

<[Back](#) | [Home](#) | [Basics](#) | [Departments](#) | [Get Involved](#) | [Site Map](#) | [What's New](#)



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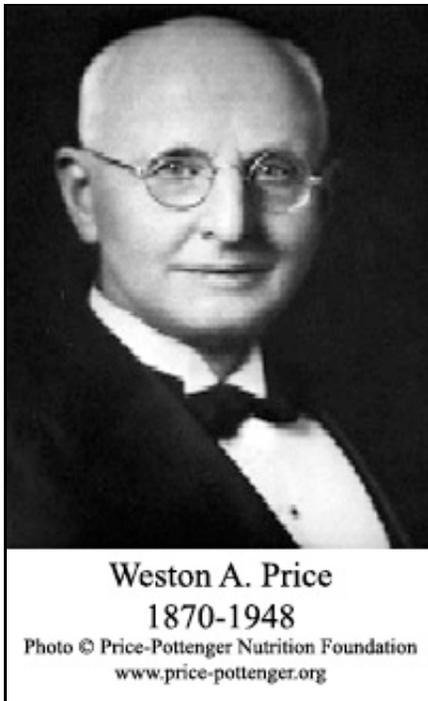
[Home](#) > [Basics](#) > [Traditional Diets](#) > Ancient Dietary Wisdom



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Ancient Dietary Wisdom for Tomorrow's Children

[By Sally Fallon](#)

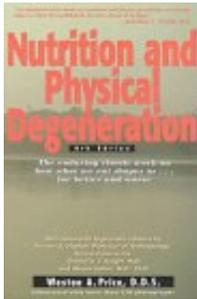


More than sixty years ago, a Cleveland dentist named Weston A. Price decided to embark on a series of unique investigations that would engage his attention and energies for the next ten years. Possessed of an inquiring mind and a spiritual nature, Price was disturbed by what he found when he looked into the mouths of his patients. Rarely did an examination of an adult client reveal anything but rampant decay, often accompanied by serious problems elsewhere in the body such as arthritis, osteoporosis, diabetes, intestinal complaints and chronic fatigue. (They called it neurasthenia in Price's day.) But it was the dentition of younger patients that gave him most cause for concern. He observed that crowded, crooked teeth were becoming more and more common, along with what Price called "facial deformities"--overbites, narrowed faces, underdevelopment of the nose, lack of well-defined cheekbones and pinched nostrils. Such children invariably suffered from one or more complaints that sound all too

familiar to mothers of the 1990s: frequent infections, allergies, anemia, asthma, poor vision, lack of coordination, fatigue and behavioral problems. Price did not believe that such "physical degeneration" was God's plan for mankind. He was rather inclined to believe that the creator intended physical perfection for all human beings, and that children should grow up free of ailments.

Price's bewilderment gave way to a unique idea. He would travel to various isolated parts of the earth where the inhabitants had no contact with "civilization"

to study their health and physical development. His investigations took him to isolated Swiss villages and a windswept island off the coast of Scotland. He studied traditional Eskimos, Indian tribes in Canada and the Florida Everglades, Southsea islanders, Aborigines in Australia, Maoris in New Zealand, Peruvian and Amazonian Indians and tribesmen in Africa. These investigations occurred at a time when there still existed remote pockets of humanity untouched by modern inventions; but when one modern invention, the camera, allowed Price to make a permanent record of the people he studied. The photographs Price took, the descriptions of what he found and his startling conclusions are preserved in a book considered a masterpiece by many nutrition researchers who followed in Price's footsteps: *Nutrition and Physical Degeneration*. Yet this compendium of ancestral wisdom is all but unknown to today's medical community and modern parents.



Buy Dr. Price's classic from [Radiant Life](#) or the [Price-Pottenger Foundation](#).

Nutrition and Physical Degeneration is the kind of book that changes the way people view the world. No one can look at the handsome photographs of so-called primitive people--faces that are broad, well-formed and noble--without realizing that there is something very wrong with the development of modern children. In every isolated region he visited, Price found tribes or villages where virtually every individual exhibited genuine physical perfection. In such groups, tooth decay was rare and dental crowding and occlusions--the kind of problems that keep American orthodontists in yachts and vacation homes--non-existent. Price took photograph after photograph of beautiful smiles, and noted that the natives were invariably cheerful and optimistic. Such people were characterized by "splendid physical development" and an almost complete absence of disease, even those living in physical environments that were extremely harsh.

The fact that "primitives" often exhibited a high degree of physical perfection and beautiful straight white teeth was not unknown to other investigators of the era. The accepted explanation was that these people were "racially pure" and that unfortunate changes in facial structure were due to "race mixing". Price found this theory unacceptable. Very often the groups he studied lived close to racially similar groups that had come in contact with traders or missionaries, and had abandoned their traditional diet for foodstuffs available in the newly established stores--sugar, refined grains, canned foods, pasteurized milk and devitalized fats and oils--what Price called the "displacing foods of modern commerce." In these peoples, he found rampant tooth decay, infectious illness and degenerative conditions. Children born to parents who had adopted the so-called civilized diet had crowded and crooked teeth, narrowed faces, deformities of bone structure and reduced immunity to disease. Price concluded that race had nothing to do with these changes. He noted that physical degeneration occurred in children of native parents who had adopted the white man's diet; while mixed race children whose parents had consumed traditional foods were born with wide handsome faces and straight teeth.

The diets of the healthy "primitives" Price studied were all very different: In the Swiss village where Price began his investigations, the inhabitants lived on rich dairy products--unpasteurized milk, butter, cream and cheese--dense rye bread, meat occasionally, bone broth soups and the few vegetables they could cultivate during the short summer months. The children never brushed their teeth--in fact

their teeth were covered in green slime--but Price found that only about one percent of the teeth had any decay at all. The children went barefoot in frigid streams during weather that forced Dr. Price and his wife to wear heavy wool coats; nevertheless childhood illnesses were virtually nonexistent and there had never been a single case of TB in the village. Hearty Gallic fishermen living off the coast of Scotland consumed no dairy products. Fish formed the mainstay of the diet, along with oats made into porridge and oatcakes. Fishheads stuffed with oats and chopped fish liver was a traditional dish, and one considered very important for children. The Eskimo diet, composed largely of fish, fish roe and marine animals, including seal oil and blubber, allowed Eskimo mothers to produce one sturdy baby after another without suffering any health problems or tooth decay. Well-muscled hunter-gatherers in Canada, the Everglades, the Amazon, Australia and Africa consumed game animals, particularly the parts that civilized folk tend to avoid--organ meats, glands, blood, marrow and particularly the adrenal glands--and a variety of grains, tubers, vegetables and fruits that were available. African cattle-keeping tribes like the Masai consumed no plant foods at all--just meat, blood and milk. Southsea islanders and the Maori of New Zealand ate seafood of every sort--fish, shark, octopus, shellfish, sea worms--along with pork meat and fat, and a variety of plant foods including coconut, manioc and fruit. Whenever these isolated peoples could obtain sea foods they did so--even Indian tribes living high in the Andes. These groups put a high value on fish roe which was available in dried form in the most remote Andean villages. Insects were another common food, in all regions except the Arctic. The foods that allow people of every race and every climate to be healthy are whole natural foods--meat with its fat, organ meats, whole milk products, fish, insects, whole grains, tubers, vegetables and fruit--not newfangled concoctions made with white sugar, refined flour and rancid and chemically altered vegetable oils.



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Caption: The photographs of Dr. Weston Price illustrate the difference in facial structure between those on their native diets and those whose parents had adopted the "civilized" diets of devitalized processed foods. The "primitive" Seminole girl (left) and Samoan boy (third from left) have wide, handsome faces with plenty of room for the dental arches. The "modernized" Seminole girl (second from left) and Samoan boy (right), born to parents who had abandoned their traditional diets, have narrowed faces, crowded teeth and a reduced immunity to disease.

Price took samples of native foods home with him to Cleveland and studied them in his laboratory. He found that these diets contained at least four times the minerals and water soluble vitamins--vitamin C and B complex--as the American diet of his day. Price would undoubtedly find a greater discrepancy in the 1990s due to continual depletion of our soils through industrial farming practices.

What's more, among traditional populations, grains and tubers were prepared in ways that increased vitamin content and made minerals more available--soaking, fermenting, sprouting and sour leavening.

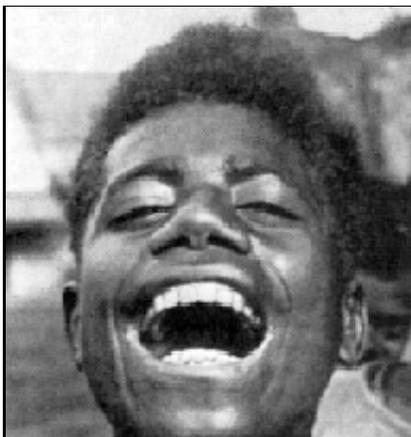
It was when Price analyzed the fat soluble vitamins that he got a real surprise. The diets of healthy native groups contained at least ten times more vitamin A and vitamin D than the American diet of his day! These vitamins are found only in animal fats--butter, lard, egg yolks, fish oils and foods with fat-rich cellular membranes like liver and other organ meats, fish eggs and shell fish.

Price referred to the fat soluble vitamins as "catalysts" or "activators" upon which the assimilation of all the other nutrients depended--protein, minerals and vitamins. In other words, without the dietary factors found in animal fats, all the other nutrients largely go to waste.

Price also discovered another fat soluble vitamin that was a more powerful catalyst for nutrient absorption than vitamins A and D. He called it "[Activator X](#)" ([now believed to be vitamin K2](#)). All the healthy groups Price studied had the X Factor in their diets. It could be found in certain special foods which these people considered sacred--cod liver oil, fish eggs, organ meats and the deep yellow Spring and Fall butter from cows eating rapidly growing green grass. When the snows melted and the cows could go up to the rich pastures above their village, the Swiss placed a bowl of such butter on the church altar and lit a wick in it. The Masai set fire to yellow fields so that new grass could grow for their cows. Hunter-gatherers always ate the organ meats of the game they killed--often raw. Liver was held to be sacred by many African tribes. The Eskimos and many Indian tribes put a very high value on fish eggs.

The therapeutic value of foods rich in the X Factor was recognized during the years before the second World War. Price found that the action of "high vitamin" Spring and Fall butter was nothing short of magical, especially when small doses of cod liver oil were also part of the diet. He used the combination of high vitamin butter and cod liver oil with great success to treat osteoporosis, tooth decay, arthritis, rickets and failure to thrive in children.

Other researchers used such foods very successfully for the treatment of respiratory diseases such as TB, asthma, allergies and emphysema. One of these was Francis Pottenger whose sanatorium in Monrovia, California served liberal amounts of liver, butter, cream and eggs to convalescing patients. He also gave supplements of adrenal cortex to treat exhaustion.



Dr. Price consistently found that healthy "primitives", whose diets contained adequate nutrients from animal protein and fat, had a cheerful, positive attitude to life. He noted that most prison and asylum inmates have facial deformities indicative of pre-natal nutritional deficiencies.

Like Price, Pottenger was also a researcher. He decided to perform adrenalectomy on [cats](#) and then fed them the adrenal cortex extract he prepared for his patients in order to test its effectiveness. Unfortunately most of the cats died



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during the operation. He conceived of an experiment in which one group of cats received only raw milk and raw meat, while other groups received part of the diet as pasteurized milk or cooked meat. He found that only those cats whose diet was totally raw survived the adrenalectomy and as his research progressed, he noticed that only the all-raw group continued in good health generation after generation--they had excellent bone structure, freedom from parasites and vermin, easy pregnancies and gentle dispositions. All of the groups whose diet was partially cooked developed "facial deformities" of the exact same kind that Price observed in human groups on the "displacing foods of modern commerce"--narrowed faces, crowded jaws, frail bones and weakened ligaments. They were plagued with parasites, developed all manner of diseases and had difficult pregnancies. Female cats became aggressive while the males became docile. After just three generations, young animals died before reaching adulthood and reproduction ceased.

The results of Pottenger's [cat experiments](#) are often misinterpreted. They do not mean that humans should eat only raw foods--humans are not cats. Part of the diet was cooked in all the healthy groups Price studied. (Milk products, however, were almost always consumed raw.) Pottenger's findings must be seen in the context of the Price research and can be interpreted as follows: When the human diet produces "facial deformities"--the progressive narrowing of the face and crowding of the teeth--extinction will occur if that diet is followed for several generations. The implications for western civilization--obsessed as it is with refined, highly sweetened convenience foods and low-fat items--is profound.



Francis M. Pottenger, Jr.
1901-1967

Photo © Price-Pottenger Nutrition Foundation
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The research of Weston Price is not so much misinterpreted as ignored. In a country where the entire orthodox health establishment condemns saturated fat and cholesterol from animal sources, and where vending machines have become a fixture in our schools, who wants to hear about a peripatetic dentist who warned about the dangers of sugar and white flour, who thought kids should take cod liver oil and who believed that butter was the number one health food?

The irony is that as Price becomes more and more forgotten, more and more research appears in the scientific literature proving he was right. We now know that vitamin A is essential for the prevention of birth defects, for growth and development, for the health of the immune system and the proper functioning of all the glands. Scientists have discovered that the precursors to vitamin A--the carotenes found in plant foods--cannot be converted to true vitamin A by infants and children. They must get their vital supply of this nutrient from animal fats. Yet orthodox nutritional pundits are now pushing low-fat diets for children. Neither can diabetics and people with thyroid conditions convert carotenes to the fat soluble form of vitamin A--yet diabetics and people with low energy are told to avoid animal fats.

The scientific literature tells us that vitamin D is needed not only for healthy

bones, and optimal growth and development, but also to prevent colon cancer, MS and reproductive problems.

Cod liver oil is an excellent source of vitamin D. Cod liver oil also contains special fats called EPA and DHA. The body uses EPA to make substances that help prevent blood clots, and that regulate a myriad of biochemical processes. Recent research shows that DHA is essential to the development of the brain and nervous system. Adequate DHA in the mother's diet is necessary for the proper development of the retina in the infant she carries. DHA in mother's milk helps prevent learning disabilities. Cod liver oil and foods like liver and egg yolk supply this essential nutrient to the developing fetus, to nursing infants and to growing children.

Butter contains both vitamin A and D, as well as other beneficial substances. Conjugated linoleic acid in butterfat is a powerful protection against cancer. Certain fats called glycosphingolipids aid digestion. Butter is rich in trace minerals, and naturally yellow Spring and Fall butter contains the X factor.

Saturated fats from animal sources--portrayed as the enemy--form an important part of the cell membrane; they protect the immune system and enhance the utilization of essential fatty acids. They are needed for the proper development of the brain and nervous system. Certain types of saturated fats provide quick energy and protect against pathogenic microorganisms in the intestinal tract; other types provide energy to the heart.

Cholesterol is essential to the development of the brain and nervous system of the infant, so much so that mother's milk is not only extremely rich in the substance, but also contains special enzymes that aid in the absorption of cholesterol from the intestinal tract. Cholesterol is the body's repair substance; when the arteries are damaged because of weakness or irritation, cholesterol steps in to patch things up and prevent aneurysms. Cholesterol is a powerful antioxidant, protecting the body from cancer; it is the precursor to the bile salts, needed for fat digestion; from it the adrenal hormones are formed, those that help us deal with stress and those that regulate sexual function.

The scientific literature is equally clear about the dangers of polyunsaturated vegetable oils--the kind that are supposed to be good for us. Because polyunsaturates are highly subject to rancidity, they increase the body's need for vitamin E and other antioxidants. (Canola oil, in particular, can create severe vitamin E deficiency.) Excess consumption of vegetable oils is especially damaging to the reproductive organs and the lungs--both of which are sites for huge increases in cancer in the US. In test animals, diets high in polyunsaturates from vegetable oils inhibit the ability to learn, especially under conditions of stress; they are toxic to the liver; they compromise the integrity of the immune system; they depress the mental and physical growth of infants; they increase levels of uric acid in the blood; they cause abnormal fatty acid profiles in the adipose tissues; they have been linked to mental decline and chromosomal damage; they accelerate aging. Excess consumption of polyunsaturates is associated with increasing rates of cancer, heart disease and weight gain; excess use of commercial vegetable oils interferes with the production of prostaglandins--localized tissue hormones-- leading to an array of complaints such as autoimmune diseases, sterility and PMS. Vegetable oils are more toxic when heated. One study reported that polyunsaturates turn to varnish in the intestines. A study by a plastic surgeon found that women who consumed mostly vegetable

oils had far more wrinkles than those who consumed traditional animal fats.

When polyunsaturated oils are hardened to make margarine and shortening by a process called hydrogenation, they deliver a double whammy of increased cancer, reproductive problems, learning disabilities and growth problems in children.

The vital research of Weston Price remains largely forgotten because the importance of his findings, if recognized by the general populace, would bring down America's largest industry--food processing and its three supporting pillars--refined sweeteners, white flour and vegetable oils. Representatives of this industry have worked behind the scenes to erect the huge edifice of the "lipid hypothesis"--the untenable theory that saturated fats and cholesterol cause heart disease and cancer. All one has to do is look at the statistics to know that it isn't true. Butter consumption at the turn of the century was eighteen pounds per person per year, and the use of vegetable oils almost nonexistent, yet cancer and heart disease were rare. Today butter consumption hovers just above four pounds per person per year while vegetable oil consumption has soared--and cancer and heart disease are endemic.



What the research really shows is that both refined carbohydrates and vegetable oils cause imbalances in the blood and at the cellular level that lead to an increased tendency to form blood clots, leading to myocardial infarction. This kind of heart disease was virtually unknown in America in 1900. Today it has reached epidemic levels. Atherosclerosis, or the buildup of hardened plaque in the artery walls, cannot be blamed on saturated fats or cholesterol. Very little of the material in this plaque is cholesterol, and a 1994 study appearing in the *Lancet* showed that almost three quarters of the fat in artery clogs is unsaturated. The "artery clogging" fats are not animal fats but vegetable oils.

Built into the whole cloth of the lipid hypothesis is the postulate that the traditional foods of our ancestors--the butter, cream, eggs, liver, meat and fish eggs that Price recognized were necessary to produce "splendid physical development"--are bad for us. A number of stratagems have served to imbed this notion in the consciousness of the people, not the least of which was the National Cholesterol Education Program (NCEP), during which your tax dollars paid for a packet of "information" on cholesterol and heart disease to be sent to every physician in America. As the American Pharmaceutical Association served

on the coordinating committee of this massive program, it is not surprising that the packet instructed physicians on ways to test serum cholesterol levels, and what drugs to prescribe for patients whose cholesterol levels put them in the "at risk" category--defined arbitrarily as anyone over 200 mg/dl, the vast majority of the adult population. Physicians received instruction on the "prudent diet," low in saturated fat and cholesterol, for "at risk" Americans, even though studies indicated that such diets did not offer any significant protection against heart disease. They did, however, increase the risk of death from cancer, intestinal diseases, accidents, suicide and stroke. A specific recommendation contained in the NCEP information packet was the replacement of butter with margarine.

In 1990, two generations after Weston Price conceived of studying isolated nonindustrialized people as a way of learning how to confer good health on our children, the National Cholesterol Education Program recommended the "prudent diet" for all Americans above the age of two. The advantage of such a diet is supposed to be reduced risk of heart disease in later life--even though not a single study has shown such an hypothesis to be tenable. What the scientific literature does tell us is that low fat diets for children, or diets in which vegetable oils have been substituted for animal fats, result in failure to thrive--failure to grow tall and strong--as well as learning disabilities, susceptibility to infection and behavioral problems. Teenage girls who adhere to such a diet risk reproductive problems. If they do manage to conceive, their chances of giving birth to a low birth weight baby, or a baby with birth defects, are high.



Caption: These two beautiful girls were born to mothers whose nutrition had not been optimal during their growing years. However, they were able to reverse the trend of physical degeneration by eating a rich diet during pregnancy and by feeding their daughters whole, nutrient-dense foods including animal protein, whole milk products, butter, whole grains, fresh fruits and vegetables, and cod liver oil. This diet allowed these girls to reach their optimum genetic

potential. Both mothers had crowded teeth, while these two girls have naturally straight teeth, needing no orthodontics.

Compared to this folly, the wisdom of the so-called primitive in regards to ensuring the health of his children has inspired the awe of Weston Price and all who have read his book. Again and again he found that tribal groups--especially those in Africa and the South Pacific-- fed special foods to young men and women before conception, to women during pregnancy and lactation, and to children during their growing years. When he tested these foods--things like liver, shellfish, organ meats and bright yellow butter--he found them to be extremely rich in the "fat-soluble activators"--vitamins A, D and the X Factor. Special soaked grain preparations of high mineral content--particularly millet and quinoa--were fed to lactating women to increase milk supply.

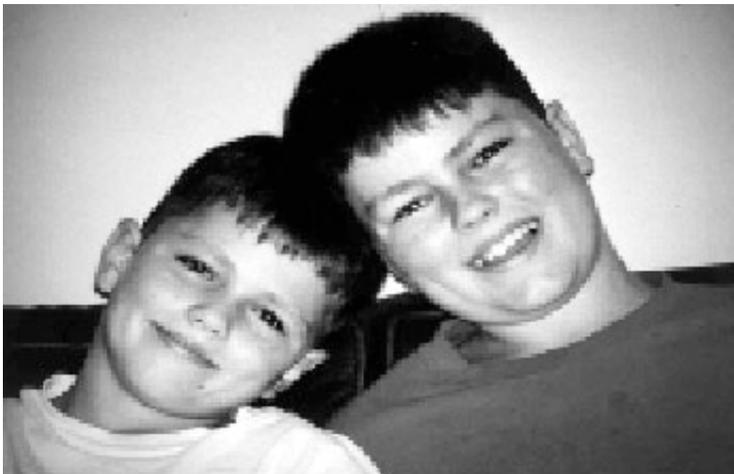
Price also discovered that many tribes practiced the spacing of children in order to allow the mother to recover her nutrient stores and to ensure that subsequent

children would be as healthy as the first. They did this by a system of multiple wives, or in the case of monogamous cultures, deliberate abstinence. Three years was considered the minimum time necessary between children to the same mother--anything less brought shame on the parents and the opprobrium of the village.

The education of the young in these tribal groups included instruction in dietary wisdom as a way of ensuring the health of future generations and the continuance of the tribe in the face of the constant challenge of finding food, and defending the group against warring neighbors.

Modern parents, living in times of peace and abundance, face an altogether different challenge, one of discrimination and cunning. For they must learn to discriminate between hyperbole and truth when it comes to choosing foods for themselves and their family; and to practice cunning in protecting their children from those displacing products of modern commerce that prevent the optimal expression of their genetic heritage--foodstuffs made of sugar, white flour, vegetable oils and products that imitate the nourishing foods of our ancestors--margarine, shortening, egg replacements, meat extenders, fake broths, ersatz cream, processed cheese, factory farmed meats, industrially farmed plantfoods, protein powders, and packets of stuff that never spoils.

For a future of healthy children--for any future at all--we must turn our backs on the dietary advice of sophisticated medical orthodoxy and return to the food wisdom of our so-called primitive ancestors, choosing traditional whole foods that are organically grown, humanely raised, minimally processed and above all not shorn of their vital lipid component.



When offspring are properly spaced, and care given to the diet of both parents before conception, and to the children during their period of growth and development, all children in the family can be blessed with the kind of good health that allows them a carefree childhood; and the energy and intelligence they need to put their adult years to best and highest use.

[2007 Update: Activator X is now believed to be the fat-soluble vitamin K₂; read Chris Masterjohn's article to see how this 60-year mystery was finally solved.](#)

About the Author



Sally Fallon is the author of [*Nourishing Traditions: The Cookbook that Challenges Politically Correct Nutrition and the Diet Dictocrats*](#) (with Mary G. Enig, PhD), a well-researched, thought-provoking guide to traditional foods with a startling message: Animal fats and cholesterol are not villains but vital factors in the diet, necessary for



normal growth, proper function of the brain and nervous system, protection from disease and optimum energy levels. She joined forces with Enig again to write *Eat Fat, Lose Fat*, and has authored numerous articles on the subject of diet and health. The President of the Weston A. Price Foundation and founder of [A Campaign for Real Milk](#), Sally is also a journalist, chef, nutrition researcher, homemaker, and community activist. Her four healthy children were raised on whole foods including butter, cream, eggs and meat.

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