecture Antioxidant Research Department) at Gifu University, and began to research various pathological and oxidative stress caused by Twendee X.



Helmut • Durschlag

Ph.D., Institute of Biophysics and Physical Biochemistry, University of Regensburg

I've been researching a variety of antioxidants.

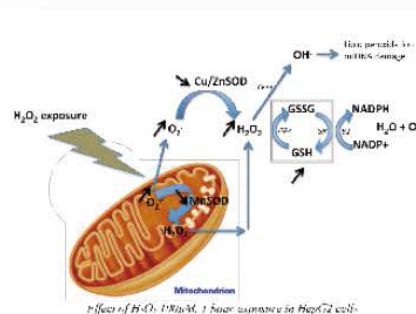
During the research, I became interested in the antioxidant activity of Twendee X and verified it in my own lab, and confirmed the beneficial data about Twendee, so I am now conducting a joint research with Dr. Inufusa's research team.

Antioxidant substances measurement through a third-party agency ICDD

While researching oxidative stress in 2014 to objectively evaluate the antioxidant effect of Twendee X, Inufusa entrusted ICDD, a French oxidative stress measurement company, to measure it.

The the measurement results of the antioxidant effect using a HHCC named HepG2 show that the oxidative stress of mitochondria is reduced by 63% at 60μg/ml (equivalent to 20% of the daily amount of a human body weight of 60 kg), and the SOD of oxidative power is increased by 147%.

According to Dr. Natalie Compagnie, CEO of ICDD, there are no substances and formula products that have no side effects on the human body and have antioxidant power like Twendee X. That is to say, Twendee X is proven to be the most powerful antioxidant in the world.



Effects of H₂O₂ (100μM, 1 hour exposure) in HepG2 cells

Experimental condition	Dose	Effects on REDOX status in response to H ₂ O ₂ exposure				
		mROS	eROS	mSOD	eSOD	GSHtot
H ₂ O ₂	10μM	↑ 89%	↑ 80%	↓ 32%	↓ 31%	↑ 31%
	100μM	↑ 83%	↑ 45%	↓ 147%	↓ 60%	↓ 40%
Twendee X	120μg/ml	↓ 77%	↓ 49%	↑ 106%	↑ 20%	NR ↓ 15%
	240μg/ml	↓ 82%	↓ 34%	NS ↑ 38%	NS ↑ 19%	↑ 20%

Significance levels compared to the control: * p<0.05, ** p<0.01, *** p<0.001. NS: not significant. Effects are expressed with respect to the control cells for the H₂O₂ condition, and with respect to H₂O₂-induced oxidative stress for the Twendee X condition.



Natalie Compagnie

ICDD (Innovative Concepts in Drug Development) CEO



ICDD has received entrustment for the measurement of oxidative stress from pharmaceutical, chemical, food, and cosmetic companies around the world. This company is better at researching antioxidants than any other companies in the world. In the experiments using our cells we have not found yet any substances that have no side effects in humans and have greater antioxidant effects than Twendee X.

Prevention of Cognitive Disorder

In recent years, the incidence rate of cognitive disorder has risen rapidly, and the number of affected people is expected to reach 7 million by 2025. The attack of cognitive disorder takes about 25 years, and prevention during this period is very important. Therefore, we invite the Nutritional Supplementary Food Class of the Medical Creation Committee of the Japan Society for the Prevention of Cognitive Disorder (Monitor: Professor Koji Abe, Department of Neurology, Okayama University) to carry out a clinical test of Twendee X's preventive effect on cognitive disorder.

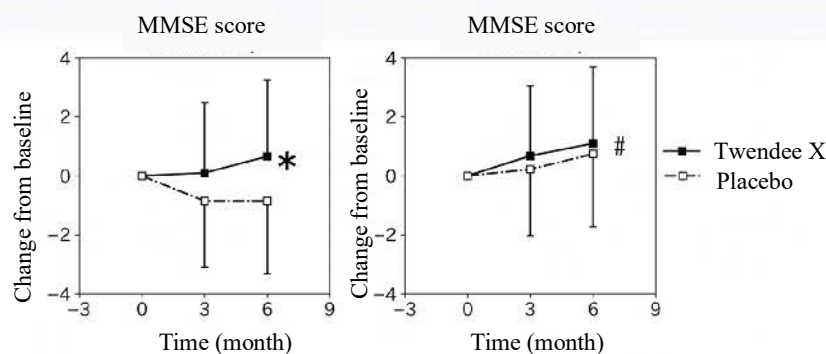
Test method: Positive, randomized double-blind test, control group, control standard group test carried on in 8 institutions across the country.

Administration period: 6 months, Twendee X and placebo.

Assessment method: Two assessments by MMSE and Hasegawa Dementia Modified Scale (HDS-R).

Results: Compared to decline in cognitive function from administration of placebo, that from administration of Twendee X is controlled. In addition, improvements are also seen in the MMSE assessment.

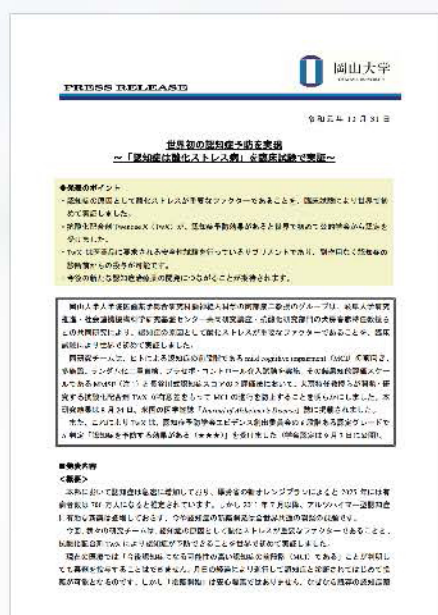
Comparison of Changes in the MMSE and Hasegawa-style (HDS-R) Dementia Scale with that at Beginning



MMSE: with significant difference *P<0.05 (compared with the control group)

HDS-R: with significant difference #P<0.05 (compared to the beginning)

The research results were published in an American Medical Journal *Journal of Alzheimer's Disease* on August 24, 2019. In this regard, the Medical Creation Committee of the Japan Society for the Prevention of Cognitive Disorder rated it as Grade A “effectively preventing cognitive disorder (★★★)” out of 6 grades of accreditation, and announced the accreditation on September 3, 2019.



Press Release by Okayama University



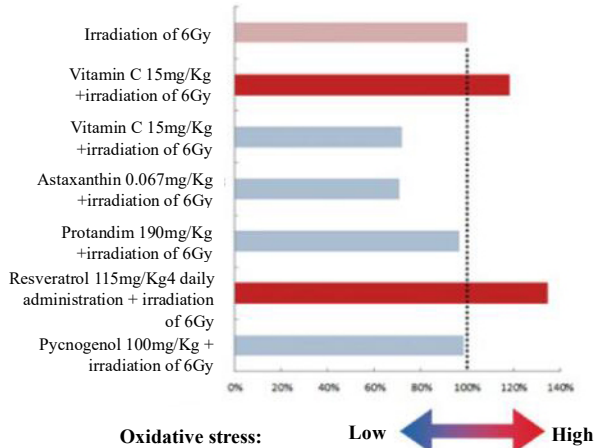
Grading certificate

Basic research result

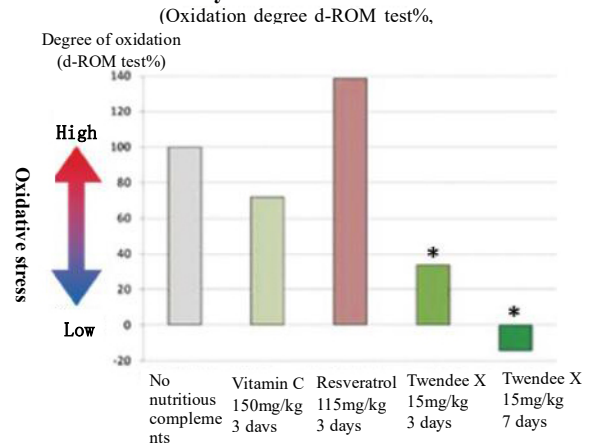
All experiments are carried out after approval by the Animal Ethics Committee.

Antioxidant effect

A Inhibit the increase in the degree of oxidation caused by the irradiation of antioxidant substances



B Measure oxygenated substances in blood under irradiation of 6Gy



The oxidative stress in the body increases significantly after 3 days of exposure to radiation (6Gy).

3 days later, taking advantage of this feature, the mice were administered various nutritional supplements for 3 days, and were irradiated (6Gy) on the 4th day. 3 days later, the experimenters measured the oxidative stress in the blood and verified whether the rise in oxidative stress could be inhibited.

A The inhibitory effect on oxidative stress of representative antioxidant substances on the market.

In the usual dose (daily dose for a 60 kg human being converted into the body weight of a mouse), since the oxidative stress could not be reduced, astaxanthin and Protandim were administered at 100 times the usual dose for humans, and resveratrol and pycnogenol were administered at 4 to 5 times the usual dose for humans. 9 grams of Vitamin C (150 mg/kg) and high doses of astaxanthin and Protandim were taken, and the oxidative stress was reduced compared to the untreated group, but no significant difference was found.

B Inhibitory effect of Twendee X on oxidative stress.

Twendee X was administered 3 days before irradiation, for a total of 7 days before and after irradiation, and its inhibitory effect was compared with other antioxidants. It is clearly understood that the amount of Twendee X is 1/10 of Vitamin C, and the degree of oxidative stress is greatly reduced to 1/3 (green: $p < 0.05$, t-test). The level of oxidative stress was reduced to -15% in the 7 days before and after administration to the mice. (Approval numbers: 25-64, 26-39, 27-94, 28-71, 29-97, 2019-041)

(Approval numbers: 25-63, 25-72, 26-40, 27-95, 28-70, 29-96, H30-154, 2019-043)



Tyendee Y: Tyendee Y (27mg/kg/day/mouse) dissolved in sterilized water for drink

Twendee X: Twendee X (37mg/kg/day/mouse) dissolved in sterilized water for drink.

After 4 weeks of cell injection, NK activity was measured with LDH assay kit.

6 weeks after cell injection, some mouse was measured metastatic nodules on lung surface.

(Approval numbers: 25-63, 25-72, 26-40, 27-95, 28-70, 29-96, H30-154, 2019-043)

Questionnaire results

Implemented by: EYE'S Co., Ltd.

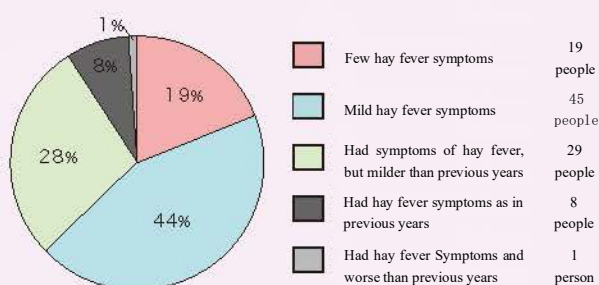
Hay fever monitoring

Implementation period: February 8 to May 7, 2017. Participants: 102 women over 20~50 (including 20~50).

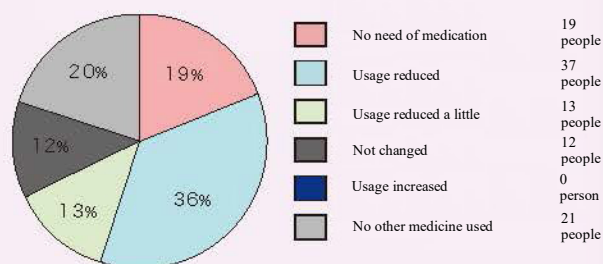
Twendee X taking period: about 2 months, taken every day.

Results: actually 91% felt improvement in hay fever symptoms. After taking Twendee X, about 20% of people no longer needed the drug, and 90% of the people in the questionnaire wanted to use it if they have hay fever symptoms next year. Twendee X has no side effects against hay fever and is the best choice.

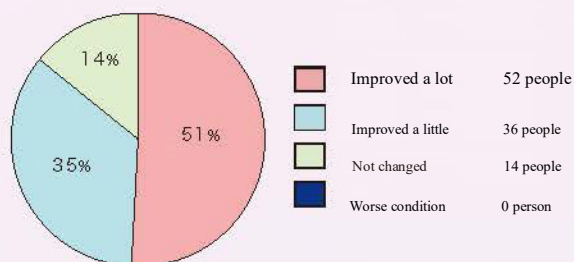
Q. Have you had hay fever symptoms while taking Twendee X?



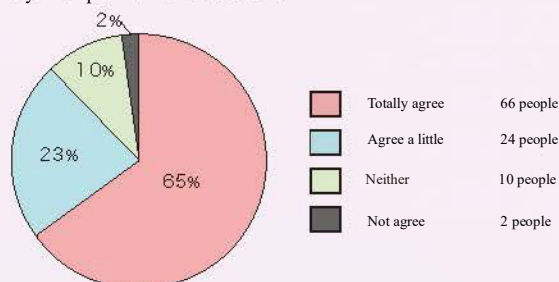
Q. Is there a change in the dosage of people who have taken oral medicines other than Twendee X, nasal sprays and eye drops?



Q. Have your hay fever symptoms improved after taking Twendee X for about 2 months?



Q. Is Twendee X a nutritional supplement that can be recommended for hay fever patients?



Questionnaire results

- Had no severe hay fever symptoms during spring.
- Felt much better than last year, despite a lot of pollen this year. It would be better if it was cheaper.
- Very good physical condition. Make sure to indicate "improve hay fever" on the packaging. I am grateful for this wonderful product.
- No problem with pollen in mild periods, but needed over-the-counter medications in peak periods.
- Tried this product and took much fewer over-the-counter medicines than last year.
- The effective countermeasure against hay fever. The eye symptoms that bothered me every year were relieved, which is the most exciting thing.
- Didn't have a cold in the past 2 months, and hardly had any symptoms such as sneezing, runny nose, itching around the nose, and itchy eyes.
- In addition to hay fever, the symptoms of rough skin also eased, and I did not get tired easily.

Implemented by: EYE'S Co., Ltd.

Asthma monitoring

Implementation period: November 8, 2017 to March 18, 2018. Participants: 44 women over 20~50 (including 20~50).

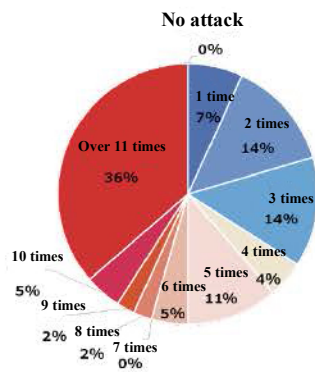
Twendee X taking period: about 4 months, taken every day.

In the 4 months before taking the medicine, 60% had more than 5 attacks, but in the 2 months after taking the medicine, 90% had fewer than 4 attacks, which was a substantial improvement. In the last 4 months of taking, 65% had less than 4 attacks. In the second half of the 2-month period, which coincided with the period of hay fever, it was more likely to attack than usual, but it could be seen that there was still a great improvement compared with before taking it.

Questionnaire results about the number of asthma attacks (n=44/74 before, n=44 in middle, n=44 in the end)

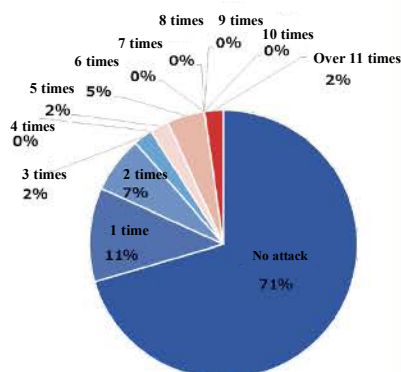
<Before>

Please fill in the number of asthma attacks in the past 4 months (July to October).



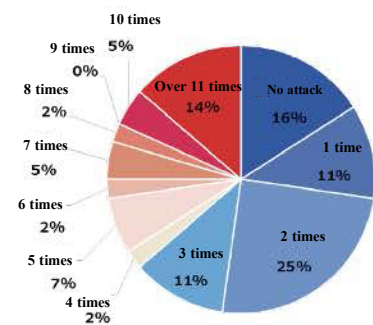
<In the middle>

How many attacks did you have in the two months after you started taking Twendee X?

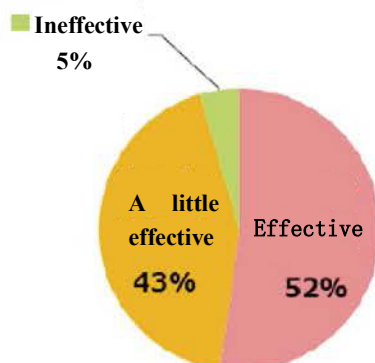


<In the end>

How many asthma attacks did you have after 4 months of taking Twendee X?



Q. Is Twendee X effective in inhibiting asthma attacks?



	Answercou	Proportion
Effective	23	52%
A little effective	19	43%
Ineffective	2	5%
Worse	0	0%
	44	100%

Intestinal bacteria monitoring

Implementation period: March 12 to May 29, 2018. Participants: 57 groups of healthy men and women over 30.

Twendee X taking period: Analysis of intestinal bacteria:

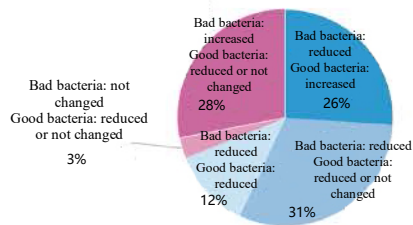
1 month, taken every day.
Takara Bio Co., Ltd.

Analysis of intestinal bacteria: Takara Bio Co., Ltd.

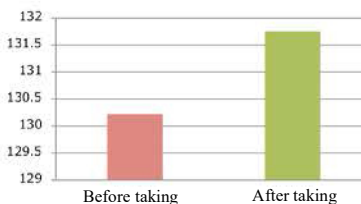
60% of human immunity comes from the intestinal tract, where many intestinal bacteria live. The ideal balance contains 20% good bacteria, 10% bad bacteria, and 70% ordinary bacteria not belonging to either. If such balance is disrupted by oxidative stress, the diversity of bacterial species will be reduced, leading to a variety of diseases. Therefore, to stay healthy, it is very important to improve the balance of intestinal bacteria and the diversity of bacterial species.

We recycled feces before and after taking Twendee X, and monitored the changes in intestinal bacteria and patency before and after. In the intestinal bacteria of healthy people, taking Twendee X also increased good bacteria, which greatly improved the patency.

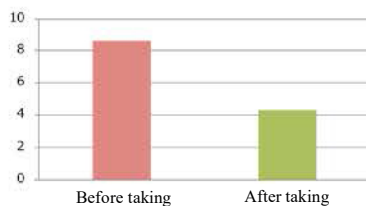
Changes in unbalanced bacteria, regulator bacteria, and bacteria with unknown functions before and after taking, n=58



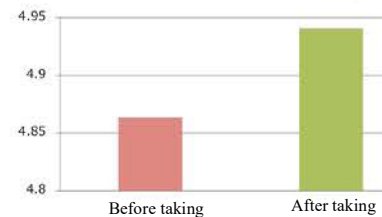
Change in number of strains before and after taking, n=58



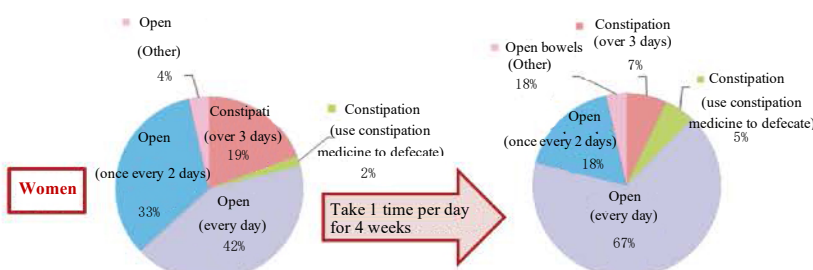
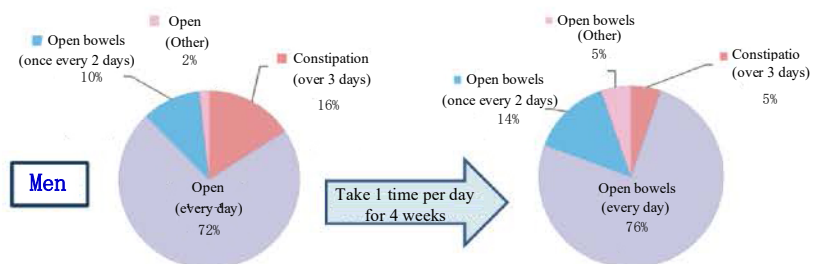
Change in obesity Index before and after taking, n=58



Change in diversity index before and after taking, n=58



Changes in defecation and defecate status



Monitoring of sleep apnea syndrome

Implemented by: Takashima ENT

In recent years, it has been reported that more than 70% (included) of patients with sleep apnea syndrome have elevated inflammatory markers, which indicates that there is inflammation somewhere in the airway, but ordinary anti-inflammatory agents cannot relieve symptoms. On the other hand, it's also reported that levels of reactive oxygen species are elevated in the blood of patients with sleep apnea syndrome, which means relation to oxidative stress.

The cause of this inflammation lies in reactive oxygen species, but it is unclear whether the increase in reactive oxygen species is caused by inflammation. However, among patients with sleep apnea syndrome who took Twendee X to eliminate fatigue, several patients' apnea symptoms disappeared. Therefore, we surveyed people whose family members reported sleep apnea symptoms, asked them to take Twendee X continuously for at least three weeks, and conducted a questionnaire about their symptoms before and after taking.

Questionnaire results

Questionnaire results	Yes	No	No	Improvem
Less snoring	30	5	0	85.7%
Less waking up at midnight due to breathing difficulties	28	5	2	84.8%
Become sound asleep	32	3	0	91.4%
Less sleepy during the day	27	5	3	84.3%
Less depressed mood	26	4	5	86.6%
Focused during the day	26	4	5	86.6%
No more apnoea in sleep according to family members.	30	5	0	85.7%
No more serious snoring according to family members.	30	5	0	85.7%
Go to the toilet less at midnight	18	7	10	72.0%
No headache after waking up in the morning	16	7	12	69.5%
Decreased symptoms of thirst after waking up in the morning	22	6	7	78.6%
No more serious snoring even after drinking alcohol	20	5	10	80.0%

Questionnaire respondents

35 men whose family members pointed out their sleep apnea syndrome an the symptoms persisted for more than one year (including one year).

The average age was 57.2 years.

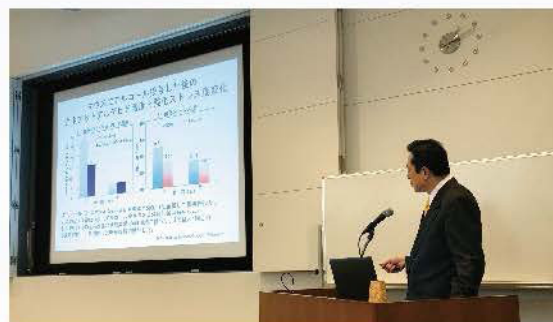
Complications: 21 people with diabetes, 7 people with hypertension, and 26 people with obesity.

Take 1 piece of Twendee X (the active ingredient of Twendee X is converted to 13.3~17.6 mg/kg) every 15~20 kg of body weight when waking up, and take it for more than 3 consecutive weeks (including 3 weeks). Then a questionnaire survey was conducted (TIMA Japan Co., Ltd.).

Society publication

Foreign societies

1. October 2020, The 22nd World Conference on Oxidative Stress Reduction, Redox Homeostasis & Antioxidants.
“COVID-19 infection is oxidative stress disease. Twendee will be best solution to prevent and avoid severe symptoms.”
2. October 2020, The 22nd World Conference on Oxidative Stress Reduction, Redox Homeostasis & Antioxidants.
“Does continuous OS reduction prevent and ameliorate through species diversity of intestinal bacteria? ”
3. October 2019, Sustainable Industrial Processing Summit & Exhibition. **“Brain Disease and Oxidative Stress: Ischemia and Dementia”.**
4. October 2019, Sustainable Industrial Processing Summit & Exhibition. **“Cancer and Oxidative Stress”.**
5. October 2019, Sustainable Industrial Processing Summit & Exhibition. **“Does continuous oxidative stress reduction prevent and ameliorate diseases through species diversity of intestinal bacteria?”**
6. **October 2019, Sustainable Industrial Processing Summit & Exhibition. “Role of Anti-oxidant Twendee X for Maintenance of Voice and Swallow”.**
7. October 2019, Sustainable Industrial Processing Summit & Exhibition. **“Exposome-induced Oxidative Stress and Protective Effects of Antioxidants in Rats”.**
8. November 2018, Sustainable Industrial Processing Summit and Exhibition. **“Oxidative stress: Can We Reduce Oxidative Stress in Various Diseases?”**



Domestic Societies

1. October 2019, the 9th Academic Meeting of the Japan Society for the Prevention of Cognitive Disorder, “The role of Twendee X in cranial nerves”
2. October 2019, The 61st Japan Brain Nutritional Supplements Society, “Clinical Effect of Antioxidant Nutritional Supplement Twendee X”
3. October 2019, The 1st Japan Brain Nutritional Supplements Society, “Can the antioxidant nutritional supplement Twendee X function as a body regulator?”
4. September 2020, The 61st Academic Conference of the Japanese Neurological Society, “Antioxidative Treatment of Neurological Diseases - Infinite Potentials of Twendee X-”
5. June 2019, The 72nd Academic Meeting of the Japanese Society for Oxidative Stress, “Antioxidant compound Twendee X’s effect of reducing oxidative stress”
6. In December 2018, the 16th Japan Functional Food Medical Association General Conference "Discussion on the administration of antioxidant compound Twendee X for allergic diseases"
7. September 2018, The 8th Academic Meeting of the Japan Society for the Prevention of Cognitive Disorder, “Progress in the Proof for Cognitive Disorder Prevention of Antioxidant Nutritional Supplement - Twendee X”
8. In September 2018, the 8th Academic Meeting of the Japan Society for the Prevention of Cognitive Disorder, “What will happen once oxidative stress declines? Basic and clinical data for cognitive disorder, cerebral infarction, hay fever, asthma, chronic sinusitis, fatigue and other diseases.”
9. May 2018, The 18th General Assembly of Japan Anti-Aging Medical Society, “What happens once oxidative stress is reduced?”

Society publication

Education/Seminar, etc

August 2019, The 2nd Antioxidant Summit - Cognitive Disorder and Health & Longevity - Open Seminar, Osaka

August 2019, The 2nd Antioxidant Summit - Cognitive Disorder and Health & Longevity - Open Seminar, Tokyo

September 2019, Oxidative Stress and Disease, Special Lecture

January 2019, Lifespan and Oxidative Stress. Open Seminar on Antioxidant Research ~Health & Longevity and Allergic Diseases~

November 2018, Lifespan and Oxidative Stress. The 1st Health & Longevity and Antioxidant Summit

September 2018, Nagoya Small and Medium Business Promotion Association, Managers Forum “Proposal for a truly diet and lifestyle for longevity ~ Prevent body rust, cancer, diabetes, hypertension, cognitive disorder ~”

August 2018, ITbM Seminar, “Lifespan and Oxidative Stress”

January 2018, The 36th Health Fair Seminar, “Body rust can cause cognitive disorder, and adult diseases such as cognitive disorder, cancer, diabetes, hypertension, hay fever, acne are also caused by oxidative stress!”

January ~ March 2018, “Allergic diseases are caused by rust!?” 1st on hay fever, 2nd on dermatitis, 3rd on ulcerative colitis (Aichi, Gifu, Mie)

Papers published

- Yang Fuhua, Tanaka Sho, Marcus, Mathusika, Gleifencrow, Yoshikawa Toshiichi, Okada Naomi, Haruhiko Inufusa. Twendee X, the world's first anti-oxidant tablet to prevent cognitive disorder, challenges the super-aged society. *BIO Clinica* Vol.35 No.10 Sep. 2020.
- Koh Tadokoro, Yasuyuki Ohta, Haruhiko Inufusa, Alan Foo Nyuk Loon, Koji Abe. Prevention of Cognitive Decline in Alzheimer's Disease by Novel Antioxidative Supplements. *Int J Mol Sci.* 2020 Mar; 21(6)
- Yang Fuhua, Tanaka Sho, Marcus, Mathusika, Gleifencrow, Yoshikawa Toshiichi, Okada Naomi, Haruhiko Inufusa. The world's first prevention of cognitive disorder was achieved (process of preventing cognitive disorder through the anti-oxidant research department's compound Twendee X). *Medical Science Digest*, Vol.45(13), 2019.11.
- Yang Fuhua, Tanaka Sho, Marcus, Mathusika, Gleifencrow, Yoshikawa Toshiichi, Okada Naomi, Haruhiko Inufusa. The world's first prevention of cognitive disorder was achieved- the relations with oxidative stress, inflammation and immunity. *BIO Clinica* Vol.35 No.4 Apr. 2020.
- Koh Tadokoro, Ryuta Morihara, Yasuyuki Ohta, Nozomi Hishikawa, Satoko Kawano, Ryo Sasaki, Namiko Matsumoto, Emi Nomura, Yumiko Nakano, Yoshiaki Takahashi, Mami Takemoto, Toru Yamashita, Setsuko Ueno, Yosuke Wakutani, Yoshiki Takao, Nobutoshi Morimoto, Yumiko Kutoku, Yoshihide Sunada, Katsushi Taomoto, Yasuhiro Manabe, Kentaro Deguchi, Yasuto Higashi, Haruhiko Inufusa, Fukka You, Toshikazu Yoshikawa, Markus Matuschka von Greiffenclau, Koji Abe. **Clinical Benefits of Antioxidative Supplement Twendee X for Mild Cognitive Impairment: A Multicenter, Randomized, Double-Blind, and Place-bo-Controlled Prospective Interventional Study.** *J Alzheimers Dis.* 2019; 71(3): 1063-1069
- Shizuo Hirano, Haruhiko Inufusa, Sugiyama Yuichiro, Kaneko Mami, Yoshikawa Toshiichi. Voice and Anti-aging, *Journal of the Japanese Anti-aging Medical Association*, Vol. 15, No. 2, 214-219. 2019.4.

About the lab

Lab member

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Born in Okayama Prefecture in 1957. Majored in and graduated from the Department of Surgery, Institute of Medical Sciences, Kinki University after graduating from the Faculty of Medicine, Kinki University (Kinki University Ph.D. (Medicine))

After that, he successively served as a professor in the Department of Clinical Medicine, Faculty of Medicine, Kinki University, a visiting professor at the European Institute of Telesurgery, University of Strasbourg, and a visiting professor at the Surgical Classroom of the University of Barcelona, Spain. He has been in his current position since 2013.

Chief Researcher at the Antiacidification Lab of the Louis Pasteur Medical Research Center / Executive Member of the Certification Creation Committee of the Japan Society for the Prevention of Cognitive Disorder/ Council Member of the Japanese Society for Gastroenterology (Tokai Region) / Council Member of the Japan Society for Endoscopic Surgery Member / Director of Japan Brain Nutritional Supplements Society

Special Teaching Assistant: Okada Naomi (M.D., M.PhD.) / Special Teaching Assistant: Yang Fuhua (Ph. , M.PhD.) /

Academic Research Assistant: Harakawa Yoshitsune



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Contact Information

For joint research and interviews with our lab, please contact us by email. Meanwhile, we also accept questions from the public about antioxidant research.

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Videos posted on YouTube's
"Antioxidant Channel"

