



## LINUS PAULING

This issue is dedicated to a great, good man, Dr. Linus Pauling, who died August 19 at age 93. His picture graced my first newsletter in October 1981. Dr. Pauling's courage persisted in the face of mean-spirited political persecution by the U.S. press and government in the 1950s for his warning about the dangers of widespread birth defects and cancers from ongoing testing of nuclear weapons in the atmosphere. In 1963 he received the Nobel Peace Prize (to join his 1954 Nobel prize for chemistry) for his role in encouraging the U.S. to join the other superpowers in signing a treaty that year to suspend all such testing.

An unrepentant *LIFE* magazine, however, headlined the award as a "Weird Insult from Norway." Later, his vitamin C research, received with loud derision by the medical hotshots (who, by now, I hope are eating crow), made him a hero again to me. Although I attended two of his talks, I never met him personally, but had the pleasure of receiving a warm letter from him on February 25, 1991, praising *The Felix Letter*. He'll never know I walked two feet off the ground for a month afterwards! The world will miss him and so will I. □

## FINDING YOUR WAY THRU THE HORMONE JUNGLE

This past year has been an era of welcome enlightenment, long overdue, on the business of hormone replacement therapy (HRT). My innate skepticism about pharmaceutical intrusions into delicately balanced functions has been confirmed in spades. It's increasingly clear that Provera and other synthetic progestins (routinely confused in the media with natural progesterone) vie with estrogens to increase breast cancer and unleash an awesome string of side effects. Enormous profits spawned by HRT are reinvested in massive 'doctor education' and public relations campaigns to juggle statistics and mask truths. Fortunately, the ranks of fractious women and doctors who are saying "Basta!" are swelling.

John R. Lee, M.D. led the way for me, and others, with his book *Natural Progesterone: The Multiple Roles of a Remarkable Hormone* (see review in FL#76), the first to document truly impressive rebuilding of bone using natural progesterone cream in 63 menopausal osteoporotic women over a period of years. Out of 100 patients, only 63 elected to take bone mineral density scans which generally weren't covered by medical insurance. Nevertheless, all patients reported similar strengthening and well-being benefits, and not one of the 100 suffered a new osteoporotic fracture, not even those in their 70s and 80s. Bone scans every three to six months showed initial rapid improvement in density, in some women as high as 25% the first year! (Mind you, this is a time of life when female bone density commonly decreases 2 to 4% per year.) Bone density increased gradually afterwards, about 3% to 5% a year, until it was restored to that found in healthy 35-year-olds. Moreover, these effects were seen equally in Lee's patients taking progesterone whether they were or weren't on estrogen.

Estrogen tends to slow down bone loss but can't cause new bone to be laid down. Dr. Lee now is confident natural progesterone is the hormonal trigger for healthy bone rebuilding. Jerilynn C. Prior, M.D., of the University of British Columbia, found that young women long-distance runners who had low levels of progesterone suffered over 4% bone mineral loss in one year, in spite of normal estrogen levels. Conversely, the women runners who had normal periods and progesterone levels actually gained bone mass.

While Dr. Lee finds that women patients absorb progesterone efficiently when they rub it as a cream preparation on their skin, MDs also are using progesterone pills with good results, so long as the dosage is large enough to compensate for what's metabolized, i.e., broken down, by the liver. In contrast, Provera and other synthetic progestins are absorbed orally with great efficiency because the liver can't break them down easily. That means they circulate for a long time and are able to fill up the body's receptors for real progesterone (our tissues contain natural receptors for various steroid hormones). Once hooked up, so to speak, the synthetics, unfortunately, can perform only a tiny percentage of progesterone's functions.

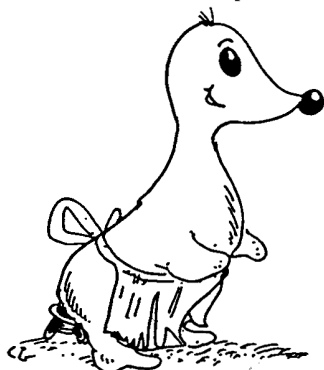
The result is a spate of nasty side effects while the body wrestles with the imposters, which refuse to break down and vacate the receptors! Meanwhile, the real progesterone, which causes no side effects whatsoever, can't get into the receptors and is metabolized before it can do its job. In effect, the synthetic progestins create a deficiency of real progesterone.



I find interesting parallels with the w6/w3 story. In 1929, the 'parent' molecules in the w6 and w3 families of fatty acids were found to be essential, i.e., required in our diet. As time went by, somehow the research efforts became focused solely on the w6 group. In the late 1980s, grudging re-acceptance of w3 essentiality was forced on the medical community by the work of a handful of scientists, who bucked the tide to show how fundamental the w3s were to our cardiovascular, immune, reproductive systems, etc. and to the brain.

In essence, it meant much of the research of 50 years was skewed because the w3 and w6 families of fats actually achieve their effects by working in *tandem* -- competing and cooperating to regulate and control cellular functions throughout the body. As a matter of fact, without healthy competition from ample w3s, the w6s may go into overdrive, churning out PG2s, thromboxane, leukotrienes, etc. -- the very molecules implicated in inflammations, clogged arteries, menstrual cramps, skin diseases, mental disorders, even cancer!

In much the same way, the estrogens took center stage while commercial and research interest in (nonpatentable) natural progesterone waned. But in the human female, the hormones engage in a purposeful balancing act. Progesterone is vitally needed to offset estrogen's potentially harmful tendencies to, for example, increase salt and fluid retention, induce growth in breast and uterine tissues, increase blood clotting, reduce oxygen levels in all cells, interfere with thyroid hormone, impair blood sugar control, and increase headaches. It's part of nature's immutable plan!



When pharmaceutical scientists granted estrogen star billing in HRT, some not so funny things happened to a lot of women: gallstones, intractable headaches, fibrocystic breasts, pulmonary embolism (blood clot in lungs), and stroke (blood clot in brain).

(Over the years, all but the last actually happened to friends of mine who were taking estrogen either in birth control or in "Feminine Forever!" pills.)

The biggest problem was a big rise in uterine cancers. The drug researchers realized they needed progesterone to exert its anticancer effect, but chose the synthetic, i.e., *patentable*, i.e., *profitable* form. Uterine cancer incidence dwindled, but older women were blessed not just with noxious side effects but with having monthly periods restored!

[There are many studies showing associated rises in breast cancers, too, although trying to extract clear, verifiable statistics from other, industry funded studies is like pulling teeth. However, lung cancer rates went down (in men) soon after cigarette sales took a giant dip, and rose for the first time in women. after they took up the habit in a big way. (Thanks for nothing, Virginia Slims!)]

Incidence of many other cancers has dwindled, but women's breast cancer rates keep rising. Is it just a coincidence that, simultaneously, millions of young women on The Pill and older ones on HRT have been taking synthetic estrogens and/or synthetic progestins?]

All in all, Dr. Lee's work with natural progesterone is filling a huge informational vacuum. The real stuff builds bone, relieves menopausal symptoms for many women, increases energy, libido, and wellbeing, contributes to the pool of natural cortisone and cortisol (the body makes them from progesterone, but can't make them from synthetic progestins), and *fights cancer*. The big job now is to educate doctors away from their progestin fixation! The best way I know is for women to buy Dr. Lee's book, hand copies to their gynecologist, GP, endocrinologist, etc. and ask them to consider prescribing a course of natural progesterone -- come Hell, high water, or the wrath of progestin peddlers.

A fresh look at estrogens is needed, too. Dr. Lee found that natural progesterone without added estrogens relieved typical menopausal discomforts (hot flushes, sleep disturbance, depression, fatigue) for most of his patients and *reversed* dryness and atrophy of vaginal tissues as well. If women taking progesterone still suffer from these problems, he suggests *natural estriol* may be a safer alternative to the synthetic and conjugated estrogens commonly prescribed. *Estriol* is formed in the body from *estrone* which, in turn, is made from *estradiol* -- these being the major estrogens produced in the body. (Synthetic estrogens cannot form estriol.) Unlike the other estrogens which predominate in contraceptives and HRT, estriol is not associated with breast cancer. Moreover, estriol may be the most active of the three in maintaining integrity of vaginal and cervical mucosa. In a recent study (*New Eng J Med*, 329; 11: 753-6, 1993) nearly 100 postmenopausal women who suffered from recurrent urinary tract infections were given either estriol or placebo in a vaginal cream. Intravaginal estriol not only stopped further infections, but encouraged normal colonization by protective lactobacilli, previously lacking in vaginal tissues of these infection-prone women.

When all is said and done, the real question is: Are women fated, after menopause, to turn into decrepit sacks of crumbling bones unless rescued by pharmaceutical intervention? Fortunately, new worldwide interest in menopause is starting to give us answers. A study of menopausal Mayan Indian women in a tiny rural village in Yucatan, Mexico, for instance, showed no incidence of hot flushes and very few of what we consider typical complaints. The older Mayan women not only had excellent resistance to fractures, but also to loss of height, which in the U.S. is seen commonly in elderly women as a result of collapsed osteoporotic vertebrae. In Japan, whose women are among the longest-lived and healthiest in the world and far freer

of breast cancer than U.S. women, very little "medicalization", i.e., hormonal treatment, of menopause takes place despite universal health care. Menopausal complaints seldom include hot flushes and are reported generally to be milder than those of western women.

I think we may look partly to nutritional clues for explanations, as Dr. Lee and other researchers suggest. Yucatan Indians in rural communities consume plant foods that are rich in progesteronelike substances, e.g., yams of the *Dioscorea* species. Where traditional tribal customs still prevail, it's expected that herbal concoctions also will be used routinely as "female" tonics. In Japan, not only do women rely more on herbal teas and infusions than on western medicines, but a major dietary staple -- tofu (from soybeans) -- is now confirmed as an exceptional source of active plant hormones, the *phytoestrogens* (*J Am Dietetic Assoc.*, 94;7:739-42, July 1994.)

The JADA study speculates that when a woman's circulating levels of estrogen are high, phytoestrogens compete modestly with estrogen for receptors in tissues. In breast tissue, for example, the competing phytoestrogens may help to lessen overstimulation of growth triggered by too-high estrogen. On the other hand, women with low levels of estrogen may get a gentle systemic boost from the plant estrogens, thus easing menopausal discomforts, as seen in Japan.

Progesterone precursors as well exist in edible plants, chief among which are the *Dioscorea* species whose potato-like tubers grow in all tropical and subtropical countries and are a major staple for a substantial proportion of the world's people. Dr. Lee describes a July 1992 *National Geographic* report on Trobriand Islanders near S.E. New Guinea whose diet of yams, vegetables, and fish enables them to enjoy "a vigorous sex life....The yam, in fact, is a Trobriand totem signifying good health and good life."

It looks as if the paths of conservative medicine and alternative healing may be converging, now that natural plant hormones are being hailed by the 'straight' folks as 'new' magic bullets. Their studies are confirming what herbalists have always known: that phytoestrogens and plant progesterones may help women sail through menopause and assorted 'female' difficulties and, as a side benefit, prevent cancers in both sexes!





Here are more books (see FL#76 for others) to flesh out your reference library on alternative and herbal approaches for getting and staying well:

•**WITHOUT ESTROGEN:** *Natural Remedies for Menopause & Beyond* by Dee Ito, 1994. Carol Southern Books, 201 E. 50th St., New York, NY 10022.

•**PREVENTING & REVERSING OSTEOPOROSIS** by Alan R. Gaby, MD., 1994. Prima Publishing, PO Box 1260BK, Rocklin, CA 95677.

•**HERBAL TONIC THERAPIES** by Daniel B. Mowrey, PhD, 1993. Keats Publishing, Inc., PO Box 876, New Canaan, CT 06840.

•**ALTERNATIVE MEDICINE, The Definitive Guide** compiled by the Burton Goldberg Group, 1993. Future Medicine Publishing, Puyallup, WA. This 1000 plus-page compendium is a remarkable, up-to-date contribution to understanding and treatment.

•**NATURAL PROGESTERONE: The Multiple Roles of a Remarkable Hormone** by John R. Lee, MD, 1993. BLL Publishing, PO Box 2068, Sebastopol, CA 95473. (\$9.95 plus \$2 shipping plus sales tax if bought in Calif.) □

## OUR ANTS

We've got the healthiest ants in the neighborhood. That's because we feed them scraps from our table, and, boy, do we ever eat healthy! (If we didn't, I'm sure some Higher Power would rip my nutritionist badge off my chest and stomp on it with both Feet.) Seven years ago in FLs 37/38, I wrote about my scheme, born of desperation, to keep ants out of the house. It consisted of establishing several tiny outdoor feeding stations, safe from cats and the occasional raccoon. Bits of fatty fish, lamb, freshly squashed snails [no, from the garden, *not* from our table], and dribbles of honey have done the trick remarkably well. When little scouts begin to show up in the house, peering around speculatively and biting me on the leg, I know it's time to fill up the stations again.

Over the years, we've observed a puzzling phenomenon. The bits of meat and fish in the feeding station last for many days, *but never get stinky*, even in warm weather. Gradually, our outside rubbish/garbage receptacle became an involuntary feeding station, too. Every particle of meat or fish scrap in it positively *quivers* with ants. And it, too, hardly ever smells! Except for the bother of brushing off ants every time we open it to dump in trash, we've come to consider our no-smell garbage bin a kind of St. Francis of Assisi reward for our kindness. I called some entomologists at UC Berkeley to ask about the no-odor business but never got through to anyone who specialized in Formicidae (ants). The other day, though, hunting for a new biochemistry text in the student bookstore, I found the answer. No, it's not formic acid (my first guess), which ants make also. It's **phenylacetic acid** (secreted from a unique metapleural gland that distinguishes ants from other Hymenoptera such as bees and wasps), *which is exceptionally active against fungi and bacteria and possibly has other antibiotic action*, the reference text said. Apparently, ants disseminate phenylacetic acid's antibiotic secretions diffusely throughout their nests, which helps them to colonize successfully in warm, moist, microorganism-filled environments.

So *that's* the story: Ants cleverly make *home preserves* out of everything! I say more power to the little buggers, as long as they keep our garbage smelling like roses, almost. □



## THE EERIE CANAL

Author and dentist George E. Meinig has written a book about the very recently uncovered work of one of his heroes: Weston A. Price, dentist, anthropologist, and extraordinary researcher. As a director for 20 years of the Price Pottenger Nutrition Foundation (PPNF), Dr. Meinig participates in one of the foundation's main purposes, to make Dr. Price's legendary **NUTRITION & PHYSICAL DEGENERATION** available to the public and health professionals. Published in 1938, the book documents the magnificent dental and overall health of widely dispersed preindustrial societies where people still ate their traditional, native foods. Where the same cultures came in contact with "civilization" in the form of trading posts selling white flour and sugary foods, terrible tooth decay followed. First generation offspring developed crowded, crooked teeth and previously unknown ailments such as club feet and hairlips.<sup>1</sup>

For 25 years before the expeditions began, however, Dr. Price had been conducting a methodical set of experiments on the systemic effects of root canal therapy. His conclusions were so upsetting to the dental societies of his day that even though he was a prestigious, honored member of the profession, the work was discounted, summarily dismissed, and buried for 70 years! Not long ago, a friend of PPNF, Dr. Hal Huggins, unexpectedly received two of Dr. Price's volumes of research. Recognizing their enormous relevance, he notified Pat Connolly of PPNF who made them available to Dr. Meinig.

**ROOT CANAL COVER-UP EXPOSED!** is scary and shocking but, most important, it points to options so there's no despair in its message. Dr. Price found that root canal therapy, no matter how scrupulously and expertly practiced, creates a permanent state of simmering infection in the filled roots. Bacteria and their toxins escape into the bloodstream from miles of microscopic tubules in the dentin of the tooth. The result? Infection and degeneration in the heart, kidneys, joints, lungs, eyes, and countless other tissues!

He did his experimental work on thousands of rabbits, apologizing for the suffering he caused them in the service of human beings.

<sup>1</sup> Weston and Florence Price, by then both past middleage, traveled for 9 years to remote parts of the world, starting at the end of the 1920s. They did dental examinations and took 18,000 "before and after" photographs of, for example, Alaskan Eskimos, Peruvian Indians, Australian aborigines, and various tribes over a 6000 mile stretch of Africa. Their work was irreplaceable, because most of the untouched cultures no longer exist, having vanished or become "modernized." The book is available from PPNF, POBox 2614, La Mesa, CA 91943. \$39.95 plus \$6.50 for UPS, plus \$3.10 sales tax for Calif. residents. UPS ships to home addresses only, not PO boxes. A gift medical and dental students will treasure.

Root canal therapy was still rare in his day, but believing in doing everything possible to save a tooth, he had become proficient in it. "However, he had the sense that, even when such treatment appeared successful, teeth containing root canal fillings remained infected....Then one day, while treating a woman who had been confined to wheelchair living for six years from severe arthritis, he recalled how bacterial cultures were taken from patients who were ill and then inoculated into animals in an effort to reproduce the disease and test the effectiveness of drugs on the disease."

**D**r. Price extracted the only tooth with filled roots and *embedded it under the skin of a rabbit*. "Lo and behold, in two days the rabbit developed the same kind of crippling arthritis as the patient....What is more, the patient made a successful recovery after the tooth's removal! She could then walk without a cane and could even do fine needlework. That success led Dr. Price to advise other patients, afflicted with a wide variety of illnesses that were defying treatment, to have any root filled teeth removed.

"**T**hereafter, whenever such situations occurred, he either embedded the whole tooth or small parts of the tooth under a rabbit's skin....In almost every instance, the rabbits developed the disease of the patient or one similar to it...If the patient had kidney trouble, the rabbit developed kidney involvement; if eye trouble, the rabbit's eyes failed. Heart trouble, rheumatism, stomach ulcers, bladder infections, ovarian diseases, phlebitis, osteomyelitis, whatever disease, the rabbit promptly became similarly infected..." and most died within 2 weeks.

**T**o test his theory, he implanted healthy teeth (removed for orthodontic work) and sterile coins under rabbits' skins -- and nothing happened! Some developed a non-infected cystic sac around the object, and in other rabbits the objects were gradually pushed out of the skin. But the rabbits remained healthy in 100 such experiments!

**M**einig makes wonderfully clear why the tooth structure makes it possible for bacteria and/or their toxins to escape from the filled roots into the general blood circulation. Today, the electron microscope shows huge numbers of tubules running the length of each tooth, receiving fluid nourishment from the central pulp's blood supply, offering calcium, etc. to reinforce the outside enamel. (It helped me to understand why a properly nourished tooth may actually repair itself, as some studies suggest!)

**P**rice's research went on for 25 years, aided by distinguished colleagues. One of the findings was that typical aerobic (oxygen-using) decay bacteria, when trapped inside a filled, oxygenless root canal, commonly mutated into anaerobic forms, becoming smaller and able to thrive without oxygen.

"At the same time they become more virulent and their toxins much more toxic." Even when bacteria couldn't get thru the natural cementum of the root into the circulation, their *toxins* could! When the researchers injected sterilized fluid from a tooth into a rabbit, the toxins (minus bacteria) killed the poor creature even faster than when the bacteria also were present!

**I**n addition, Price demonstrated "how bacteria in periodontal pockets were absorbed into the tooth through any lateral canals that opened into the area of the pyorrhea pocket, as well as through the dental tubules."

**H**e documented cases involving hundreds of patients who recovered from chronic illness when their root-filled teeth were extracted. But he himself didn't believe root-filled teeth should be extracted routinely. About 30% of individuals with such teeth remain in good health, never suffering from chronic disorders. In these cases, he thought a strong immune system protected them, keeping bacteria in check. Price found that when such teeth were extracted and implanted in rabbits, usually no infection or illness resulted for the animals, either!

**W**hile a rewarding number of patients recovered from a variety of diseases after their root-filled teeth were extracted, Dr. Price reasoned that those who didn't recover were not suffering primarily from focal infections emanating from the mouth but from other causes as well, including genetic tendencies and/or poor nutrition.

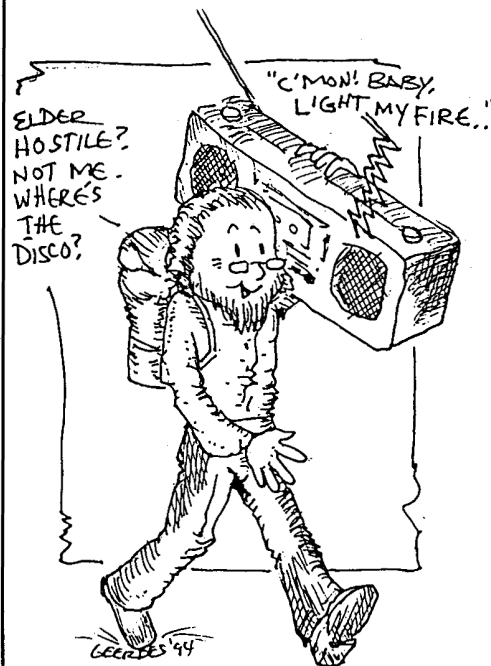
**D**r. Meinig writes: "In thousands of experiments, the tissues most often infected were those of the heart. In Price's two volume report of his research, heart conditions appear more often than all the other degenerative diseases combined." He thinks it's imperative that the dental profession explore any possible connection between the number one killer in the U.S.--heart disease--and the fact that *24 million root canals were performed in 1993.*

**A**re Price's 70-year-old research findings relevant today? Surely, doesn't penicillin or other antibiotics control all infections in filled roots? Meinig writes: "...the fact is that antibiotics can't get inside the dentin tubules once a tooth loses its blood supply due to root canal treatment. If antibiotics can't get inside tubules, they can't kill the bacteria therein." Additionally, antibiotics would be ineffective against powerful *toxins* from the bacteria.

**W**hat about improved methods for sterilizing root canals? Meinig says the solution to focal infections eventually may lie there, but the sure fix is a long way off.

When dental societies buried Dr. Price's work, 70 years during which the problems could have been acknowledged and worked on were lost. It's catch-up time now; researchers in Sweden and the U.S., for example, are testing medications and new ways to deliver them in root canals. Dr. Meinig thinks laser treatments may prove useful in the future. Dr. Hal Huggins is busy duplicating Price's experiments, with guinea pigs instead of rabbits. He's meeting with dental and medical groups, asking them to accept the challenge of dealing with issues that are just now seeing the light of day.

**M**ost of us, consumers of dentistry, have some serious rethinking to do about any present or future root canals. Dr. Meinig has done us all a magnificent service, even though he may have brought the wrath of his fellow endodontists down on his head! (Ironically, as one of the founder members in 1943 of the American association, he was honored last year at its 50th annual celebration.) Buy a book and lend it to your dentist! Send \$19.95 plus \$2.50 for shipping and \$0.94 sales tax if you're in Calif. to Bion Publishing, 323 E. Matilija 110-151FL, Ojai, CA 93023. □



**Illustrations by Clay Geerdes and other artists as noted.**

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