

# Healing Arts *Guide*

SPA & WELLNESS PRODUCTS AND SERVICES

Today's and Tomorrow's  
Anti-aging Therapies

By Dima Ali



THE PROFESSIONAL'S RESOURCE FOR PROFITABLE WELLNESS OPERATIONS

# today's and tomorrow's anti-aging therapies

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WellMedica Anti-Aging and Wellness Center

Is it possible to reduce the gap between chronological age and biological age? By definition, does aging have to imply chronic disease, suffering, dementia, frailty, and debilitation? Could it be possible to live to 110 years of age and still be out and about with the energy to enjoy our great grandchildren without collapsing from shortness of breath or a fractured hip? That is what longevity medicine is all about. It is not about achieving immortality and it is certainly not about looking 21 when you are 92.

It is, however, about taking advantage of medical breakthroughs to live a healthy, vigorous life as long as we possibly can.

This article will begin by giving a brief overview of the current theories of aging and will conclude with the latest trends in anti-aging research. Let us redefine the term “aging gracefully” to “aging gracefully and healthfully.”

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**Dima Ali, M.D.**

Complimentary Initial Consultation

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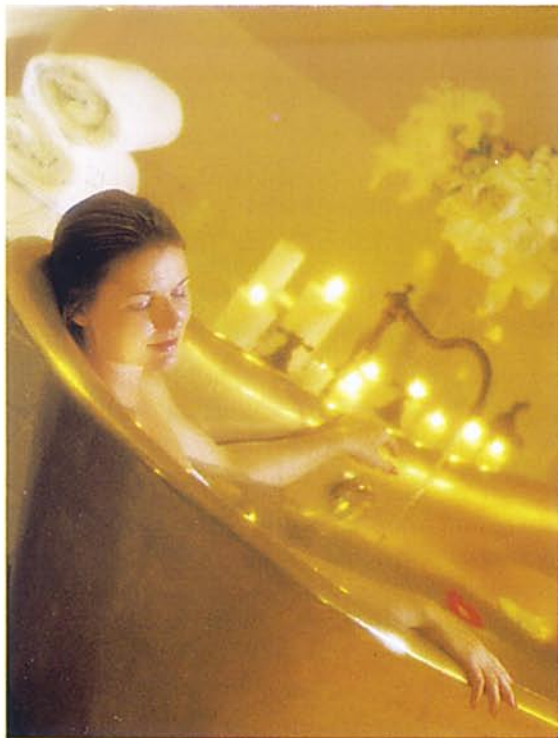


Photo: The Fairmont Sonoma Mission Inn & Spa, Sonoma, California

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conceivably be 130 years by the year 2010. In fact, 10 times as many people are expected to reach their 100th birthday as in the year 2000. Here is a sampling of what current research is focusing on today and what can be expected in the next decade and beyond.

- Advances in genetic engineering and nanotechnology will lead to such treatments as nanonized insulin administered via skin patches or nasal inhalers, making the need for injections of insulin obsolete. Moreover, with the completion of the Human Genome Project, cures for chronic diseases such as diabetes, rheumatoid arthritis, and cancer will follow suit.

- Laser treatment for vision correction will become more commonplace and more affordable. On the horizon: surgically implanted contact lenses and light sensitive microchips for age related blindness.

- Vasectomies will become outdated as advances in male contraception are made with sperm-neutralizing vaccines.

- Replacement parts for our aging body will be available, from artificial eyes and ears to hips and knees that last for 50 years instead of the present 10.

- In 50 years, it is conceivable that limbs, joints, and even faces will be "grown" or replicated, replacing the need for artificial parts. This includes lab grown breast tissue to replace breasts lost to cancer.

- Intellectual immortality will be possible through the development of multiple memory chips that will store an individual's thoughts, feelings, and memories.

The future of anti-aging medical therapies is already here. Start living a healthy life now so that you can take advantage of these emerging and exciting anti-aging technologies.

Visit the American Academy of Anti-Aging Medicine at [www.worldhealth.net](http://www.worldhealth.net)

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#### About the Author:

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versus leading a vigorous, productive life well into the 90s, the choice is a no-brainer. Today, the average American consumer is realizing this. Here are some basic facts about the anti-aging marketplace: 60% of Americans age 65 and older are taking some form of hormone supplementation and dietary supplementation. In this estimated \$30 billion industry, sales of anti-aging supplements are estimated at \$1 billion in the United States alone. If we eliminated the top three chronic diseases (heart disease, cancer, and stroke) trillions of U.S. dollars could be reinvested in furthering longevity research.

What does the Anti-Aging Medical Model include? What can you expect from an anti-aging evaluation and treatment plan? This may include:

- Anti-Aging endocrinological assessment and hormone replacement therapy.
- Anti-oxidant analysis and appropriate supplementation.
- Evaluation of the bio-markers of aging.
- Cardiovascular and Immune protection.
- Cognitive function assessment and repair.
- Metabolic and DNA repair.
- Aesthetic procedures and skin rejuvenation such as laser, botox, chemical peels, and fillers.

#### The Latest in Anti-Aging Research

Technical advances and knowledge in Anti-Aging Medicine are increasing at a rapid rate. The future of this burgeoning field is remarkable to say the least. The average lifespan, now estimated to be at about 80 years of age, could



## Brief Review of the Causes of Aging

There are many current theories on aging. Some of the major focus on aging has been placed on the eventual destruction or damage of DNA by oxidation. One such theory is the Telomerase Theory, which proposes that cells lose their ability to replicate appropriately. As this continues, cells become more and more damaged and the cumulative effect is cellular dysfunction, which is commonly known as "aging." Telomeres are the unique sequence of nucleic acids or "the building blocks of life" that are a vital part of our genetic makeup.

So what if we could fix the telomeres or prevent them from breaking down? Well, we would essentially be able to reverse the natural aging process. The person who figures this out will surely be a Nobel laureate.

What contributes to DNA damage? Oxidation, toxins such as tobacco smoke, pollution, certain disease states such as diabetes, which leads to glycosylation, and even states of extreme stress, contribute to DNA damage while potentially accelerating the aging process of our skin and body. Why stress? Our bodies produce excessive cortisol when in states of stress and the levels increase with normal aging. In excess, it is commonly believed that cortisol plays a significant role in damaging the hypothalamus, a key neuroendocrine organ in the brain. As such, it would seem logical to reverse or stop the aging process at a hormonal level, either by reducing the amount of excessive cortisol production or by finding a safe way to keep the hypothalamus functioning appropriately.

Likewise biochemically, our molecules like to remain "in a state of balance." When they are not in balance, molecules tend to find that balance by stealing electrons from other molecules. This is known as the Free Radical Theory of Aging. However, as humans we generate free radicals all the time as a result of ATP or energy production in the mitochondria. So how can something essential to our survival be bad for us? There are different levels of free radicals resulting in different levels of damage. The idea is to control, as much as possible, the production of the bad free radicals within our bodies. Limiting free radical damage also ties in with the theory that we increase cellular damage by excessive consumption of calories. Since we need energy to burn calories and the production of energy leads to free radical formation, it follows that limiting caloric intake would result in extending the lifespan of a cell. Thus, maintaining the efficiency of the energy storehouses of our cells—the mitochondria, is also essential to preventing premature aging.

Finally, the Lipid Membrane Theory of Aging states that our cell membrane loses water and lipids as we age and gains lipofuscin. This is a toxin and its accumulation leads to premature cell damage and the inability of the cell to function optimally. Similarly, the Glycosylation Theory states that excessive amounts of glucose cause cellular damage resulting in end organ damage. Uncontrolled diabetics, for example, have up to 75% more glycosylated proteins than normal

individuals. These cross-linked proteins cannot function efficiently and result in more heart, kidney, and circulatory problems for diabetics, thus greatly shortening their lifespan. It is important to keep in mind that all these theories are interrelated and it is likely a combination of the above that leads to premature aging and cell damage.

## Anti-Aging Remedies

What can be done to potentially reverse and prevent these challenging aging processes, so that we can live a more healthy life? There are the obvious solutions: smoking cessation, exercise, and dietary modification. However, we cannot entirely avoid damaging pollutants that surround us within the environment and the presence of chemicals in our foods. Luckily, there are things we can start doing today:

Photo: The Fairmont Empress Victoria, British Columbia



**1. Take Anti-Oxidants:** A basic anti-oxidant program should include a multi-mineral supplement, a multivitamin with folic acid, and additionally Vitamin A, Vitamin E, Vitamin C, Alpha Lipoic Acid and Co-enzyme Q10.

**2. Take other nutraceutical supplements,** under the advice and care of an anti-aging physician, to meet your specific needs. For example, both women and men should take estrogen blockers, natural hormone replacements including estrogen, progesterone, and testosterone, yet in varying and individualized amounts. Make sure your physician includes hormone levels as part of your prevention workup, especially if you are over 45.

**3. Utilize substances that give natural protection against cancer,** which include: laetrile cream, estrogen blockers such as DIM, thymus, and resveratrol.

**4. Take substances that will prevent free radical damage and enhance mitochondrial production:** These can include

Acetyl-L-Carnitine and Aminoguanidine, Carnosine, and even melatonin.

**5. Maintain circulatory health by taking resveratrol, Aminoguanidine, and Vitamin E.**

**6. Piracetam, hydergine, gerovital-H3, deprenyl and vincopote, Acetyl-L-Carnitine** all play a role in improving brain function and oxygenation.

**7. DHEA and pregnenolone** aid in excessive cortisol and more effective hormone production.

**8. Use sunscreen protection:** With regard to aging of the skin, sun protection is the key to anti-aging and it is very cost effective. A sunscreen with UVA/UVB and an SPF of 30 or higher is essential.

**9. In addition to oral supplements there are many excellent antioxidants that can be used topically.** These include Co-enzyme Q10, Alpha Lipoic Acid, DMAE, Vitamin E, pycnogenol, Vitamin A, Vitamin C, Carnosine, even estrogen creams. Some work by preventing free radical damage and others help to promote new collagen formation in the skin.

**10. Get screened for diabetes, cancer, heart disease, and osteoporosis.** Early detection and prevention is the cornerstone to longevity.

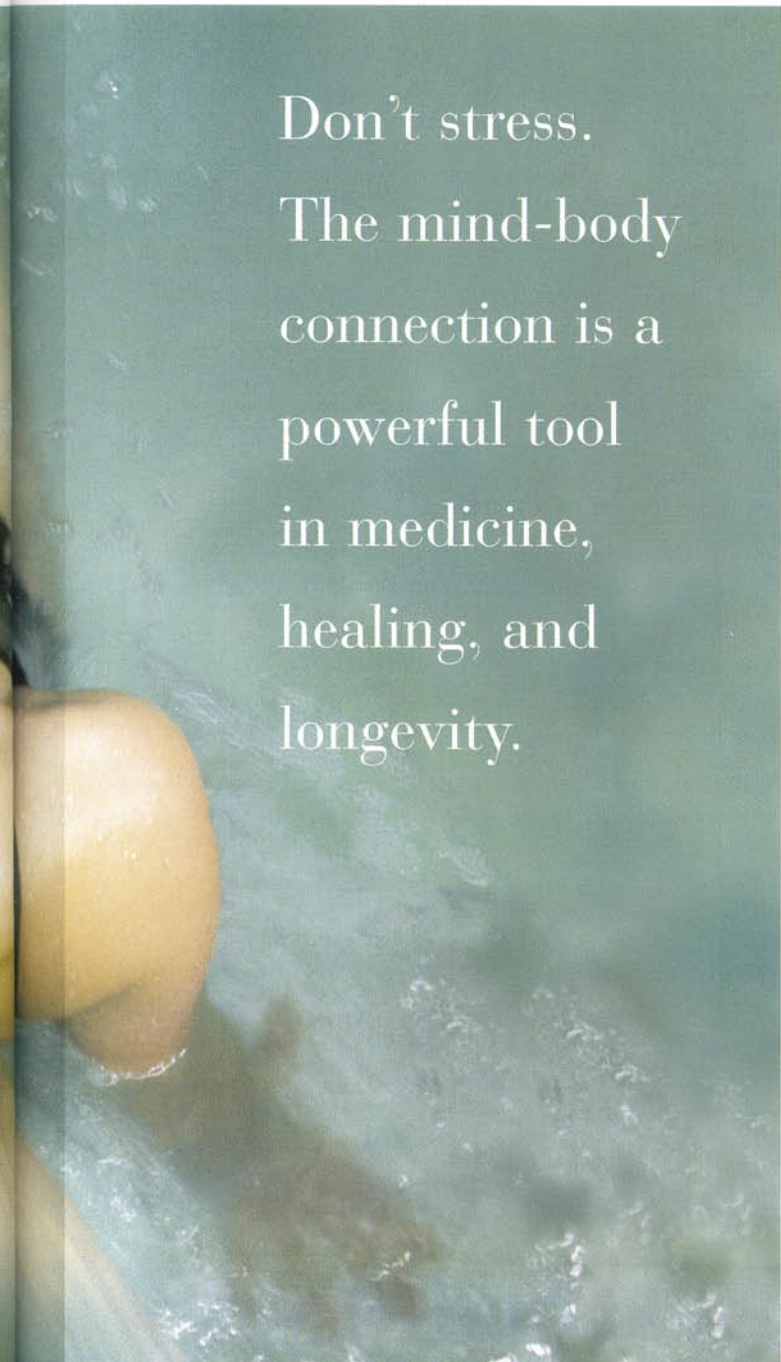
**11. Discuss decreased libido and sexual function with your doctor.** The ability to maintain sexual performance is a definite gauge of health and longevity.

**12. Don't stress.** The mind-body connection is a powerful tool in medicine, healing, and longevity.

### **Anti-Aging = Becoming Ageless?**

Anti-Aging Medicine is not about achieving an ageless society. It is not "pseudoscientific hype about miracle cures," "virtual immortality," or the secret to the "fountain of youth." It is, however, about learning what can be done to live a long, healthful, more productive life. It is about focusing on disease detection and prevention rather than the treatment of symptoms of age-related chronic disease. It is a clinical medical specialty based on innovative, peer reviewed scientific research, and a sensible model of preventive medical care. Consider these facts: (1) The 85 and older age group has more than tripled since 1970. (2) The number of Americans aged 100 and over has increased by 35% in the last decade. (3) It is projected that by the year 2030, 1 in 5 Americans will be age 65 and older. (4) The leading causes of death in the U.S. are heart disease, cancer, and stroke.

The bottom line is that with rapid advances in high-tech medical treatments we are all going to live longer, whether we like it or not. We have a choice in how we choose to live the latter part of our lives. Given the choice between spending the last years of life debilitated and in a nursing home with three or more chronic diseases of aging being managed by the traditional polypharmaceutical approach



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