



Live Well Be Well

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SUGAR

A SWEET DECEPTION

When Emperor Darius invaded India in 510 B.C. he called it, “the reed which gives honey without bees.” The Crusaders called it *sweet salt* when they brought it to the European continent, and *white gold* is what the British called it in 1750 when it became the most valuable crop produced in all of Europe. Today we call it *sugar* and it is considered a basic food staple of the American diet. Sugar even rates a spot on the government food pyramids. Most Americans rarely go a day without consuming one form of sugar or another. We add it to just about everything—even ketchup, medicines, and baby food.

The truth is that sugar is relatively new to the food chain. Unlike nuts, seeds, fruits, meats, and wild grains which have been found in the guts of primitive man and have been part of our consumption since our earliest history, sugar was discovered a mere 8,000 years ago and, until the last 40 years, people consumed very little of it.

The harvesting and the making of sugar originated in New Guinea and then quickly spread to Polynesia, Indonesia, and eventually Northern India where it stayed until the seventh century. When Arabic peoples invaded India they quickly recognized sugar as valuable crop and carried the harvesting techniques to their conquered territories throughout the Arabian Peninsula where the technology stayed until the 11th century. It was the Crusaders who carried what they

called *sweet salt* to Europe and later Columbus carried it across the seas to the Americas.

Despite being of a substance of great desire, sugar was hard to come by, very expensive, and was something reserved for nobility and the very rich. So difficult were the conditions of harvesting it, that sugar is credited with the birth of African slavery as slaves were imported throughout the world to harvest sugar cane.

It wasn't until the 18th century that sugar was produced in enough quantities to become something the general public could afford and not until the early part of the 21st century that it was affordable enough to become a daily staple. In 1930, Americans consumed roughly five pounds of sugar a year, or the equivalent of $\frac{3}{4}$ tsp. a day. After World War II the demand for sugar rose so dramatically that by 1970 consumption had increased to 109 pounds per person, per year.

In the late 70s, President Nixon imposed tariffs and quotas on imported sugar which caused the domestic price of sugar to soar. Food industries began looking for less costly options to satisfy America's sweet tooth and a technology developed a decade earlier in Japan seemed like a good solution. Japan had developed a method for converting corn—a crop in surplus in the United States—into high fructose corn syrup, a compound even sweeter than sugar. This seemed like an easy, inexpensive way to sweeten foods.

Once introduced to food manufacturers, it took less than a decade for high fructose corn syrup to become the predominant sweetener used in soda pop, baked goods, fruit juices, breakfast

cereals, etc. This alternative sweetener source drove the demand and the price of sugar down. Now for the first time in human history, satisfying cravings for sweetness became easy and affordable for just about everybody.

Sugar and high fructose corn syrup was added to everything, and in larger and larger portions. Sodas were no longer sold in standard 6 oz bottles—now 32 oz. Super Gulps could be had at every corner gas station. In the next 30 years the soft drink industry grew by over 350%. Americans started drinking 18 billion gallons of soda pop a year. People even gave it to their toddlers in baby bottles. **Daily consumption of sugar had increased so dramatically that by 2010, the average daily sugar intake was no longer ¾ tsp. per day as it was in 1930, but 26 tsp. or half a pound a day. That is 170 pounds of sugars per person a year!**

Imagine adding in 170 pounds of a foreign substance into your diet over a 40 year period. The health consequences have been profound. If the problem with sugar was simply empty calories, weight gain, and dental caries it wouldn't be so deadly. However, over the last decade an increasing number of biochemists have made a case that sugar is actually a toxin and in enough quantities, it is lethal. The most outspoken of these biochemists is Robert Lustig M.D., a pediatric hormone disorders specialist and the leading expert in childhood obesity at the University of California, San Francisco, School of Medicine. Dr. Lustig writes, *"...white table sugar and high fructose corn syrup have unique characteristics; specifically in the way the human body metabolizes the fructose in them, that makes them particularly harmful. When sugar is consumed in sufficient quantities, or in liquid form—soda or fruit juices—the fructose and glucose will hit the liver quickly. If fructose hits the liver in sufficient quantities and with sufficient speed the liver will convert much of it to fat. This extra fat stored in the liver induces a condition known as insulin resistance or insulin resistant diabetes."*

Dr. Lustig theorizes that sugar (a term he uses to include white sugar [sucrose] and high fructose corn syrup) is the primary reason that obesity and diabetes have risen in this country in alarming rates over the last 30 years. He further asserts that sugar is the likely cause of other chronic conditions such as heart disease, hypertension, and many common cancers. In the 70s, type 2 diabetes was called adult on-set diabetes because it only occurred in adults and typically in middle-aged adults. In the last 30 years the occurrence of type 2 diabetes—or what is now called insulin-resistant diabetes—has increased dramatically. Most concerning is the rapid increase of children now diagnosed with insulin resistant diabetes, even in children as young as six months old. Dr. Lustig credits the high concentration of sugar and high fructose corn syrups in snack, fruit juices, soda, and baby formula with the fact that insulin resistance diabetes is now endemic in children.

Animal studies clearly demonstrate the connection between sugar, insulin resistance, and obesity. At Stanford University, Dr. Reaven, who is credited with much of the pioneering work on insulin resistances and type 2 diabetes writes, *"If you want to cause insulin resistance in laboratory rats, feeding them diets that are mostly fructose is an easy way to do it. The more you feed them the faster you can achieve fatty liver, insulin resistance, and metabolic syndrome. Smaller amounts take longer for the condition to occur, but either way it is a predictable outcome."*

Sugar intake has been linked to other chronic health conditions besides diabetes. The 2007 report published by the World Cancer Research Fund and the American Institute for Cancer Research concluded *"...the western diet high in refined sugars manifests itself through obesity, diabetes, fatty liver, and metabolic syndrome. This increase in insulin resistance leads to the secretion of more insulin which acts like a growth factor for cancer cells and promotes tumor growth."*

The Food and Drug Administration recommends that sugar should be avoided and that intake be limited to less than 40 pounds per person a year or less than 10% of caloric intake. However, taking sugar out of our food chain may prove difficult. In the 2009 *Journal of Nutrition*, a study documented the effects of sugar on neurochemistry changes in the brain. They found that sugar activates beta endorphin receptor sites in the brain the same way as heroin and morphine. In laboratory rats, dependency on sugar was achieved in as little as 10 days. Cycles of sugar binges caused sensitization of brain dopamine and opioid receptors which caused withdrawal symptoms similar to withdrawal from drugs and alcohol. Sugar may look a lot like cocaine, but it acts more like heroin when it hits the brain.

All indications point to sugar being addictive and dangerous to your health. It may be very difficult to give up sugar, but the benefits in improved physical and emotional health are well worth the effort. If you don't



want to give up sugar entirely, then consider giving up liquid forms of sugar. In liquid form, sugars saturate the liver very quickly causing more harm than eating highly sweetened foods.



Those who feel like they are *addicted* to sugar may want to look into the 12-step food/sugar addiction recovery groups available in the community; Over-Eaters Anonymous or Food Addicts In Recovery Anonymous. These groups are free and some of them offer a structured food plan.

The Positive Choice Wellness Center offers a three-month program called *Solution-Recovery from Food Addiction*. This intensive program offers education, support, and treatment for food/sugar addictions. The Positive Choice medically managed weight management programs may be another option for someone who wants to lose weight, reverse type-2 diabetes, and avoid sugar. The multi-disciplinary program uses nutritional supplements made by OPTIFAST® supplements that help people lose weight. These supplements contain no sugar and when used properly provide the correction of many chronic health conditions including insulin resistance. You can find out more information about these programs on our Web site or call us.

Live Well - Be Well newsletter is published in the public interest by the Preventive Medicine Department at Kaiser Permanente and distributed free of charge to interested groups and individuals. The Department of Preventive Medicine, which includes Health Appraisal and the Positive Choice Wellness Center, is dedicated to providing comprehensive physical assessments and multi-disciplinary treatment for stress, smoking, fitness, and weight management. The information published in *Live Well - Be Well* is intended solely for the use of our readers and is not intended to provide or substitute for professional medical advice. Readers should always consult their physicians for treatment advice. We consider all mailing and internet addresses used in distribution of this newsletter to be confidential. We do not share or sell this confidential information.

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If you would like to be added to the *Live Well Be Well* mailing list, or you would like to be removed from the list, please contact: Vicki Pepper at (858) 573-5558

Be Well on Your Way

The FREE seminars and workshops listed on these pages are hosted by Kaiser Permanente's Positive Choice Center. They are free to everyone. You are welcome to participate even if you are not a member of the Kaiser Permanente health plan. All seminars are held at the Positive Choice Wellness Center unless another location is listed in the description. We add new seminars regularly so check our Web site for the most current calendar. **Call 858-573-0090 to reserve your space.**

Putting in the *Healthy When Dining Out*

Monday, January 23 6 to 7:30 p.m.
Monday, April 16 6 to 7:30 p.m.

The average meal when dining out can top 1,000 calories and contain over twice the daily recommended amount of fat. **Erica Bohm**, a dietitian and author of *Dining Out in San Diego*, will speak about restaurant practices and why it is so hard to eat out healthily. She'll teach you about www.healthydiningfinder.com the new, FREE Web site that will help you dine out easily and win the health game.

Solutions to Food Addiction

Friday, January 27 6 to 7 p.m.

Do you feel addicted to food? Do you sometimes find yourself unable to stop eating once you start? If so, then this workshop is for you. **Steven T. Fortson, MA**, will help you understand the addictive nature of food and help you regain your sense of power over food. Learn effective techniques to help you recognize and resist the urges to overeat.

Positive Choice Wellness Center

positivechoice.org
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The Right Fit ~ Finding the Shoe that Lets You Survive the Workout

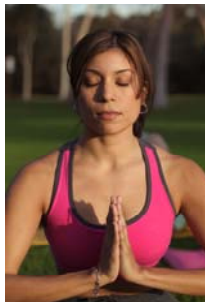
Wednesday, February 8 6 to 7 p.m.
Wednesday, June 6 6 to 7 p.m.

If your knees, feet or hips ache during or after you exercise than maybe your solution is finding the right shoe. Learn how the shape of your foot, height of your arch, and how your foot moves determines the type of shoe you need and what a difference it can make in your ability to exercise. **This seminar will be hosted at Road Runner's Sports located at 5553 Copley Dr., 92111.** Each person will receive a free digital foot scan, video of themselves running or walking on a treadmill, three sizing measurements (foot length, foot width, arch length), and shoe recommendations. **One lucky person will win a pair of free shoes valued up to \$100!**

B.L.A.S.T. ~ Become Lean and Toned Workout

Tuesday, February 28 6 to 7 p.m.

Having a hard time getting into or keeping an exercise routine? **Barbara Cohen MPH**, is a certified health fitness instructor, life style coach, and registered yoga instructor with close to 30 years experience, Come learn resistance training techniques, yoga, and how to make exercise a lifetime routine. Come dressed to exercise.



Mind/Body Restoration: A Life of Inner Peace is Within Reach

Friday, March 2 6 to 7 p.m.

The root of all addictive behavior is the drive to seek pleasure and avoid pain. Mind/Body Therapy can ease addiction behaviors by teaching how to observe the mind, listen to the body, and experience emotions without reacting to them. **Lara Eisenberg** holds master degrees in counseling and psychology, is a registered yoga and meditation teacher. She will teach combined techniques in breathing exercises, mudras (body movements that attune us to energy frequencies in the body), Somatic Experiencing® (a technique to resolve trauma), yoga, meditation, and deep relaxation.

SIMPLY YOGA

Friday, March 9 6 to 7 p.m.

Don't let age, health problems, or the fact that you've never done yoga stop you from enjoying all the great health benefits it can offer. **Norma Soloman, BA**, will show you simplified yoga poses that anyone can do no matter their fitness level. Come dressed to participate and have fun.

Walk 2 Win ~ Walk and Burn Calories

Like a Runner

Friday, March 16

6 to 7 p.m.

Friday, Sept 7

6 to 7 p.m.



Coach **Lizzy Kemp Salvato, MS**, a National Race walking Team member, 1992 Olympic Trials race walking qualifier, and exercise physiologist is going to take you on a 30-minute race walk that will leave you feeling energized and renewed. Lizzy teaches a low-impact, injury-free method of walking that burns more calories than running and

she will tell you about her weekly walk training groups that meet in San Diego. Come dressed to exercise and with good shoes.

Surviving a Painful Childhood ~ How it Affects Your Health as an Adult

Saturday, April 7

10 to 11 a.m.

Saturday, August 4

10 to 11 a.m.



We rarely can control what happens around us, but we have complete control over our inner world. This talk offers an introduction to meditation that meets the needs for just about anyone. Learn what meditation is, its benefits, and how to begin a meditation practice. **Keisang Chokyi**, a resident teacher at the

Vajrarupini Buddhist Center, will guide you through the steps of this gentle art. This seminar will be held at the Vajrarupini Center, 3344-4th Avenue, San Diego, CA 92103. (For parking without meters, participants can park on 3rd Ave, between Upas and Thorn. It's just a block away to the Center which is located on 4th Ave between Upas and Thorn Streets.

Surviving a Painful Childhood ~ How it Affects Your Health as an Adult

Friday, May 11

6 to 7:30 p.m.

Dr. Vincent J. Felitti speaks on his collaboration with the Center for Disease Control and his ground-breaking research showing that adults just don't *get over* the effects of a painful childhood. Childhood experiences of emotional/physical abuse or of parental drug/alcohol abuse lead to adults that are 4,600% more likely to experience drug addiction, 460% more likely to suffer from depression, and have over 260% increased risks for other serious health issues such as lung disease, obesity, diabetes, and coronary heart disease.

Fitness for Every BODY ~ Big Time Exercise

Tuesday, May 15

6 to 7 p.m.



fitness instructor Ms. Patie. All ages and abilities welcome.

Learn how to use fitness to help you live joyfully and healthfully in the skin you're in with **Jeanette De Patie**. Ms. De Patie has been singing, dancing, and performing her whole life and her motto is "*The life you dream of can start now!*" Come dressed ready to exercise and laugh with plus-sized

Wellness, Weight Loss, Stress Reduction..... Made Simple Using Self-Hypnosis

Friday, June 8

6 to 7:30 p.m.

Friday, September 21

6 to 7:30 p.m.

Self-hypnosis gives you a set of skills that allows you to identify, express, let go of, and resolve the blocks of stress, fear and misunderstanding that restrict you—allowing you to feel free to discover and create your own path to letting go of emotional and physical weight. **Brian Alman, PhD**, author of four books and internationally known clinician will show you how to create positive changes in your life using self-hypnosis, visualization, relaxation, and deep breathing.

Muscle Toning Made Easy ~ Workout with Exercise Bands and Balls

Friday, June 15

6 to 7 p.m.

Would you like to learn a simple, fun way to tone and strengthen your muscles? Without using complicated equipment or going to a gym? Positive Choice fitness instructor **Norma Solomon** will show you how you can get a complete strength training workout in the comfort of your home using exercise bands. She will also demonstrate some exercises using one of the most efficient pieces of exercise equipment—exercise balls. Please wear comfortable clothes and tennis shoes. Meets at **7071 Convoy Ct. in Room 106**.

Train to Walk or Jog a Full or Half Marathon in Six Months ~ Any BODY Can Do It!

Friday, June 22

6 to 7 p.m.

Meet the organizer and leader of **In Motion Fit. Coach Katie** will tell you about walking/jogging training sessions that meet at Mission Bay and Carlsbad and train regular people to achieve amazing results in either walking or jogging a half or full marathon. If you think you can't—you're probably wrong because In Motion Fit specializes in taking average couch potatoes and turning them into fitness enthusiasts. All groups train for the Carlsbad Full or Half Marathon that runs along our beautiful coast. Training includes weekly training plans and free fitness and nutrition seminars, but mostly they make getting fit really fun.

Biofeedback for Stress and Pain Control

Tuesday, July 17

6 to 7 p.m.

Biofeedback therapy uses technology to measure physiological processes we can't normally perceive. It can give us a window into how our bodies change in response to stress. Biofeedback therapist, **Megan Thompson, PhD**, will discuss the application of biofeedback and ways to incorporate them into your healthy lifestyle. Biofeedback is used to successfully treat anxiety, migraines, headaches, panic attacks, insomnia, TMJ, fibromyalgia, irritable bowel syndrome, and other stress-aggravated conditions.



Feeling healthy and feeling good about yourself is not a luxury—it's an absolute necessity.

Need a little help eating right and exercising? Check out these Positive Choice Wellness Center FREE services...

Ask the Dietitian—Receive nutritional counseling from a dietitian. Sessions are offered on Mondays, Wednesdays, Thursdays 5 to 5:30 p.m. or Tuesdays 11:45 a.m. to 12:15 p.m. and 5:30 to 6 p.m. at the Positive Choice Wellness Center.

Fitness Forum—Receive advice from an exercise physiologist. Sessions are offered Mondays thru Thursdays from 5 to 5:30 p.m. at the Positive Choice Wellness Center.

You don't need to be active in a Positive Choice Program and you don't need to be a Kaiser Permanente member to attend.

Save \$15

towards a Positive Choice Wellness Center medically supervised Weight Management Program.

Present this coupon at the time of your enrollment.