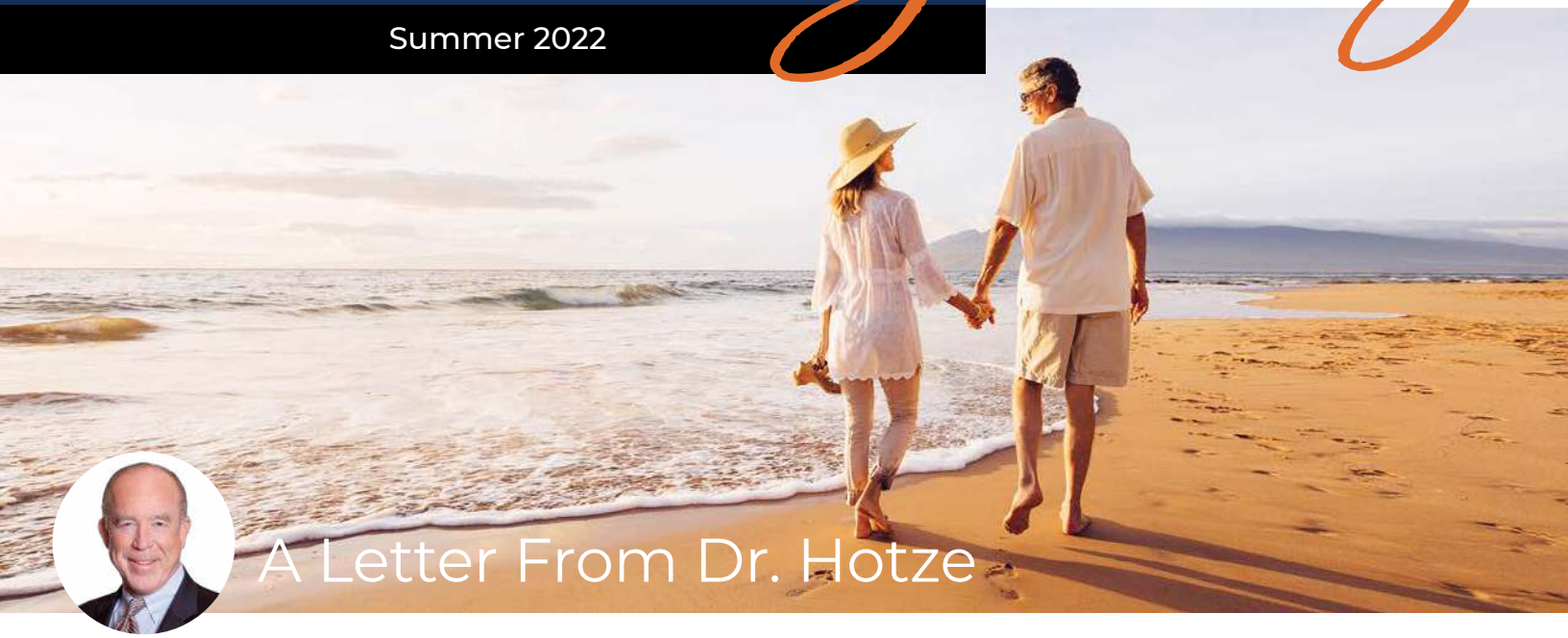
HOTZE
Healthy Living
Summer 2022



A Letter From Dr. Hotze

As long as you are alive, you want to have energy, vitality and enthusiasm for life, don't you? When Moses died at 120 years "his eyes sparkled, and he was full of vigor." *(Deut. 34:7)*

We all want to live to a ripe old age, but as Jonathan Swift wrote in Gulliver's Travels, "Every man desires to live long, but no man wishes to be old." In other words, what we really want is a long healthspan. Healthspan is the number of years you are not just alive, but also healthy and well, free from chronic disease and the disabilities of aging.

Although we have made great strides in increasing the average lifespan, the gap between lifespan and healthspan leaves much to be desired. The average life expectancy of an American is 79 years, but the average healthspan, according to the American Heart Association, is just 66 years. The reasons for this 13-year gap are obvious.

Nearly 74% of American adults are overweight and 42% are obese. Diabetes, heart disease, hypertension, stroke, cancer, chronic lung disease, Alzheimer's and liver and kidney disease are on the rise. Six in 10 adults of all ages have at least one chronic condition, and four in 10 have two or more. Additionally, these degenerative diseases are being diagnosed at earlier ages, resulting in more years of less than optimal health.

Our mission at the **Hotze Health & Wellness Center** has always been to help our guests obtain and maintain health and wellness naturally, so that you are brimming with energy, vitality and enthusiasm for life. In short, our goal is to help you increase your healthspan. Our core programs of allergy and yeast treatment, hormone replenishment and balancing, immune system enhancement, a healthy eating plan and other lifestyle changes, and weight loss are an excellent foundation for health and longevity.

In this issue of *Hotze Healthy Living*, we will focus on some of our newer therapies that specifically support various aspects of healthy aging. You will read about **Sirolimus** (Rapamycin), which many are calling the most promising life extension drug ever discovered; **intermittent fasting** and why it is a terrific therapy for chronic diseases; my new **Longevity Pak** of supplements with proven anti-aging benefits; **stem cell therapy**, which has enormous therapeutic potential; and rejuvenating **skincare treatments**.

Although the current life expectancy at birth is 79 years, actuarial tables say that if you are 79 today, you can expect to live another nine or 10 years, and if you are in your 50s or 60s, you have decades ahead of you. You make plans to ensure your financial security throughout your lifespan. Planning for a vibrant, active healthspan is equally as important. We stand ready to partner with you, so that you will have energy, vitality and enthusiasm for life as you mature.

Committed to your health success, I remain, as always,

Steven F. Hotze, M.D.

Sirolimus (Rapamycin) for Healthspan and Lifespan

Don Ellsworth, M.D., Hotze Health & Wellness Center

"The overwhelming evidence suggests that Rapamycin [Sirolimus] is a universal anti-aging drug."

— Mikhail Blagosklonny Ph.D., M.D.

"For persons over 50, it is the most important drug in the world today."

— Al Green, M.D., who has over 1,000 patients using Sirolimus under his care

"Rapamycin [Sirolimus] is currently the most effective and reproducible pharmacological approach for directly targeting the aging process to increase lifespan."

— Matt Kaeberlein, Ph.D.

Sirolimus (also known as Rapamycin) is considered by many physicians and scientists to be the premier tool for optimizing healthy aging and longevity.

Providential Discovery From a Remote Island

In 1964, medical explorers found that the soil on Easter Island contained a unique natural compound produced by *Streptomyces hygroscopicus* bacteria. They named it Rapamycin: "Rapa" to honor the ancient name of the island, *Rapa Nui*, and "myces," indicating that it was thought to be an antifungal agent.

High daily doses of Sirolimus were found to be an immunosuppressant, and it was approved by the FDA in 1999 for preventing organ transplant rejection. Unless you had an organ transplant, however, you would have no need for an immunosuppressant. In fact, because Sirolimus was incorrectly viewed as only an immunosuppressant, it blinded most researchers to Sirolimus's true potential.

The rest of the story was only learned recently, when Sirolimus's many additional properties were discovered. The FDA later approved Sirolimus to fight cancer. Because Sirolimus has anti-inflammatory properties, it has also been embedded in cardiac stents to prevent inflammation and narrowing of the coronary arteries.

Further studies have shown that when lower doses of Sirolimus are used intermittently, it actually functions as an immunomodulator rather than an immunosuppressant. A 2014 study by Joan Mannick, M.D., showed a 20% improvement in immune function in older men and women when a Sirolimus analog was used.

Sirolimus (Rapamycin) to Slow Aging and Prolong Life

Here's how it works. Virtually all cells have an enzyme complex called mTOR, which stands for **m**echanistic **t**arget **o**f **R**apamycin. The mTOR complex serves as a critical cellular process for sensing nutrient status and controlling cell growth and aging. As cells mature, mTOR typically becomes overactive in the production of proteins and other cellular products. This causes the essential cellular repair and cleansing processes of toxins and degraded cellular products, known as autophagy, to be underactive. In short, overactive mTOR leads to accelerated aging.

Sirolimus appears to have the same effect as intermittent fasting, which also slows mTOR activity and increases the critical role of autophagy. In animal studies, intermittent fasting has been demonstrated to significantly increase lifespan. Actuarial studies in humans demonstrate that thin people live longer than those who are overweight.

This is because the high-caloric, fast-food diets of most Americans, which include multiple meals and snacks, hyperstimulate the mTOR pathway. This promotes accelerating aging and age-related diseases, such as type 2 diabetes, heart disease, strokes, fatty liver, dementia, neurological disorders, arthritis and other inflammatory diseases. Sirolimus inhibits the mTOR enzyme, like intermittent fasting does.

Animal studies show that Sirolimus dramatically prolongs life. Several species lived 10% to 60% longer, depending on when Sirolimus was started in their lifespan. This research reveals not only longer lifespans, but also better healthspans. In studies involving mice, diseases seen with aging either appear later or may even regress. They include cancers, heart disease, neurologic degeneration (Alzheimer's, Parkinson's), osteoarthritis, hypertension, diabetes and immune dysfunction. Animals look and act younger, and mice run faster.

These studies also demonstrate that Sirolimus is exceptionally safe. When massive doses of Sirolimus were

given to animals to determine the lethal dose, no lethal dose could be found, which speaks to the extreme safety of this naturally derived medication.

Sirolimus: The Time is Now!

Sirolimus has been used since 1999 as an FDA-approved medication, although not for slowing the aging process. Fortunately, we have reassuring studies from 2014 and 2018 showing that when people took Sirolimus at a low dose once per week, there were no significant side effects. Only minor side effects, such as sores in the mouth, were occasionally reported. Blood work is monitored, so adjustments in dosages can be made if necessary. Any minor side effects are temporary and respond to dosage adjustments.

While adopting a healthy lifestyle clearly helps people live longer and healthier, Sirolimus is a promising tool to assist individuals age in a more youthful and healthy way. Many physicians are prescribing Sirolimus beginning as early as midlife to help improve their patients' health and wellness. If you are interested in Sirolimus, please feel free to contact us at the Hotze Health & Wellness Center.

➔ Prescriptions for Sirolimus (Rapamycin) can be filled by **Physicians Preference Pharmacy**. Active guests should discuss with their provider whether Sirolimus might benefit them. Prospective new guests should call **281.317.7904** to schedule an appointment at **Hotze Health & Wellness Center**.

REFERENCES

Pelton R. *Rapamycin: The Most Promising Life Extension Drug*. Praktikos Books, Edinburg, VA. 2022.

Mannick JB, et al. mTOR inhibition improves immune function in the elderly. *Sci Transl Med.* 2014;6(268):268ra179. doi:10.1126/scitranslmed.3009892

Mannick JB, et al. TORC1 inhibition enhances immune function and reduces infections in the elderly. *Sci Transl Med.* 2018;10(449):eaaq1564. doi:10.1126/scitranslmed.aaq1564

Blagosklonny MV. Rapamycin for longevity: opinion article. *Aging (Albany NY).* 2019 Oct 4;11(19):8048-8067. doi: 10.18632/aging.102355.

REPORTED BENEFITS OF SIROLIMUS (RAPAMYCIN)

Since 2014, people have been taking Sirolimus to promote vitality and longevity. Although there have been no large-scale clinical trials on Sirolimus for longevity and age-related disorders, men and women who have taken it report that after three to six months they notice that Sirolimus:

- Increases energy
- Improves mood
- Reduces joint pain
- Improves strength and endurance
- Raises testosterone levels
- Improves skin health
- Promotes weight loss
- Reduces blood pressure
- Decreases bodily inflammation
- Enhances sleep
- Improves blood work (e.g., lowers LDL cholesterol readings)
- Improves erectile function

Note that these improvements are from patient reports, not from an actual study. Of course, we welcome more studies but not more delays!

VITA-MINUTE

Dr. Hotze's Longevity Pak

Research on therapies for lengthening both lifespan and healthspan has skyrocketed in recent years. Sirolimus (Rapamycin) may be the leader of the pack, but a handful of cutting-edge nutritional supplements are exceptionally promising. Because they target various cellular pathways involved in aging, these supplements are an excellent adjunct to Sirolimus, intermittent fasting and other therapies.

Dr. Hotze's Longevity Pak provides guests with easy-to-use packets of the best supplements for increasing your healthspan. *Each packet, which is to be taken once a day, includes:*

- **NMN 500 mg:** Nicotinamide mononucleotide (NMN) increases levels of NAD+, a vehicle for energy production and an important regulator of cellular function. Levels of NAD+ decline as we age. Restoring them may help slow some of the processes associated with aging.
- **Resveratrol 500 mg:** The "red wine pill" is a potent antioxidant and anti-inflammatory that mimics some of the positive effects of calorie restriction and intermittent fasting. It has proven benefits for cardiovascular health and has been shown to extend longevity in animals by 20%.
- **Betaine 496 mg:** Betaine is important to take along with NMN, as it replenishes methyl groups (small molecules that activate or inactivate targeted genes) that may be lost during the metabolism of NMN.
- **Berberine 500 mg:** Berberine activates AMPK, an important energy-sensing pathway. In addition to increasing insulin sensitivity and lowering blood sugar, berberine stimulates the production of new mitochondria for enhanced energy.
- **Quercetin 400 mg:** Known for its immune-boosting and anti-inflammatory effects, quercetin was recently shown to reduce senescent (old, damaged) cells in fat tissue.
- **Fisetin 100 mg:** Fisetin also helps remove senescent cells, plus it has anti-inflammatory, antioxidant, anticancer, neuroprotective and cardioprotective properties.
- **Spermidine 10 mg:** Like Sirolimus, this anti-aging compound triggers autophagy, the cellular process that cleans out damaged cells, which enables cellular regeneration.

To learn more or to order Dr. Hotze's Longevity Pak, visit **Physicians Preference Vitamins** or call us at **281.646.1659**.

HORMONES AND AGING

The progressive decline in hormone production that occurs as we get older is linked with many of the challenges of aging. Low energy, weight gain, muscle loss, osteoporosis, frailty, depression and anxiety, memory problems, diabetes, heart disease, sexual dysfunction, aging skin: All these are due, at least in part, to drops in thyroid, estrogen, progesterone, testosterone and other hormones.

Hormonal deficiencies and imbalances can occur at any age, but they are increasingly common as we get older. Virtually all women over age 50 have entered menopause and no longer produce female hormones. Men's testosterone levels begin a slow, steady decline beginning in their late 20s. Low thyroid function, or hypothyroidism, is particularly prevalent and often undiagnosed in women and men starting in midlife.

The remarkable increase in average lifespan over the past century means we are living longer, but it also means we are spending more years in a state of relative hormone deficiency. Restoring your hormones to optimal levels with safe, natural, bioidentical hormone replacement just makes sense.

If you have not had your hormones evaluated, then call us at **281.698.8698** and learn how bioidentical hormones can increase your energy, vitality and healthspan.

Intermittent Fasting for Healthy Aging

Steven F. Hotze, M.D.

If you're serious about wanting to lose weight, then you should consider adopting intermittent fasting as a lifestyle. You are probably aware that being overweight contributes to a host of health problems, such as type 2 diabetes, degenerative arthritis, high blood pressure and heart, liver and kidney disorders, to name a few. You are also aware that if you want to have a longer, healthier life, then you should get down to your ideal body weight.

Let my practice of intermittent fasting be an encouragement to you. I have practiced intermittent fasting for years, and I weigh 168 pounds, which was my football playing weight in high school. At 72 years of age, I have no chronic health problems, and I am brimming with energy. Intermittent fasting may be the most important lifestyle change you can make for improving your healthspan.

When You Eat Matters

David Sinclair, Ph.D., is a professor of genetics at Harvard Medical School, co-director of the Paul F. Glenn Center for the Biology of Aging and a world-renowned expert on aging.

In his book *Lifespan: Why We Age—And Why We Don't Have To*, he discusses the underlying processes of aging as the cause of most chronic diseases and how they can be slowed and even reversed. He covers medications such as Sirolimus (Rapamycin) as well as supplements that have the potential to extend lifespan and reduce age-related diseases. He also focuses on lifestyle, including exercise and a lower-protein, vegetable-rich diet. But he places particular emphasis on intermittent fasting.

"After 25 years of researching aging and having read thousands of scientific papers, if there is one piece of advice I can offer, one surefire way to stay healthy longer, one thing you can do to maximize your lifespan right now, it's this: eat less often."

Dr. Sinclair is not suggesting serious calorie restriction, although that has been shown to dramatically extend lifespan in animal studies. Rather, he maintains that when you eat is as important as what you eat and that intermittent fasting, or going for longer periods without eating, is an excellent strategy for enhancing health and longevity.

Eating less often may seem unnatural and unhealthy if you are used to having breakfast, lunch and dinner plus snacks. In reality, the opposite is true. Only recently has so much food been so easily accessible to so many. For most of human history, alternating cycles of eating when food was available and fasting the rest of the time were the norm.

As a result, our bodies are much better adapted to intermittent fasting than to eating throughout the day. Returning to this more natural way of eating can have profound effects on your health.

Anti-Aging Effects of Intermittent Fasting

Most people who follow this regimen lose weight, which is helpful in and of itself. However, the primary driver of intermittent fasting's diverse benefits is its effects on cellular processes that promote aging.

One of these processes is autophagy. As explained in the article on Sirolimus on page 2, autophagy is your cells' way of clearing out dysfunctional proteins, damaged organelles and other debris to make way for cellular regeneration. When nutrients are available, an enzyme called mTOR is activated, which signals your cells to use those nutrients to build new proteins and promote cell growth. Of course, this is important, but when you eat every couple of hours, your cells are in constant building mode, leaving little time for "cellular housekeeping."

The constant overactivation of mTOR and insufficient autophagy are believed to be a major cause of chronic diseases and aging. By temporarily depriving cells of nutrients, fasting inhibits mTOR and promotes autophagy. The reason I am so enthusiastic about Sirolimus is because it mimics the benefits of intermittent fasting and promotes autophagy, even without fasting.

Fasting also revs up defense mechanisms that protect against oxidative stress and reduce inflammation. It triggers DNA repair and the production of new mitochondria. Taking a break from eating lowers blood sugar and insulin and shifts your mitochondria into fat-burning mode, which facilitates fat loss while maintaining muscle mass. Fat-burning also increases levels of ketones, which fuel and energize brain cells and boost the activity of brain-derived neurotrophic factor, a growth factor that

triggers the production of new neurons.

A Proven Therapy for Chronic Diseases

Hundreds of animal studies and dozens of human clinical trials have shown that intermittent fasting has positive effects on obesity, diabetes, hypertension, heart disease, cancer, inflammatory conditions, Alzheimer's, Parkinson's and other neurologic disorders. Although human studies have not lasted long enough to determine longevity effects, mice who were fed every other day were not only healthier but lived longer.

If you are struggling with your weight or any chronic diseases, or if you are just interested in healthy aging, give intermittent fasting a try. Eating three square meals a day is so ingrained in our culture that few people, including doctors, question it, so it is understandable if the idea of going for hours without eating seems challenging.

Let me assure you that it is easier than you may think. Give it a couple of months, and intermittent fasting will likely become second nature!

➔ For help getting started on intermittent fasting and other anti-aging protocols, call us at **281.698.8698** or visit **HotzeHWC.com**.

REFERENCES

Sinclair DA. *Lifespan: Why We Age—And Why We Don't Have To*. Atria Books, 2019.

De Cabo R & Mattson MP. Effects of intermittent fasting on health, aging, and disease. *New England Journal of Medicine*. 2019;381(26):2541-2551. doi: 10.1056/NEJMra1905136

BASICS OF INTERMITTENT FASTING

The basics of intermittent fasting are simple. You eat only within a specific time window every day. During your fasting period, you avoid all solid foods and drink only calorie-free beverages. This includes black coffee and tea, sweetened with stevia if desired, and plenty of water, but no juices.

I personally skip breakfast and lunch and eat only one meal a day at dinner, so I effectively fast for at least 22 hours a day. I drink two or three cups of "bulletproof coffee" (coffee with full-fat cream, butter or coconut oil and stevia as a sweetener) in the morning and iced tea in the afternoon. Supper usually includes a large green salad with spinach, broccoli, nuts and fruit with olive oil dressing, along with fresh vegetables, four to six ounces of meat or fish and a buttered dinner roll. I will often have a few bites of dessert, usually pie or cheesecake.

I am not saying this is the best protocol for everyone. A popular version of intermittent fasting is to fast 16 hours a day and limit your food intake to an eight-hour period. If you skip breakfast, eat your first meal between 11:00 and noon and finish dinner by 7:00–8:00 pm, you fast for 16–17 hours, but much of it occurs while you are sleeping.

For best results, it is important that you stick with a healthy eating plan. This includes dramatically reducing your intake of sugar and simple carbohydrates such as wheat, corn, rice and potato products, all of which are converted to sugar in the body.

Like most lifestyle changes, intermittent fasting takes some getting used to. You may initially experience hunger and irritability, but they usually disappear after a few weeks.

Stem Cells: The Ultimate Anti-Aging Treatment

If you have had a baby or grandbaby in recent years, you may be familiar with cord blood banking. Blood from the umbilical cord and placenta is collected within minutes after delivery, preserved and sent to a blood banking facility where it is frozen and stored.

Cord blood is rich in stem cells, which have unlimited therapeutic potential. Most of your body's cells are highly specialized. Lung cells can replicate to create new lung cells, but they cannot turn into a brain or heart cell. Stem cells, however, are undifferentiated, meaning they have the ability to develop into any cell type.

Banking a baby's cord blood keeps a supply of invaluable stem cells on hand in case they are needed to treat future health challenges. Cord blood stem cells have been used to treat nearly 80 conditions, including blood disorders, some types of cancer, immune deficiency and metabolic diseases. These cells are also being used in regenerative medicine to stimulate the body's own repair mechanisms.

Adult Stem Cells Stimulate Healing

Cord blood banking has only been around for about 20 years, so that ship has sailed for most adults. However, new technologies make it possible to harness the power of your own adult stem cells, which are also undifferentiated and have tremendous healing potential. In fact, they are routinely used to treat degenerative disorders like arthritis, circulatory problems, autoimmune diseases, Alzheimer's and Parkinson's disease.

Tissues and organs throughout your body contain stem cells, but they are particularly abundant in bone marrow and adipose, or fat, tissue. These cells, called mesenchymal stem cells, are the type most often used in regenerative medicine. Although they can be harvested from bone marrow, extracting them from belly fat is a quick, safe and relatively painless office procedure.

After the adipose tissue is extracted, it is sent to an FDA-compliant cell banking lab where it is processed, cultured to create hundreds of millions of stem cells and stored indefinitely in nitrogen tanks at -300° F. Because these cells are from your own body and are rigorously tested, there is no danger of rejection, contamination or loss of efficacy.

After the initial extraction process, you will have an unlimited supply of safe, undifferentiated stem cells to use as needed. When a health challenge arises, a portion of your stored stem cells can be injected into a problematic joint or given in an IV infusion. Once in your body, these cells home in on areas of inflammation and provide the raw materials and cellular signaling needed to rejuvenate your cells and facilitate healing.

Should You Bank Your Stem Cells?

Think of stem cell banking as insurance. You may not need treatment today, but it should give you peace of mind to know this remarkable therapy is there whenever you need it.

Feedback on autologous mesenchymal stem cell therapy is quite positive. Good results are reported for back pain and degeneration of the knees, hips and other joints, and it has proven beneficial for patients with multiple sclerosis and other autoimmune conditions. Because the number of stem cells in our bodies declines dramatically with age, many men and women who are concerned about healthy aging are receiving periodic infusions for immune system boosting and overall well-being.

Ongoing studies and projected future uses of adult stem cell therapy include treatment of everything from heart failure, stroke and insulin-dependent diabetes to facelifts and breast augmentation. It truly is the frontier of medicine.

I am happy to announce that our **Hotze Restorative Protocol™** now includes adipose stem cell extraction and banking in conjunction with **Celltex Therapeutics**. We are also participating in Celltex's FDA-approved clinical trial evaluating the effects of autologous adipose tissue-derived mesenchymal stem cells on osteoarthritis of the knees, hips and shoulders.

➔ To learn more about this exciting new therapy and other treatments in our **Hotze Restorative Protocol™**, call us at **281.698.8698**.

HOTZE
HEALTH & WELLNESS CENTER INTL

20214 Braidwood Drive, Suite 215
Houston, Texas 77450

ANTI-AGING TREATMENTS *for your skin*

No sign of aging is more evident than changes in our skin. You may feel like a million bucks and run circles around people half your age, but for most of us, our faces mark the passing of the years.

"If you don't mind, it doesn't matter," Mark Twain said about aging. But appearance does matter, and we all want to look our best. Feeling good about how you look will boost your mood, self-confidence and overall well-being.

Hotze Aesthetics was created to provide our guests with the most advanced skincare therapies and services, performed by licensed and certified professionals in the comfort and safety of our medical center. Our team includes Mark Barlow, M.D., Board-Certified Plastic Surgeon, who has years of experience with Botox and Juvederm fillers. Licensed Aesthetician Bailie Muñoz specializes in the full gamut of noninvasive therapies, including BroadBand Light (BBL), HALO laser, Epionce and VI peels, Plasma Pen, Dermaplaning and HydraFacial, the most recent addition to our aesthetics therapies.

By hydrating, nourishing, smoothing and protecting your skin, all of our aesthetics therapies provide noticeable improvements in wrinkles, texture, tone and other signs of skin aging. Many of our treatments also stimulate collagen production for long-lasting results.

➔ For more information, contact Bailie Muñoz at **Hotze Aesthetics** at **281.698.8770**. Bailie would be happy to discuss a tailored treatment plan for you. You can also visit **www.HotzeBeauty.com** for more information.

WHAT IS HYDRAFACIAL?

HydraFacial is the perfect treatment year-round but is strongly recommended for maintaining your skin regimen and hydration during the summer months! A HydraFacial is a noninvasive deep-cleansing facial with no downtime. Each HydraFacial treatment is customized to fit the needs of your skin with steps that include cleansing, exfoliation, painless extractions, specialty treatments and hydration infusions.