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E. EXCEL'S WORLD



July – September 2022

## Second-generation E. Excellers—Legacy and Innovation

### Diamond Masters Cheng Chuan-Yuan and Chen Ruo-Huai



**Cheng Chuan-Yuan and  
Chen Ruo-Huai**

**From:** Taiwan

**Strengths and Hobbies:**

Program design, calligraphy,  
watching movies, and reading

**Dream:** To follow E. Excel to travel  
around the world with teammates

**Traveled with E. Excel to:**

Germany, Australia, Sanya,  
Royal Caribbean Cruise

As the son and daughter-in-law of Diamond Master Yang Hsueh-Kuei, newly promoted Diamond Masters Cheng Chuan-Yuan and Chen Ruo-Huai might be luckier than others when managing their E. Excel career in that their mom has paved the way for them. Even with the head start, they still put in just as much effort as others because they know that they will not achieve recognition and go far in life if they do not work hard. As second-generation E. Excellers, they believe, "The health industry will never go out of fashion because we need good health to live life to the fullest. Furthermore, Nutritional Immunology is at the forefront of the times. Thanks to mom, we were able to take up the E. Excel career—one that can be passed down to future generations. We're so lucky!"

Working as a software engineer in Taiwan's technology industry, Chuan-Yuan had an enviable career and earned a high income. But he often worked around the clock in a high-pressure environment. In contrast, he saw his mom managing her E. Excel career and sharing Nutritional Immunology joyfully every day, and even traveling around the world with E. Excel. Only then did Chuan-Yuan realize that, "Even the most successful career isn't more important than a healthy body. Besides, the charm of achieving financial freedom through passive income subverts the traditional thinking of exchanging labor for money." Hence, Chuan-Yuan started managing the E. Excel career in his spare time.

E. Excel was also the "matchmaker" that brought Chuan-Yuan and Ruo-Huai together. Before encountering E. Excel, Ruo-Huai did not have good health. This led Chuan-Yuan to share Nutritional Immunology with her and then, later, marry her. Ruo-Huai diligently learned about this science, especially during her pregnancy, and eventually gave birth to two healthy babies. E. Excel products have now become an inseparable part of her children's daily lives. She shared, "I saw photos of my son at his high school graduation ceremony. Alongside him wasn't bubble tea or cola—typical drinks popular with many young people—but the E. Excel product Triflora." She felt happy and comforted. Her son took up the E. Excel career after turning 18, becoming a new driving force in the team.

"Our team spans three generations. We retain our traditions—building a strong foundation through education, cherishing interpersonal interactions, trusting teammates, delighting in sharing health knowledge, and tailoring customer service. On the other hand, we make full use of digital platforms and social media, holding both online and offline activities, to cater to the younger groups." The couple follows their mom Hsueh-Kuei's leadership style in managing their E. Excel career, and at the same time, incorporates the mindset of younger people, constantly fine-tuning for a balance between legacy and innovation so as to meet the needs of all generations.



Chuan-Yuan said of himself, "I'm easy-going, warm, and helpful." And in his eyes, Ruo-Huai is very self-disciplined, giving her all in everything she does. Chuan-Yuan and Ruo-Huai support, help, and complement each other, and have the assistance of their mom Hsueh-Kuei. There is no specific job division between them; they are each other's incredible teammate. Together, they lead the team onward.

Oftentimes they ask fellow new E. Excellers, "What kind of life do you want to live in the future? If you want to live an ordinary life, the setbacks you encounter will also be ordinary. The world is fair. If you want to live the best life, you'll face the biggest challenges. Be fully prepared to face those challenges. The setbacks and difficulties are temporary and serve as good opportunities for learning and gaining experience." Ruo-Huai added, "When teammates encounter challenges, they can vent their feelings to the team. As everyone in the team shares their own experiences, sometimes one can derive comfort from knowing that one is not alone." She also frequently tells teammates, "Never forget your original aspiration and beliefs. Time will not stop for you. Let go of the past and look ahead."

E. Excel has stood the test of time for 35 years—what does that mean to Chuan-Yuan? He elaborated in a firm voice, "It represents a wealth of history. With the foundation of Nutritional Immunology and the mission of sharing the gifts of health and knowledge with mankind, E. Excel hasn't been eliminated from the market. Instead, it has flourished to become a mainstay of the market after enduring all those years in a fast-changing environment. This is a great testament to Dr. Jau-Fei Chen's foresight. Over the span of 35 years, Dr. Jau-Fei Chen has never stopped dedicating herself to education—her lifelong cause. She's a scientist who deserves our respect. Time will prove everything, and it has already proven that we made the right choice." Ruo-Huai said, "E. Excel is a happy enterprise that brings us financial and time freedom, a healthy lifestyle, and a sense of security. Furthermore, we can travel around the world with E. Excel."

"Get close to successful people more often" is the couple's secret to success over the years. "Some people finally see their desired future because they firmly believe it'll come true. In contrast, others only believe something when they see it first. They lack perseverance and give up easily. If they never envision their desired future, they won't be able to persevere till the end. Ask yourself: Which type of person do you want to be?"

For a career to last long, it has to be continuously infused with motivation and vitality. "With co-operation across generations, we hope that through learning, sharing, and attaining win-win results together, we can pass along love and hope, letting the E. Excel career pass down from generation to generation." Chuan-Yuan and Ruo-Huai made a promise to themselves that they will play their part in inheriting and innovating well, carving out a beautiful future with their teammates.

# Keep Learning in Your Golden Years and Be Sincere

## Diamond Master Lai Tsai-Lien



**Lai Tsai-Lien**

**From:** Taiwan

**Strengths and Hobbies:**

Affable, empathetic; reading, making friends, and connecting with people

**Dream:** To travel around the world with E. Excel

**Traveled with E. Excel to:**

France, Spain, Japan, India, Royal Caribbean Cruise

In Taiwan, the mandatory retirement age is 65; those working in traditional businesses will have to retire upon reaching this age. Believing in herself and leading by example, however, newly promoted Diamond Master Lai Tsai-Lien attained E. Excel's highest rank at the age of 65—a wonderful embodiment of the saying "Learning is endless and a lifelong process." Tsai-Lien said with a smile, "At E. Excel, I feel young even as I'm growing older because I'm doing things that I like every day. Sharing Nutritional Immunology is an act of giving. I wish to share the health knowledge that I've learned in E. Excel with more people in need." Tsai-Lien truly exemplifies the spirit of learning in one's golden years.

Serendipity led Tsai-Lien to her first encounter with E. Excel. When she was younger, she worked in the China Medical University Library, Taiwan. In the course of her work, she read numerous research journals and books, and among them was the book *Cancer & Nutritional Immunology* written by Dr. Jau-Fei Chen. It introduced health knowledge in a simple and easy-to-understand way, which impressed her very much—this was her first encounter with E. Excel. She not only learned about Nutritional Immunology, but also got to know of Dr. Jau-Fei Chen. Aside from that, she was surprised by what was mentioned in the book, "Each of us is born with the best doctor in the world—our immune system." This was a very novel and amazing concept to Tsai-Lien back then. "More than a decade ago, there wasn't much health awareness. People didn't mind being 'sub-healthy' because they thought medicines are cure-alls."

A couple of years later, Tsai-Lien came across E. Excellers by chance when she was diagnosed with cancer. Only then did she learn that Dr. Jau-Fei Chen has not only written books and advanced the science of E. Excel Nutritional Immunology, but she has also developed convenient E. Excel products formulated upon the principles of Nutritional Immunology. Thanks to her first encounter with the book, Tsai-Lien felt that her second encounter with E. Excel, which was under the guidance of fellow E. Excellers, was like finding a great treasure. She therefore made a wish that if she was able to get through the physical ordeals she kept suffering from, she would devote herself to sharing Nutritional Immunology for the rest of her life.

Those who are sincere will always be blessed. Tsai-Lien's strong will to survive not only invigorates her body, but has also empowered her to help more people who endured the same anguish as she did. She transforms her gratitude for being alive into motivation, cherishing every opportunity. She has developed a broad network of good relationships, winning over every one with her sincerity. During the COVID-19 pandemic, there were fewer offline activities to provide support but she elevated her E. Excel career to a higher level through online events, and was promoted to the rank of Diamond Master. She promised, "E. Excel is a team that pursues the common interest of all members. As an E. Exceller, apart from achieving my own success, I'll also support fellow E. Excellers so that we can all achieve E. Excel's highest rank—Diamond Master—and shine bright like a diamond!"



No one's life is forever smooth sailing. Setbacks are unavoidable. The question is: How can we cultivate an indomitable spirit? Tsai-Lien said, "Your mindset is very important. Be sincere and kind in everything you do. As long as others can sense your sincerity, it won't matter anymore if they accept or reject your sharing. Everything you do leaves a trace. Life is like farming; if you work hard, you'll reap the benefits even if they do not come immediately. Once you understand this, you won't feel frustrated by difficulties. This is what I always share with fellow E. Excellers to encourage them.

"In fact, E. Excel has not only given me a career but also good health. Furthermore, through E. Excel, I've made many friends. Most importantly, it has made my life more meaningful." Tsai-Lien is grateful for E. Excel and a supportive team that is like a family, whereby teammates always encourage and support each other. "My happiest moments in E. Excel are when I win the Company's incentive trip challenges because they are proof that my hard work has paid off and I can travel around the world with E. Excel. What impressed me the most was the incentive trip on a luxurious cruise to celebrate E. Excel's 30th anniversary. It's my first cruise experience. The Company's consideration and care for us could be felt in every detail of the customized six-day, five-night itinerary, creating a truly unforgettable experience for me.

"The COVID-19 pandemic is a threat to the entire world. The virus is ruthless but fair—it attacks everyone. But not everyone has the same reaction to the virus. Some people are asymptomatic. Some have symptoms similar to those of a flu. Others suffer side effects after getting infected. And very unfortunately, there're people dying from it. The attack of the pandemic has taught everyone that prevention is truly better than a cure. Consequently, Nutritional Immunology has also become more easily accepted by the public." To Tsai-Lien, a crisis can be turned into an opportunity. The COVID-19 pandemic has caused many to lose their health; many people have also lost their job. But at the same time, it has underlined the strengths of the E. Excel career.

"Just do it!" is Tsai-Lien's encouragement to those who are still hesitant about joining E. Excel and those who just joined. "You'll never get a chance to succeed if you never get started in the first place. Opportunities are reserved for those who dare to try. If you always just think about doing something instead of acting on it due to your fear of failure, you'll never know the sweetness of the fruits of success." Because E. Excel has recharged Tsai-Lien's life with new vitality, she hopes to inspire fellow E. Excellers by sharing her own experience, "I become a Diamond Master at the age of 65. If I can do it, so can you!"

# A Trusted Career Filled with Love

## E. Exceller Iris Huang Hong



**Iris Huang Hong**

**From:** USA

**Strengths and Hobbies:** Singing, traveling, and sharing

**Dream:** To travel around the world; the people around me can stay healthy

**Traveled with E. Excel to:**

Hong Kong, Vietnam, Spain, Royal Caribbean Cruise, Ireland

"I joined E. Excel in August 2016. In October that same year, I attended the 29th E. Excel Convention, which changed my life because I met a group of high-spirited E. Excellers there. They were very happy and enthusiastic. It'd been years since I last saw or encountered such a bright atmosphere. I could feel their joy, and suddenly I just wanted to be like them so much!" Iris Huang Hong, our interviewee, shared as she recalled the day she chose decisively to take up the E. Excel career.

Iris elaborated, "More importantly, I saw Dr. Jau-Fei Chen with my own eyes during the Convention. Prior to this, I've never seen her in person before. I've only heard of her through others' sharing or have seen her in videos or on the internet, so it didn't feel very real. But during the Convention, I listened to Dr. Jau-Fei Chen shared stories about her startup days, including a story about a mother who wished to build a healthier life. This touched me deeply as I'm a mother. I realized then that E. Excel not only has superior products, but it also has infinite love for people, which is more precious; the E. Excel career is a career that spreads love. Right at that moment, in my heart, I quietly made a promise to myself that I'll follow Dr. Jau-Fei Chen's footsteps to share Nutritional Immunology. It was also then that I decided to commit fully to my E. Excel career."

Regarding the change in her career track, Iris shared candidly, "Before joining E. Excel, I ran a traditional business and had a physical shop for eight years. However, my schedule was very inflexible, and I hardly had time to go to the places that I wanted to visit! After joining E. Excel, I realized the flexibility of the sharing career—I don't have to stay put at one place and I won't incur expenses like rent." Through constant learning in E. Excel and sharing, Iris is earning a stable income and she can help fellow E. Excellers to learn and grow together. She feels very accomplished especially when she witnesses the success of fellow E. Excellers—something she never experienced when running her shop. "Traveling around the world has been my dream since I was a child. I hope that one day, I can achieve financial freedom and then I'll travel around the world with my family! In E. Excel, I can enjoy free incentive trips through my hard work. This helps put me on my way of fulfilling my dream of traveling around the world. Every year I can have the opportunity to travel with fellow E. Excellers and broaden my horizons!"

Recounting her first experience of sharing the E. Excel career, Iris said, "I'm good at communicating with people. Running a brick-and-mortar business requires communication and interaction with customers. My interactions with customers gave me a glimpse into the lives of people from all walks of life.



At the same time, I analyzed their problems by putting myself in their shoes, and then shared with them what I thought would be helpful to them.” Iris has infused the same strength and sincerity into her E. Excel career. “I remember my first time sharing the concept of healthy living with someone, I didn’t have very professional knowledge about it then. I simply treated the person as my friend, and shared sincerely with her what I’ve learned. I was surprised that she chose to trust me and accept Nutritional Immunology even though I was a stranger; she even started sharing Nutritional Immunology along with me. She helped boost my confidence and determination to manage my E. Excel career.” This experience also made Iris realize deeply that despite the great importance of professional knowledge, oftentimes, having a sincere and kind heart is equally significant. She said with deep conviction, “When we treat people sincerely, they’ll definitely feel it, and therefore choose to believe us and take up the E. Excel career like we did.”

Iris also wants to share with fellow E. Excellers her experience and tips for managing the E. Excel career, “Choosing to change may be tough. Everyone has weaknesses. There’ll be moments when we feel lonely and helpless. However, we must believe that such moments are there not to defeat us, but for us to learn how to face difficult times with greater courage! Regardless of whether we succeed or fail, we’ve every reason to cheer for ourselves! When digging a well and we don’t see water, it’s not because there’s no water, it’s because we didn’t dig deep enough. Similarly, it’s not that there’s no success or that success reaches us too slowly, it’s because we give up too quickly! Never fear moving forward, your team and the Company will always provide solid support. Persistence will pay off!”

Throughout the more than five years of managing the E. Excel career, Iris felt profoundly Dr. Jau-Fei Chen’s contributions to the health of humanity and the mission she shoulders. Iris also gained a clearer view of the wonderful vision to be accomplished through the E. Excel sharing career. “I’m blessed to meet E. Excel, and I’m willing to become an advocate of Nutritional Immunology. If there’s one more person in this world who gets to know Nutritional Immunology and the benefits of wholesome plant foods because of me, then my efforts are worth it! On top of that, in the past five years, I’ve encountered many like-minded teammates. Our team is growing bigger and bigger. All of us are working very hard to achieve our dreams. We feel lucky to have chosen the right direction. I firmly believe that our efforts will be well rewarded, and that there’ll be more people becoming advocates of Nutritional Immunology in the future!”

Life Motto—“Life is about moving forward. Success lies in persisting a minute more than others.”

## Make Your Dream Come True with a Career that Passes on Love

### E. Exceller Raine Tan



Raine Tan

**From:** Singapore

**Strengths and Hobbies:** Yoga, exploring nature, reading, and traveling

**Dream:** To have a healthier, wealthier, and happier life

**Traveled with E. Excel to:**

Italy, Xi'an, USA, South Korea, Royal Caribbean Cruise, Osaka, Sanya

"What attracts me the most about E. Excel is its sincere intention to pass on a legacy of success and love," our interviewee Raine Tan said with a smile as she shared her E. Excel story. "I worked for others for over a decade prior to joining E. Excel but I've never encountered anything like the E. Excel career—building my own business that can be easily passed down to the next generation while instilling in them the priceless concept of healthy living! Dr. Jau-Fei Chen is our best and most direct role model. She has passed her business baton to the second generation of E. Excel's leadership. In the big E. Excel family, this is not unusual at all. I've seen many fellow E. Excellers pass their businesses down to their children. I've seen three-generational families—grandparents, parents, and children—traveling together in E. Excel. I've seen families whereby out of five siblings, three are E. Excellers. This makes me even more convinced that I made the right choice."

Raine's positive and upbeat mindset shines through in her amiable smile that she always carries. She is doing her E. Excel career on a full-time basis now, and has achieved good results. Looking back, she shared about the twists and turns in her E. Excel journey, "I first came into contact with E. Excel during my secondary school days because my mom was using the products. I still remember there were E. Excellers in my house who played the video of Dr. Jau-Fei Chen being interviewed in Beijing. My second contact with E. Excel happened 12 years later. In 2007, a colleague shared about E. Excel products with me. Did I embrace E. Excel then? No, I ran in the opposite direction! It wasn't until my third encounter with E. Excel that I finally joined the big E. Excel family, thanks to my passionate love for E. Excel products!" Hence, Raine can handle any objection and rejection well when she shares with others.

"It's understandable because even I didn't accept it the first time. It took me three encounters with E. Excel before I became a part of E. Excel. Just take rejection in your stride and always try again. Those who turn us down may not know us well enough and may not yet see the true value of our sharing. Focus on what we can control!"

Raine would also like to share her understanding of *dream* and *persistence* with fellow E. Excellers, "People grow great by dreams. Your dream is your 'boss.' No matter how big your dream is, as long as you persist, E. Excel will make your dream come true!"



The COVID-19 pandemic has underlined E. Excel's strengths of flexible working hours and locations. Raine has also taken full advantage of these strengths—using online platforms wisely to support her career. "Nowadays, many people are constantly using their computers and mobile phones. We E. Excellers are coaches of excellent living, so regardless of where I'm going, such as on a staycation with my family, I post the moments on my social media in real time, sharing the great lifestyle with everyone. This not only allows me to work and live a life at the same time, it also naturally attracts people so that they voluntarily read the content I share on my social media, which leads them to knowing more about the E. Excel career. This is an aspect of the E. Excel career that I love and enjoy very much."

Over the span of more than 10 years with E. Excel, there are many people whom Raine would like to thank, Dr. Jau-Fei Chen is chief among them. "Dr. Chen has pioneered a science of prevention. She has created an opportunity for everyone to be an entrepreneur with a buildable career. In addition, her quote 'Children want their parents to lead them, not sacrifice for them' has inspired me and has laid a solid foundation for my parenting philosophy. It has guided me throughout my parenting journey and propelled me to keep improving myself and let my children also benefit from the E. Excel career!" Another person whom Raine would like to thank is her mom. "Because my mom is a tour guide, I've been familiar with traveling since I was a child. After managing the E. Excel career on a full-time basis in 2014, I went on nearly all the incentive trips, and therefore, I got the opportunity to take my mom with me for the first time to attend the 30th E. Excel Convention on a luxury cruise ship in 2017. Following that, I also took my mom along on the incentive trips to places like Osaka and Sanya. When I was little, my mom would take me and my siblings to travel around Malaysia. Now that I'm an adult, I'm finally able to take my mom to travel the world! I'm thankful for making the right choice so that the speed at which I achieve success outpaces that of my parents' aging." Raine also wants to thank her mentors, family, team, and the Company for encouraging, motivating, and supporting her so that she can fulfill her dreams step by step and continually stride towards excellent living.

Looking into the future, Raine hopes to attract and lead more people of the younger generation, helping them achieve a life of excellence and freedom. She also wishes to help many more like-minded teammates pursue their dreams and attain a happy and successful life! "On top of that, I want to follow E. Excel and travel to different places. I want to explore life and travel around the world with my mom, husband, children, other family members, and teammates!" Raine smiled.

Life Motto—"Making the right choice is more important than working hard. Create an excellent life!"

# Kidney Disease Prevention



The kidneys are two bean-shaped organs sitting just underneath the rib cage at the back, one on each side of the spine. Although small, they play vitally important roles in keeping our body balanced and healthy. A lot can go wrong if the kidneys are not healthy.

## Functions of the Kidneys

The main jobs of the kidneys are to filter the blood, remove waste, control the body's water level, and maintain a healthy balance of water, salts, and electrolytes—such as sodium, calcium, phosphorus, and potassium—in the

blood. By controlling what exits the body via the urine, the kidneys can do their job and maintain this balance well. If there is too much water, then more urine will be passed. If there is too much of a certain electrolyte, then more of that electrolyte will be discarded into the urine. Conversely, if there is too little of an electrolyte, it will be kept in the body and will not be allowed to pass into the urine.

## A Domino Effect

Once the kidneys start to fail, the other organs in the body will follow like falling dominoes.

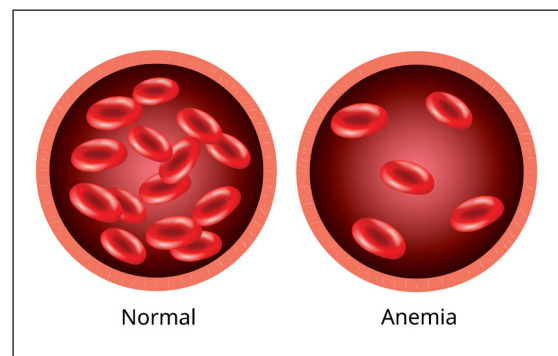
### High blood pressure

Since the kidneys control how much urine is passed, they control the level of water within the body and, by extension, the blood pressure. The kidneys need a lot of blood in order to filter fluid and waste out of the body. Hence, if the kidneys sense reduced blood flow, they will hold on to water and produce less urine. More water retained in the body means more blood volume, which means a higher blood pressure. The kidneys can also start a chain reaction of hormones that constrict and narrow blood vessels, which elevates blood pressure.

The kidneys and the body's blood pressure can affect each other. If the kidneys fail, then they will not be able to regulate blood pressure properly. They will also not be able to get rid of enough water, which will lead to too much water being held in the body, causing high blood pressure.

### Anemia

The kidneys play a key role in red blood cell production. Red blood cells carry oxygen from the lungs to the tissues in the body, and carry carbon dioxide back to the lungs to be exhaled. When specialized cells in the kidneys sense low levels of oxygen, they produce erythropoietin (EPO)—a hormone that stimulates the bone marrow to produce red blood cells. If the kidneys are not working, they cannot produce EPO, and without EPO, no new red blood cells can be produced. Decreased red blood cell production can lead to anemia.



### Weak bones

The kidneys help convert vitamin D from an inactive form to an active one that can be used by the body. The body uses vitamin D to absorb calcium. If the kidneys are not working, then the body cannot absorb calcium. Without calcium, maintaining strong bones is out of the question for the body. Even worse, since our body continuously needs calcium, if we do not get enough calcium from our diet, our body will take it from the bones instead. This can cause further weakening of the bones.

### Heart problems

The kidneys closely regulate the balance of electrolytes, such as sodium and potassium, in the blood. This balance is very important. Contraction of the body's muscles, including the muscle in the heart, relies on the flow of sodium and potassium. If the balance of electrolytes in the blood is disturbed, such as what happens during kidney disease, heart arrhythmias (irregular heartbeats) can happen.

### Gout

Kidney disease can cause gout. If the kidneys cannot filter out uric acid as well as they should, uric acid can build up in the body and cause gout.

#### Interesting Facts About the Kidneys

- Healthy kidneys can filter about half a cup of blood every minute, and filter the body's entire volume of blood about 40 times a day.
- You can lose up to 90% of your kidney function without knowing it!



### Another "Silent" Killer

Our kidneys are incredibly efficient at their jobs. People with just one kidney, whether due to transplants or because they were born with just one, can also live a normal, healthy life. In fact, we only need a tiny portion of our kidneys to be functioning, because our body and kidneys are incredibly good at compensating for any loss of function. But this also means that by the time a person shows symptoms of kidney disease, the disease is usually quite advanced.

The U.S. National Kidney Foundation reports that more than 1 in 7 adults in the U.S. have kidney disease; 90% of those with chronic kidney disease do not know they have it; and 2 out of 5 adults with severe kidney disease do not know they have it.

This is unfortunate because the key to treating kidney disease is catching it early. Kidney disease can be easy to miss because the symptoms are subtle:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Urinating more often</li><li>• Fatigue, weakness</li><li>• Loss of appetite, nausea</li><li>• Swelling in the arms, ankles, and/or feet</li><li>• Trouble sleeping</li><li>• Itching</li><li>• Shortness of breath</li></ul> | <ul style="list-style-type: none"><li>• Puffy eyes</li><li>• Trouble concentrating</li><li>• Muscle twitches or cramps</li><li>• High blood pressure</li><li>• Blood in urine</li><li>• Foamy urine</li></ul> |
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## Causes of Kidney Disease

### Diabetes

This is the most common cause of kidney failure in the U.S. where about one in three diabetics have kidney disease. Diabetic kidney disease happens slowly. Over the years, diabetes will irreversibly damage the delicate blood vessels and the tiny filtering units in the kidneys.

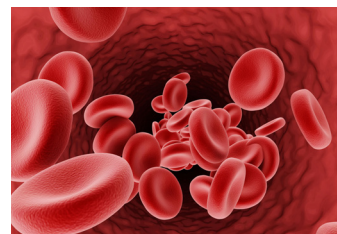


### High blood pressure

This is the second most common cause of kidney failure. Over time, high blood pressure will put undue stress on the blood vessels in the kidneys and cause damage. Damaged blood vessels cannot deliver enough blood to the kidneys, and thus the kidneys fail.

### Abnormal blood flow

The kidneys are highly dependent on adequate blood flow. If there is not enough blood reaching the kidneys, the kidneys will suffer. Low blood flow can happen with excessive blood loss, clots, narrow arteries, plaques, sepsis, severe infections, or simple dehydration. Liver diseases and heart diseases, such as heart attacks, can also affect the blood flow to the kidneys.



### Blocked urinary tract

If the body cannot eliminate urine, then the toxins that are meant to be passed out of the body will accumulate in the kidneys and cause damage. This can happen with any blockage of the urinary tract, such as kidney stones, nerve damage to the bladder, enlarged prostate, and cancers in the area that can cause an obstruction.

### Inflammation

Uncontrolled inflammation can cause kidney damage. Inflammation can be caused by medications, infections, and toxins. Some autoimmune diseases, such as systemic lupus erythematosus, Berger's disease (IgA nephropathy), granulomatosis with polyangiitis (GPA), and Goodpasture syndrome, target the kidneys.

### Genetic conditions

There are a number of genetic diseases that directly or indirectly affect the kidneys and cause kidney failure. These conditions include autosomal dominant polycystic kidney disease (ADPKD), Alport syndrome, Lowe syndrome, and Fabry disease.

## Rhabdomyolysis

Rhabdomyolysis is a serious and potentially life-threatening condition caused by the breakdown of muscle tissue that leads to the release of muscle fiber contents into the blood. The most common causes are overexertion, medications, toxins, and alcohol. The breakdown of muscle tissue releases large quantities of potassium, phosphate, myoglobin, and creatine kinase. The kidneys cannot filter all of these so they accumulate in the kidneys, causing damage.

## Medications

Some medications can harm the kidneys. For example, some painkillers and antibiotics increase the risk of kidney failure or progress kidney disease.

## Misconceptions About Kidney Disease

**Misconception: Consuming a high-protein diet will cause proteinuria or kidney disease.**

Protein does not cause kidney disease. But when kidneys are damaged, they may allow protein to leak into the urine, resulting in “foamy” urine. Proteinuria is the presence of too much protein in the urine.



**Misconception: Soy protein harms the kidneys.**

Those with kidney disease still need to get their protein! One of the best sources of protein for those with kidney disease is soy protein.

Using animal models, researchers have found that replacing animal protein with soy protein reduced the development of kidney disease. In those with diabetic kidney disease, soy protein helped preserve kidney function. Other studies have shown that compared with animal protein, which can harm kidney function, soy protein can improve kidney function. Soy protein appears to place less stress on the kidneys and also helps lower serum creatinine levels. On top of that, soy contains more than just protein—it has fiber and many other healthful substances.

**Misconception: High levels of creatinine in the blood always indicate kidney damage.**

When checking for kidney damage, doctors often look at creatinine levels. However, high creatinine levels do not always mean there is kidney damage!

Eating too much creatine can temporarily increase the levels of creatinine in the blood. Creatine is a compound that helps supply energy for muscular contractions, while creatinine is a waste product. Creatine supplements are commonly taken by athletes, but these supplements can cause blood creatinine levels to mimic the levels expected in kidney disease. Meat also contains creatine, which is converted to creatinine during cooking. Eating a lot of meat can increase serum creatinine levels.

## Lifestyle Changes to Prevent Kidney Disease

### Control high blood pressure.

The best ways to lower blood pressure are to lose extra weight, exercise, reduce salt intake, reduce stress, and eat a healthy diet full of plant foods. Drinking too much alcohol can increase blood pressure! High blood pressure is one of the most common alcohol-related health problems, so avoid alcohol.

Always remember: maintaining a healthy weight is key. An unhealthy weight is linked to many health conditions, such as high blood pressure, heart disease, and diabetes. All of these conditions can cause kidney disease.



### Stay hydrated.

The kidneys are incredibly sensitive to water levels. Even being slightly dehydrated can put someone in the earliest stage of kidney injury.

Saunas, hot yoga, and exercise all seem to be good for health, but sweating too much can actually cause kidney stones! Loss of water through sweating can allow stone-forming minerals to concentrate in the kidneys.

One of the easiest ways to keep our kidneys healthy is to stay hydrated. But not any drink will do! Unhealthy drinks, such as soda, are actually associated with a 30% increased risk of kidney stones. On the other hand, tea can reduce the risk of kidney stones. Studies have shown an 11% – 23% decreased risk of kidney stones among tea drinkers. Not a fan of water? Drink tea!

### Avoid vices.

Smoking and drinking alcohol damages various organs in the body, especially the kidneys.

### Eat more fiber.

A diet rich in dietary fiber may prevent the progression of chronic kidney disease. Researchers have found that a high consumption of dietary fiber can encourage the growth of healthy microbiota in the gut, strengthen the gut barrier, decrease inflammation, and lower the levels of uremic toxins (substances that accumulate in the body fluids of people with kidney disease and impaired kidney function) in the blood. A high-fiber diet can slow the decrease in eGFR—a marker of kidney function, and lower serum urea and serum creatinine levels.



### Eat more plant foods.

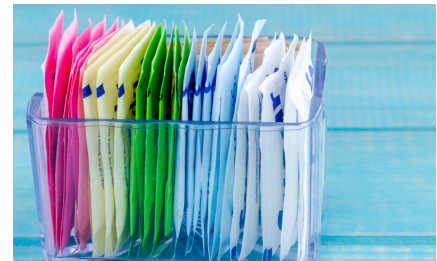
Plant foods not only contain lots of fiber, but also plenty of phytonutrients. Phytonutrients can help lower inflammation, and some even have anti-angiotensin effects, which help lower blood pressure.

### Avoid red meat.

Red meat may boost the risk of kidney failure. A study from Singapore has found that the more red meat people ate, the greater the risk of end-stage kidney disease. People who ate the most red meat had a 40% increased risk of developing end-stage kidney disease compared to people who ate the lowest amounts.

### Avoid artificial sweeteners.

Researchers have found that overconsumption of artificial sweeteners may contribute to conditions such as obesity, metabolic syndrome, hypertension, heart disease, and alterations in the gut bacteria. Some studies have suggested that the artificial sweetener aspartame may be toxic to the kidneys. However, more research needs to be done. In the meantime, it is recommended that artificial sweeteners should be avoided if possible.



Some studies also show an association between artificial sweeteners and autoimmune hypothyroidism that suggests artificial sweeteners could be a culprit in the development of thyroid disease. People with hypothyroidism are more at risk of chronic kidney disease.

### Avoid getting sick.

Any stress on the body, especially the stress of illness, stresses the kidneys. Not to mention, many of the medications used to treat illnesses, such as some antibiotics, can damage the kidneys. The cost of treating a disease can be a decline in kidney function. The best option is to avoid getting sick to begin with.

## Everything Is Connected

The kidneys are one of the most delicate organs in the body, yet they are one of the most important organs. If the kidneys fail, the rest of the organs will follow. If one organ fails, the kidneys can follow. All of the organs in our body depend on each other to function optimally. Any undue stress on one organ means the other organs have to pick up the slack.

The best way to maintain health is not to focus on the health of one organ or another, but the health of the body as a whole. The best way to do this is to eat a healthy diet, full of different plant foods. Plant foods contain all the nutrients we require, including protein. They also contain plenty of other nutrients, such as phytochemicals, polysaccharides, and antioxidants, all of which help protect and maintain health.



The Lifelong Learning article is contributed by Dr. EE Zhang, MBChB.

## Building For the Future

The idea of building something that spans generations has captured the passion and imagination of individuals and families throughout history. People aspire to build upon their family legacy, and to spend their lives producing something of lasting value.

Take, for example, the humblest farmer. He dreamed of passing on a well-worked field, hard-won skills and knowledge, and a high reputation to his children. Children followed in the footsteps of their parents and built upon the foundation laid by their predecessors. This was not only a smart strategy for stable, long-term success, but also a way of life that expanded one's horizons beyond the immediate needs and desires of oneself. It was a way of conceptualizing one's work and career as part of a long-running story, a story being told collectively through the generations as they strove together across time to build something valuable and lasting.



This sense of place in a grand narrative gave meaning and dignity to even the lowest of professions and the most difficult of circumstances. But today, we have a different attitude towards work. Increasingly, work is merely the means to a temporary end. Today, our career is seen as a means to carry us from adulthood to retirement, and to afford us and our family our immediate needs and some luxuries. In other words, we trade our lives for money without long-term purpose—money for our food, for our comfort, for our entertainment, and for our retirement. All that we pour into our career ends the day we retire or expire. Our children will go on to have careers of their own, which will similarly endure but for a lifetime as well, and their children will start all over again.

At best, we leave behind money to our children, but money can easily go up in smoke with one bad decision or an unfortunate turn of the market. In such a myopic narrative, one's immediate circumstances are everything. The number written after the dollar sign on your paycheck or bank statement tells nearly the entire story of your work life. Employers are more than happy to oblige this way of working by structuring their business models around replaceable, disposable workers whose main interest in the job is obtaining money to spend on the here and now.

## Multi-generational Business

Your career at E. Excel, however, is not temporary and is not fleeting. At E. Excel, you can build a business that will last throughout generations in an industry that transcends the fickle fads and fashions of the Information Age. Health is always going to be important. Nutrition is always going to be a significant player in the health and wellness industry. Nutritional Immunology, which is the keystone of E. Excel's products, is part of the cutting edge of the scientific research that pushes nutrition science forward. This innovative research that continuously pushes the envelope in a timeless industry makes E. Excel an ideal starting point for building a multi-generational business.



E. Excel's choice of industry and excellence in research are not the only pillars that support its vision for work as a generational building project—that vision is firmly rooted in its business model.

E. Excel is in the business of relationships, not sales. This is important because a business based solely on sales is not something that can be easily passed down to later generations. The relationships that you build as an E. Exceler are what drives not only your income from sales but also the residual income from the relationships that you foster and build over time. Furthermore, such relationships can be passed on to your children. Your children will then bring their own relationships into the business, expanding your horizons beyond what is capable through yourself alone. The business that you build with E. Excel is a solid foundation that your children and their children after them can continue to build upon.

What you are building with E. Excel is much more than just financial security: it is the beginning of a story that may span many generations; a legacy that you began but your family will continue.



## Time, Wisdom, Experience

So what might that story look like? With the flexibility that the E. Excel career gives your schedule, it starts out with having a lot more time for your family; being there for whom you love, whether it is a school concert or a family vacation. And with family members as E. Excelers, you can plan vacations together easily—no more counting of vacation days or applying for days off. Simply plan, book, and enjoy according to your own schedule.

But it goes beyond just having more quality family time. As you work, your children will see you build the family business from an early age and learn by example that work does not have to be about grinding hours for a monthly salary. As you build your business of relationships, your whole family will grow from the rich experience of seeing new faces and hearing new stories. Twists and turns in the organic growth of the business will make for lively and educational topics of discussions at the family dinner table, with ample opportunities for valuable life lessons.

Like every E. Excel household, health and nutrition will become a subject of importance and study in your family, and you and your family will reap the benefits of such useful knowledge throughout life. Through you, your family will also see how others benefit from Nutritional Immunology—their health restored, improved, and protected. As your children grow, some may express desire and talent for the work. If so, they are lucky—instead of needing to wait until after years of schooling to follow in your footsteps, they can get started immediately under your tutelage. Your children will be privileged in many ways above their peers. For one, the E. Excel household has exposed them to the basics of the business early on. They will be dealing with knowledge and products that are already familiar to them, and they will meet and work with people they have been around for years. Even more importantly, they will have you to educate and train them. Instead of starting at the bottom of somebody else’s company with zero experience as a disposable worker, your children will be groomed and cultivated by all of your experience and knowledge of the business. As your children, they can be brought smoothly into your existing business relationships.

### **E. Excel will never fail you!**

E. Excel is a force that makes your family become more close-knit as you work, rest, and travel together. There will be many opportunities for memories to be shared along the way—from the day-to-day meetings, the regular local events, to annual conventions that take you and your family around the world to exotic locations to meet with the larger E. Excel family. As your children take over what you started, you can rest easy knowing that you have handed an inheritance of much greater value than money to your family.



With E. Excel, you can build a resilient and long-lasting business that educates your loved ones about proper health and nutrition. It is a business that benefits your family, and meanwhile, grows stronger from the unique perspectives and relationships that your family brings to it. It is a business that will not only stand the test of time, but also grow and prosper across the generations. It is a business that tells the story of a wise builder who looked far beyond mere daily needs to leave a legacy that will continue to bless those who follow after.



The Professional Development article is contributed by Elei Zhang, JD.

*Knowledge is power. Knowledge is instrumental to value-creation and is a critical asset in life. It is in many ways the primary instrument of progress and innovation. However, knowledge can be messy, particularly when false. Today, information spreads rapidly and comprehensively, and websites and social media outlets are easy access points for false information.*

*We're here to help discern fact from fiction. Knowledge becomes powerful in the right culture—collectively sharing in the truth and continually seeking progress and ideas. Building the right knowledge base is neither a short-term effort nor a one-off project. It is a lifelong process of discovery.*

## Looking Young(er)



We may want to act our age but many of us do not want to look our age. Curious about products targeting AGEs, facial rollers, and facial exercises? Read on!

### Fighting against AGEs?

Everyone is always looking for the next big thing when it comes to skincare. Now there are products that claim to fight against advanced glycation end-products (AGEs).

### What are glycation and AGEs, and why are they bad?

Glycation is a process in which sugar attaches itself to proteins, amino acids, or lipids. Once it has been attached, the result is called an advanced glycation end-product (AGE). It is bad for the skin because once collagen is glycated, it is stiffer, more brittle, and cannot support the skin as it should, leading to a loss of firmness and more wrinkles.

### Why does this happen?

AGEs form in the body when there are abnormally high levels of blood sugar. High blood sugar levels increase the chances of glycation occurring. Our body is normally well-equipped to handle AGEs forming—it is a natural process after all. It becomes a problem when there is an excessive amount of sugar in the body.

### Do AGEs discolor our skin?

Some products claim that because the sugar in food becomes brown when heated, the sugar in our skin can be browned as well by heat or the sun's rays! While it is true that browning, or burning food, can produce AGEs, heat from the sun's rays is not going to "brown" the sugar in our skin. Our skin is not a steak sitting in a frying pan! Our skin tans because ultraviolet (UV) light from the sun increases the melanin in our skin.

### What is the best way to prevent AGEs from forming?

The best way to prevent AGEs from forming is to eat a healthy diet! Cut out junk foods and drinks, such as cakes, cookies, and soda. They have little or no nutritional value but are high in calories. If you need to satisfy that sweet tooth, then eat more fruits. Fruits contain far less sugar than junk food and are healthy too! Eating more fruits and vegetables can even help control blood sugar levels. Lower blood sugar levels can mean lower levels of AGEs. However, this does not mean that sweets are forever off the table. The occasional indulgence during special occasions or holidays is okay. We still need a bite of happiness once in a while!

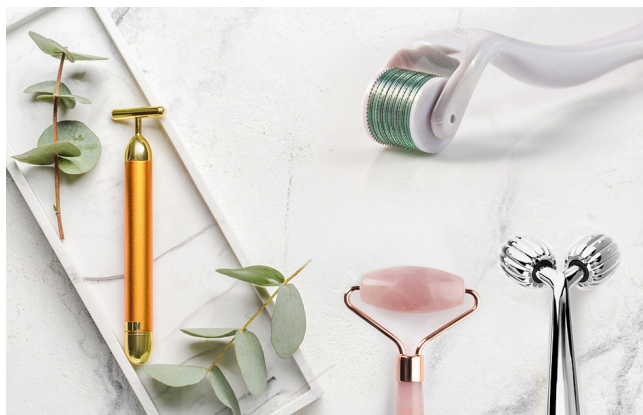


### Can facial creams help prevent AGEs in the skin?

There are many different products now targeting AGEs in the skin, but no, those creams cannot help. There is very limited data on how effective any of these skincare products are, or if they do anything at all. Many of these skincare products cannot penetrate deep enough into the skin to reach the collagen fibers. Plus, since they tend to be on the expensive side, there is no reason to get them when your hard-earned money could be spent on buying more fruits and vegetables instead!

### Facial Rollers vs. Fingers

There are all sorts of beauty products out there competing to massage your face. Oftentimes they have instructions such as to only roll in an upward motion or to massage for a certain length of time. One of the most popular products are facial rollers. These beauty tools have a polished, rounded stone or crystal for use to "roll" across your face.



People like to say that facial rollers help improve blood circulation and lymphatic drainage. You can actually reap the same benefits by using your fingers. A light massage will improve blood circulation and lymphatic drainage. However, excessive massaging of the face can do more harm than good. There is not much money to be made from telling people to massage their face with their fingers. Selling crystals and other precious stones on the other hand? Plenty of money there.

People also like to say that facial rollers help boost the absorption of skincare products into the skin. The scientific fact is that most skincare products do not get absorbed; they just sit on top of the skin. Facial rollers or forceful massaging of the face with the fingers is not going to help absorption. The material and the type of stone of the facial rollers also do not affect absorption of products. That “sinking-in” or “rubbed-in” feeling that can occur? That is just the product air drying. In the end, most of the product ends up washed off or flakes off along with dead skin cells.



### **Let Your Face Be “Lazy”**

The search for the non-surgical facelift has landed on facial exercises—exercises meant to help people look younger and get rid of wrinkles. But this idea that exercising or “toning” the facial muscles prevents wrinkles is entirely wrong. Moving our facial muscles can actually cause wrinkles. For example, the lines that form around the mouth are smile lines caused by smiling. The forehead grooves are horizontal because the forehead muscles pull everything up. The wrinkles around the eyes are from squinting. Repeated movements of those facial muscles over a long period of time causes those wrinkles. In fact, that is why people get Botox injections—to freeze the muscles in place, thereby minimizing movements that cause wrinkles. If you do not want wrinkles, then start sporting a poker face! Stop smiling, frowning, or having any facial expressions at all. (Just joking!)

### **The #1 Way to Prevent Wrinkles While Also Living Life**

If preventing wrinkles is your goal, then invest in a good sunscreen and moisturizer, do not smoke, and eat healthy. The sun damages the skin and causes premature aging, so always use sun protection. Moisturizers can help trap water in the skin, keeping skin hydrated and plumped, thus making wrinkles less visible. Smoking speeds up the aging process, and can be especially harmful to the skin. Lastly, your skin is a mirror reflecting your overall health. Eating healthy, and eating more antioxidant-rich plant foods, can help keep your skin looking youthful.

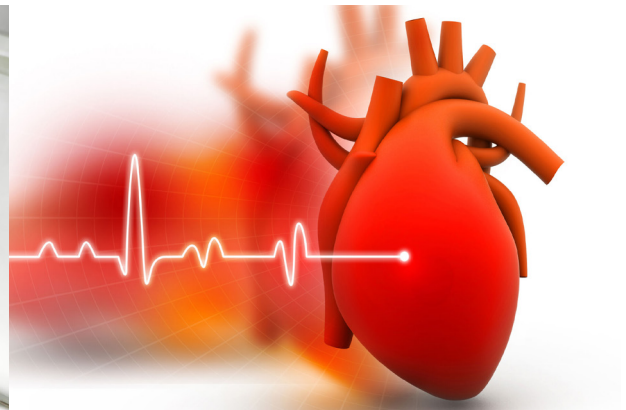


Good things come in pairs. So here's another Beyond article. Enjoy!



## Coconut Oil

Coconut oil has soared in popularity in recent years, thanks to slick marketing strategies that promote it as a health food. People take spoonfuls of coconut oil because it has been touted as a miraculous oil that helps with everything from heart health to weight loss. But is coconut oil really as good as it is cracked up to be?



### Is coconut oil good for my heart?

Hardly.

Like all oils, coconut oil is 100 percent fat. But unlike most oils, coconut oil is almost entirely saturated fat. That is why it is solid at room temperature.

Per tablespoon (14 grams), coconut oil has double the amount of saturated fat in lard or butter, and six times that in olive oil.

Saturated fat raises LDL (bad) cholesterol levels, upping the risk of heart disease and stroke.

Research shows that coconut oil generally raises bad cholesterol levels more than other plant oils. But while heart-healthy fats like olive oil are backed by a large body of credible research, there is a lack of large-scale human research to support the purported benefits of coconut oil.

Experts recommend using coconut oil sparingly in your cooking.



In fact, the American Heart Association (AHA) issued a scientific advisory in 2017, recommending against the use of coconut oil:

"However, because coconut oil increases LDL cholesterol, a cause of CVD, and has no known offsetting favorable effects, we advise against the use of coconut oil." — *Dietary Fats and Cardiovascular Disease: A Presidential Advisory from the American Heart Association*



### Can coconut oil help me lose weight?

Fat hope. Slim chance.

Coconut oil is often marketed as an excellent source of medium-chain triglycerides (MCTs). MCTs promote the feeling of fullness and prevent fat storage because they are quickly absorbed and used by the body.

The commercial coconut oils available on supermarket shelves do not contain enough MCTs to achieve the same results as weight-loss studies using specially concocted oils with 100 percent MCTs.

Furthermore, studies done with coconut oil show that coconut oil does not increase metabolism any better than other plant oils.

If you want to lose weight, you are better off eating more vegetables, fruits and whole grains daily and exercising regularly, instead of taking a few spoonfuls of coconut oil every day.



There are treasure troves of mysteries in nature waiting to be discovered and explored. Countless scientists have devoted themselves to unraveling them in the hopes of improving human health and wellbeing. Their work is vital to understanding and treating disease.

We bring you their research findings in our goal to enrich and expand public knowledge.

## Oriental Raisin Tree (*Hovenia dulcis*)



### Oriental Raisin Tree May Help Treat Drunkenness

Oriental raisin tree (*Hovenia dulcis*) has long been used in Chinese and Korean traditional medicine to treat alcohol intoxication and speed up recovery after excessive drinking. *Hovenia dulcis* extracts reduce alcohol concentration in the blood. Acetaldehyde is generated when the human body breaks down alcohol. Studies showed a decrease of blood alcohol and acetaldehyde levels in animal models. A similar effect was seen in humans as well. A reduction of alcohol and alcohol metabolites was observed in saliva and exhaled breath in the group treated with *H. dulcis* extract compared to the control group. This suggests that the alcohol was metabolized faster.

Sferrazza G, Brusotti G, Zonfrillo M, et al. *Hovenia dulcis* Thunberg: phytochemistry, pharmacology, toxicology and regulatory framework for its use in the European Union. *Molecules*. 2021;26(4):903. doi:10.3390/molecules26040903

### The Liver Can Metabolize Alcohol Faster With Oriental Raisin Tree

*Hovenia dulcis* extract could reduce the alcohol concentration in the blood and increase the activity of the enzymes—alcohol dehydrogenase (ADH) and aldehyde dehydrogenase (ALDH)—in animal models after being given alcohol. These two enzymes help break down and metabolize alcohol. The administration of *H. dulcis* extracts to animal models, 30 minutes prior to alcohol ingestion, enhanced the activity of ADH and ALDH more than control groups, which suggested that the alcohol was metabolized faster.



Chen SH, Zhong GS, Li AL, Li SH, Wu LK. *Zhongguo Zhong Yao Za Zhi*. 2006;31(13):1094–1096.

Wu YY, Lee YS, Liu YL, et al. Association study of alcohol dehydrogenase and aldehyde dehydrogenase polymorphism with Alzheimer disease in the Taiwanese population. *Front Neurosci*. 2021;15:625885. doi:10.3389/fnins.2021.625885

Hyun TK, Eom SH, Yu CY, Roitsch T. *Hovenia dulcis*—an Asian traditional herb. *Planta Med*. 2010;76(10):943–949. doi:10.1055/s-0030-1249776

### Anti-hangover Effects of Oriental Raisin Tree Extract

A randomized controlled crossover trial evaluating the anti-hangover effect of freeze-dried aqueous extract of *H. dulcis* fruit was conducted on humans. Volunteers were given 50 g alcohol to induce hangovers. Blood alcohol, acetaldehyde, and inflammatory cytokines were measured over time. A significant decrease in hangover symptom scores was observed in the treatment group compared to the placebo group. The researchers found that the *H. dulcis* fruit extract had a favorable effect on alcohol hangovers that might be associated with inflammatory regulation.

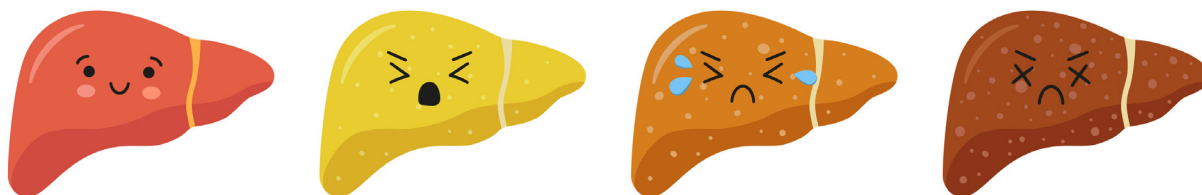


Kim H, Kim YJ, Jeong HY, et al. A standardized extract of the fruit of *Hovenia dulcis* alleviated alcohol-induced hangover in healthy subjects with heterozygous ALDH2: a randomized, controlled, crossover trial. *J Ethnopharmacol.* 2017;209:167–174.doi:10.1016/j.jep.2017.07.028

### Oriental Raisin Tree May Help Treat Liver Injury

Acute liver injury was induced in rats using carbon tetrachloride (CCl<sub>4</sub>), a chemical that can cause liver injury. The results showed that a significant reduction in AST and ALT (both are enzymes found mainly in the liver) levels in rats treated with *H. dulcis* extract compared to the control group. Elevated AST and ALT levels generally signify liver damage or injury; reduced levels indicate lower levels of liver injury or inflammation.

Kim YS, Park J, Kwon Y et al. Hepatoprotective effects of *Hovenia dulcis* extract on acute and chronic liver injuries induced by alcohol and carbon tetrachloride. *Korea J Herbology.* 2013;28(4):25–32. doi:10.6116/kjh.2013.28.4.25



### A Potential New Method For Treating Liver Scarring

Hepatic fibrosis was induced by CCl<sub>4</sub> administered for six weeks in rats. Results obtained showed that the mRNA expression of TIMP-1 was statistically reduced due to the *H. dulcis* extract, and this effect correlated with the reversion of hepatic fibrosis in the experimental group. The administration of *H. dulcis* extract lowered ALT, AST and bilirubin levels and the expression volume of collagen I and III compared to the control group. It also reduced the expression and accumulation of collagen I and III in liver tissue. Pathological images confirmed that in rats treated with *H. dulcis* extract and CCl<sub>4</sub>, the progression of fibrosis was inhibited more than in rats treated with CCl<sub>4</sub> alone.

Liu XL, Zhnag H, Wang F. *Zhongguo Zhong Yao Za Zhi.* 2006;31(13):1097–1100.

Lee JJ, Yang SY, Kim DH, et al. Liver fibrosis protective effect of *Hovenia dulcis* fruit. *Curr Top Nutraceutical Res.* 2014;12(1/2):43–49.

Grünwald B, Schoeps B, Krüger A. Recognizing the molecular multifunctionality and interactome of TIMP-1. *Trends Cell Biol.* 2019;29(1):6–19. doi:10.1016/j.tcb.2018.08.006



### Oriental Raisin Tree Can Help Protect the Liver Against Alcohol

Polysaccharides in *H. dulcis* (HDPS) exert a liver-protective effect on acute alcohol-induced liver injury in mice, without inducing toxic side effects.

*In vitro* experiments have shown that HDPS exhibits strong antioxidant activity properties with its high superoxide radical scavenging activity and significant inhibition effect on lipid peroxidation.

HDPS greatly restored the activities of superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px) in the liver of mice injured by ethanol in an *in vivo* experiment. It also significantly reduced the serum concentration of ALT and AST as well as the liver level of malondialdehyde.

These results suggest that the liver-protective effect of HDPS is mediated via the antioxidant action.

Wang M, Zhu P, Jiang C, Ma L, Zhang Z, Zeng X. Preliminary characterization, antioxidant activity *in vitro* and hepatoprotective effect on acute alcohol-induced liver injury in mice of polysaccharides from the peduncles of *Hovenia dulcis*. *Food Chem Toxicol*. 2012;50(9):2964–2970. doi:10.1016/j.fct.2012.06.034

### Oriental Raisin Tree Can Help Protect Against Fatty Liver Disease

*Hovenia dulcis* has anti-inflammatory, anti-steatosis, and antioxidant activities. A study induced liver damage in mice by giving them alcohol. The mice that were also given *H. dulcis* extract showed decreased levels of AST, ALT, albumin, alkaline phosphatase (ALP), triglyceride (TG), and  $\gamma$ -glutamyl transferase ( $\gamma$ -GTP) in serum. They also had lower TG content, tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) level, and cytochrome (CY) P450 2E1 activity in the liver. The lower levels are indicative of a liver-protective effect.



The administration of *H. dulcis* extract modified mRNA expression of genes involved in hepatic lipogenic process and in fatty acid oxidation. Histopathological analysis revealed a significant and dose-dependent inhibition of steatosis in mice given *H. dulcis* extract compared to the ethanol control mice. The molecular mechanism is related to the strong antioxidant action of *H. dulcis* and the regulation of genes involved in the lipogenic process and fatty acid oxidation in liver.

Cho I, Kim J, Jung J, et al. Hepatoprotective effects of hoveniae semen cum fructus extracts in ethanol intoxicated mice. *J Exerc Nutrition Biochem*. 2016;20(1):49–64. doi:10.20463/jenb.2016.03.20.1.4

Sferrazza G, Brusotti G, Zonfrillo M, et al. *Hovenia dulcis* Thunberg: phytochemistry, pharmacology, toxicology and regulatory framework for its use in the European Union. *Molecules*. 2021;26(4):903. doi:10.3390/molecules26040903

### Dihydromyricetin Can Help Mitigate Alcohol Withdrawal and Intoxication

Dihydromyricetin (DHM), a phytochemical in *H. dulcis*, can counteract acute alcohol intoxication (alcohol poisoning), and also withdrawal signs in rats, including alcohol tolerance, anxiety, and seizure susceptibility. GABA<sub>A</sub> receptors (GABA<sub>A</sub>Rs) are major targets of alcohol actions on the brain. At the cellular levels, DHM counteracted both acute alcohol intoxication-induced potentiation of GABA<sub>A</sub>Rs and alcohol exposure/withdrawal-induced GABA<sub>A</sub>R plasticity, including increases in GABA<sub>A</sub>R  $\alpha 4$  subunit expression in hippocampus and cultured neurons. GABA<sub>A</sub>R plasticity contributes critically to alcohol withdrawal and dependence.



Shen Y, Lindemeyer AK, Gonzalez C, et al. Dihydromyricetin as a novel anti-alcohol intoxication medication. *J Neurosci*. 2012;32(1):390–401. doi:10.1523/JNEUROSCI.4639-11.2012

### Oriental Raisin Tree May Have Anti-inflammatory Effects

The inflammatory response in the body is meant as a defense mechanism, but it can also cause harm, especially during inflammatory diseases. Currently there are some medications that can help reduce inflammation, but not without side effects. Research using *H. dulcis* fruit and seed extract showed that the treatment was not toxic to macrophages. It is thought that *H. dulcis* has this anti-inflammatory effect through attenuating the secretion of proinflammatory cytokines, such as TNF- $\alpha$ , IL-6, and IL-1 $\beta$ . It can also suppress the activation of MAPK, AP-1, JAK2/STAT, and NF- $\kappa$ B signaling pathways in lipopolysaccharide-stimulated macrophages.

Jeong YH, Oh YC, Cho WK, Yim NH, Ma JY. Hoveniae semen seu fructus ethanol extract exhibits anti-inflammatory activity via MAPK, AP-1, and STAT signaling pathways in LPS-stimulated RAW 264.7 and mouse peritoneal macrophages. *Mediators Inflamm*. 2019;2019:9184769. doi:10.1155/2019/9184769

### Anti-obesity Effects of Oriental Raisin Tree Fruits

*Hovenia dulcis* may have anti-obesity effects. Research showed that the fruits of *H. dulcis* significantly inhibited lipid (fat) accumulation during adipogenesis (the formation of fat cells from stem cells) in a dose-dependent manner. They can modulate the adenosine monophosphate-activated protein kinase (AMPK) pathway, which is responsible for glucose and fatty acid uptake to replenish cellular energy. This means *H. dulcis* has the potential to help prevent obesity.

Kim HL, Sim JE, Choi HM, et al. The AMPK pathway mediates an anti-adipogenic effect of fruits of *Hovenia dulcis* Thunb. *Food Funct*. 2014;5(11):2961–2968. doi:10.1039/c4fo00470a

### Oriental Raisin Tree Can Help Fight Against Diabetes

*Hovenia dulcis* can help reduce blood sugar levels and even help damaged pancreatic beta cells to recover. In a study, mice were induced with hyperglycemia using streptozotocin. The mice that were given *H. dulcis* extract had better blood glucose tolerance. Treatment with streptozotocin destroyed the islets of Langerhans. However, in the group given *H. dulcis*, the pancreatic islets recovered partially and some insulin-positive cells were observed.

Kim JS, Na CS, Eun JB. Effect of *Hovenia dulcis* Thunb extract on the hyperglycemic mice induced with streptozotocin. *J. Korean Soc. Food Sci. Nutr*. 2005;34(5):632–637.

Scientific research requires judgments based on professional knowledge and rigorous implementation processes. These processes consist of complex methods, any small change in which can affect the results drastically. We have provided you short summations of the research for ease of understanding. Do not use this as a basis for self-diagnosis or self-treatment.



**E. EXCEL INTERNATIONAL GROUP**  
**丞燕国际机构**

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This publication may also contain references to scientific research that has been performed regarding one or more herbs used in E. Excel's products. These articles have been referenced in order to demonstrate that the scientific community is documenting and verifying the amazing and wonderful powers of specific herbs, but under the specific circumstances and uses described in the referenced studies. Because E. Excel's product formulations contain different combinations of herbs, different amounts of herbs, and may use the herbs differently than those described in any referenced articles or studies, the use of E. Excel's products will not achieve the same specific results described in any of these cited articles. No claim is made by E. Excel that since its products contain herbs described in these studies, that the regular use of its products will achieve the specific results described in these studies. Any such claim made by any person is specifically disavowed and disclaimed by the Company.

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