



Tieraona Low Dog, MD

Fellowship Director Arizona
Center for Integrative Medicine
P.O. Box 245153
Tucson, AZ 85724-5153
(520) 626-6417

Dr. Tieraona Low Dog's extensive career in studying natural medicine began more than 25 years ago. She studied midwifery, massage therapy and was a highly respected herbalist, serving as President of the American Herbalist Guild and running a teaching clinic in Albuquerque, NM before going on to receive her medical degree from the University of New Mexico School of Medicine. Dr. Low Dog opened and ran a successful integrative medical clinic in Albuquerque before joining the faculty of the Arizona Center for Integrative Medicine at the University of Arizona where she currently serves as the Director of the Fellowship.

In addition to her work as a clinician and educator, Dr. Low Dog has been involved in national health policy and regulatory issues for more than a decade. In 2000, she was appointed by President Bill Clinton to serve on the White House Commission of Complementary and Alternative Medicine, and she completed her three-year term in February 2007 as a member of the Advisory Council for the National Institutes of Health National Center for Complementary and Alternative Medicine (NCCAM). She served as the elected Chair of the United States Pharmacopeia Dietary Supplements and Botanicals Expert Committee from 2000-10. Her many honors of distinction include the Martina de la Cruz medal for her work with indigenous medicines (1998), *Time* magazine's "Innovator in Complementary and Alternative Medicine" (2001), the Burt Kallman Scientific Award (2007) and NPR's People's Pharmacy award (2010).

Dr. Low Dog is an internationally known speaker on topics ranging from the responsible use of herbal medicine and dietary supplements to integrative approaches to women's health, with more than 30 publications to her credit. She serves on the editorial/advisory boards of *Menopause* and *Explore* journals, *Prevention* magazine and the American Botanical Council. She has appeared on E!, ABC's 20/20, CNN and is a frequent guest NPR's The People's Pharmacy. Dr. Low Dog writes a regular column for *Alternative and Complementary Therapies* magazine called "Smart Talk on Supplements and Botanicals."

Q—You and Dr. Andrew Weil launched Seasonal Therapeutics and the Seasonal Therapeutics seminar series for health care practitioners. How were they developed and what are your and Dr. Weil's hopes for the line and series?

A—Seasonal Therapeutics is an innovative program that blends integrative medicine with chronobiology, the science and study of biological rhythms. Many people forget that humans, like all plants and animals, are tied to the cycles of the day, month and seasons. Our physiology is impacted by hot and cold, damp and dry, dark and light. In times

past, our lives were intimately intertwined with nature. As we gratefully emerged from the dark and cold of winter, the bitter herbs of spring acted as a natural form of detoxification. The long, warm days of summer brought with them an abundance of fresh food and game, as well as vitamin D. Autumn ushered in the harvest—a time of fasting and reflection, as people prepared for the coming of winter. Today, we have access to almost any food anytime we want it. Our homes are equipped with heat, electricity and all the conveniences. Yet, modern life has also put a tremendous strain on our ancient biology. We use

artificial lights to work late into the night and then down caffeine to compensate for lack of sleep. We eat the same foods, or what passes for food, year-round in ever-increasing quantities, losing the natural cycles of fasting, purification and restoration. Higher potency dietary supplements dominate the marketplace, making it hard, in some cases, to separate natural from pharma. Dr. Weil and I both believe that nature can serve as a useful template for healthy living, and we are delighted to be working with Innate Response to create a program and a line of dietary supplements that practitioners can use to help their



patients live more closely in sync with their biology and their environment.

Q You have said, if stranded on a desert island, there are 28 herbs you would bring. What are they? What do they do and how did you narrow down your choice?

A I essentially chose those that had the broadest amount of use. For instance, licorice root would be high on the list because it is an expectorant, demulcent, anti-inflammatory and antiviral. It soothes and heals the oral, esophageal and gastric mucosa. You can use it for coughs, colds, congestion, asthma and to treat peptic ulcers. It is effective for herpes simplex virus and can be used topically for both oral and genital outbreaks. It is also an excellent compress when combined with St. John's wort for shingles. Amazing herb.

Yarrow would be another must have on my island. I rely heavily upon it for menorrhagia; it's my go-to herb for controlling heavy periods due to fibroids or

menopausal flooding. It can be used in a pinch for postpartum hemorrhage as well. Yarrow is a great diaphoretic when you need to break a fever that is too high. Yarrow compresses can be used topically to heal wounds, staunch bleeding and reduce inflammation.

Kava might actually be growing on my island if I landed in the South Pacific! But, seriously, it would definitely be in my medicine chest. There is hardly any herb that comes close to it for relieving anxiety and easing muscle tension. For those with chronic tension headaches, neck and back pain, kava can work wonders. It also has some affinity for smooth muscles, so can be used for uterine cramping, bladder spasm, etc.

I'd take along neem oil. It can be used for any kind of skin condition like psoriasis or eczema. I'd want to have it along in case of lice, scabies, ringworm or any other kind of fungal infection. And if there are mosquitoes on my desert island, neem is a great insect repellant!

There are certainly others I'd take along,

but these are a few of my "must haves."

Q Your speaking agenda has included several talks at dental conferences. What are the links between dietary nutrition and oral health? What supplements and integrative health care information do you discuss with dental health professionals?

A I love dental conferences. There are classes for hygienists, receptionists, business office personnel, as well as dentists. The dental community believes that successful practices are built around healthy, dynamic and educated teams. Imagine a medical society (e.g., internal medicine, family medicine) sponsoring annual conferences that included everyone: nurses, receptionists, lab techs, billing clerks and physicians. Imagine them taking classes together on how to make their practice of greater service to patients. Wow! Now that's integrative!

My classes for the dental community are primarily around nutrition, dietary sup-

plements and integrative strategies for reducing inflammation and insulin resistance—the two main drivers of chronic disease. Periodontal disease is a highly oxidative and inflammatory process, making many of the recommendations in integrative medicine highly applicable to dentistry. Certain vitamins/minerals significantly impact the oral cavity such as vitamin C (e.g., collagen), vitamin A (e.g., epithelial integrity) and calcium/vitamin D (e.g., bone, tooth retention). Inadequate intake of the omega-3 is associated with elevated C-reactive protein (CRP) and an increased risk for periodontal disease. Specific nutrient deficiencies may first appear in the mouth. For instance, the dental team may be the first to note glossitis, angular cheilitis and recurrent oral ulcers in a patient with vitamin B12 deficiency. Patients who are on medications such as metformin for diabetes or proton pump inhibitors for reflux, who are vegan, have Crohn's or had a gastric bypass are at much higher risk for B12 deficiency. I first learned about the risk of osteonecrosis of the jaw and bisphosphonates at a dental conference, years before the medical community was talking about it. And, dentists were early to point out the connection between oral inflammation and cardiovascular disease. I would love to see more collaboration between the medical and dental communities; we have much to learn from each other.

Q: You have written several books on women's health. Please describe the beginning of your work and its evolution. How has the information expanded and changed?

A: I am a seeker. For as long as I can remember, I've wanted to experience my world and understand what it means to be human and female. That quest has led me down many roads. I studied midwifery and massage in the late 1970s and then heavily pursued my love of herbal medicine and martial arts in the 1980s. Massage and martial arts taught me the yin and yang of touch, the gift of well-trained hands to heal and comfort, or to injure and harm. Walking with women as they journeyed between the earthly and spiritual realms to bring their babies into the world was magical. There's not another word that can describe what it feels like to

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be part of a miracle except magical. The woman arts brought me close to the plant world. I loved to wander through the wild and untended gardens of the meadows, deserts and forests, as well as sowing and harvesting herbs in pots outside my kitchen. I ran an herbal company, herb school and clinic in southern New Mexico.

The 1990s brought medical school. The rigor of science fed my hungry and curious mind. I would stay up until the wee hours of the night taking in everything I could learn about physiology, immunology and biochemistry. My medical training filled in so many gaps in my understanding of health and illness. Given my background, I was naturally

attracted to what was being called integrative medicine, joining the faculty at the University of Arizona Center for Integrative Medicine on a part-time basis in 2000, and as the Director of Education/Fellowship since 2006.

My thinking continues to evolve, as I continue to explore what it means to be whole. I find myself returning to what my grandmother told me almost 50 years ago—that when we're born, we're set upon a path and that path is our medicine road. All the choices we make along the way affect our thoughts, our relationships, our health and the world around us. If I choose to be whole, I must step fully into my life, which means I must honor, respect and take responsibility for it. Food that was raised inhumanely will not nourish. A body that is inactive and sedentary will not be healthy. A mind that is chaotic and undisciplined will not bring joy. And a spirit that is not lovingly tended will not bring contentment. While there are some things out of my control, for the most part, the way I live is my choice. At any moment, at anytime, I can choose to be whole.

Q: What are you working on next?

A: My new book with National Geographic, *Life is Your Best Medicine*, is coming out in September and that is keeping me busy. My husband and I have built a beautiful timber schoolhouse on our Medicine Lodge ranch up in the Santa Fe National Forest so that I can have people come and study with me who are looking for a much deeper understanding and knowledge of how to use the plants for healing. We have more than 110 medicinal herbs growing in the garden and in the forest, and the school has a kitchen where we can make medicine, as well as learn how to use these green allies in a responsible and intelligent way. I will continue to direct the Fellowship, speak on topics that are of interest to me, work with the United States Pharmacopeia on evaluating the safety of dietary supplements, and create new products and innovative programs with Dr. Weil. Mostly, though, I'll just keep following my medicine road, with open heart and deep gratitude, wherever it leads. 