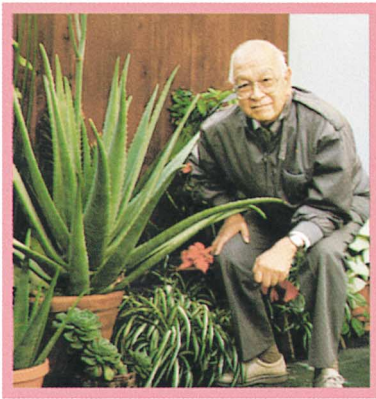


SPECIAL REPORT:

*A*loe Vera and You



**A Close-up Look at the
"Medicine Plant"
and Current Research
About Its Healing Potential**

\$19.95

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Introduction

Aloe vera has been used as a folk remedy for burns and wounds and as a healthful tonic for thousands of years. It is said to have been used as early as 2220 B.C. by Sumerian physicians. The Chinese and Greeks wrote of using aloe vera more than 2,000 years ago. In 35 A.D., the Roman scholar Pliny the Elder wrote of aloe's healing power.

Aloe vera is one of the most widely used ingredients by cosmetic companies in the United States and Canada. Because it can penetrate, stimulate and soften the skin, making it feel younger and more supple, many companies add aloe vera to their health and beauty products.

All it takes is a quick trip to the grocery or department store to find hundreds of aloe vera-based products: moisturizers, creams, baby products, lip balms, shaving creams, toothpastes, soaps, shampoos and conditioners. It is also a soothing additive in dozens of sunblock and sunburn ointments.

Myths, legends, stories and rumors about aloe vera's therapeutic potential abound. Anecdotal evidence and recent research suggest aloe vera can be an effective treatment for a range of maladies, including arthritis, ulcerative colitis, irritable bowel syndrome and possibly AIDS. Today, medical researchers around the world are taking a second look at aloe vera for therapeutic uses. Studies over the last 10 years are separating the myths and exaggerated claims surrounding aloe vera from the reality.

There are current therapeutic applications for aloe in the medical branches of dentistry, gastroenterology and dermatology, and in the treatment of immuno-depressive disorders.

How promising are these new uses for aloe vera? Although controlled clinical studies are few, laboratory research hints at aloe vera's potential as a therapeutic agent. And more human and animal studies are being conducted each year. Double-blind studies — the gold standard of medical research — have begun to confirm aloe's value.

This report offers information about the recent research on aloe, its history and potential uses, and guidelines on how to select aloe products and make sure you are getting what you are paying for.

Aloe vera research speaks for itself and no claims are made here regarding the use of the plant, nor are any claims made here that aloe vera is a medicine or drug.

Chapter 1

History and Uses

Aloes are any of a large genus of plants of the lily family, native to Africa. The plant is thought to have originated in the Cape Verde islands, in the Atlantic Ocean west of Senegal. Although there are almost 600 varieties of aloe, the primary therapeutic aloe is aloe vera, also known as *Aloe Barbadosensis* Miller or *Aloe Vera* Linné. In Latin, aloe vera means “the true aloe.”

The name “*Barbadosensis*” hints at New World origins. Spanish Jesuits brought aloe vera to the Caribbean, probably to Barbados, in the late 1500s. It’s now grown commercially in the Rio Grande Valley of Texas, California, Arizona, Florida, the Caribbean and other warm climates around the world, and in greenhouses in colder climates. It is also a popular house plant that graces the window sills of homes throughout America and the world.

Aloe Vera, the Plant

Aloe vera thrives in warm, dry climates. It is adaptable and has been transported throughout the world. The root can survive cold air as long as the ground does not freeze. It is drought resistant and tolerates temperatures of 104° or higher. It can also tolerate humid climates as long as the root does not stand in water.

Aloe vera is a cactus-like succulent. It produces a flower, but is better known for its thick, cylindrical leaves, which can grow up to two feet long. The leaves are smooth, with a rubbery texture and spiked edges.

The inner chamber of the leaf is filled with a clear gel. This pulp is believed to contain many of aloe vera's healing properties. The outer part of the leaves also contains valuable components. (See "Why Aloe Vera Works," page 21.)

Aloe Vera Called a "Miracle Plant" Throughout History

Aloe vera's therapeutic properties have been documented in Chinese, Indian and Greek written records going back thousands of years. A Sumerian clay tablet dating to 2200 B.C. mentions aloe vera's healing powers.

The *Papyrus Ebers*, an Egyptian document believed to have been written in 1550 B.C., gave detailed instructions on mixing 12 different aloe formulations to treat a variety of health conditions.

By 400 B.C., aloe vera was used throughout Asia and the Middle East as a healing salve and a tonic drink. In 50 B.C. the Greek physician Celsius introduced aloe into western medicine. Celsius mentioned using the sap as a laxative.

Between 41 and 68 A.D. Dioscorides wrote the first detailed description of the aloe vera plant in his *Materia de Medica* — a medical text used until the Renaissance. He described a variety of conditions aloe could be used to treat: insomnia, stomach problems, boils, skin irritations and skin wounds, among others. The Roman physician Pliny the Elder reported similar findings. Aloe continued to be an important healing agent in Roman medicine for hundreds of years.

In later centuries, the use of aloe vera spread throughout Europe and the New World. The product was grown commercially, mainly in Curacao, and exported to Europe.

In the 1930s in the United States, doctors at numerous medical institutions began testing aloe vera as a treatment for burns, radiation injuries, ulcers and dermatitis. Each study confirmed aloe vera's superior healing powers.

Researchers continued for the next four decades to test aloe vera as a treatment for a variety of medical conditions. Medical literature through the 1990s continues to confirm aloe vera's powers not only as a healing agent, but as an antimicrobial and anti-inflammatory agent. And now, research in the last 10 years has begun to unlock the mysteries of just how aloe vera works.

Popular throughout the world

Aloe vera is very effective according not only to medical researchers but also to ordinary users. Aloe vera in its many forms is a popular remedy throughout the world. It is used as a scalp conditioner in Malaysia. Parents in Colombia use it to protect their children's feet from insect bites. Many African tribes use it for relief from conjunctivitis. It is a time-tested remedy for sunburn in the United States. In Russia it is employed to treat a skin disease caused by parasites.

Many of these remedies have been handed down from generation to generation. Aloe vera has been called the "medicine plant" and even the "miracle plant" because it has been used for so many purposes over the centuries.

Keeping perspective

Although aloe vera has a long history as a trusted folk remedy, and current research is furthering our knowledge of its potential uses, many myths and

exaggerated claims surround the plant. For example, some have claimed it as a cure-all for everything, including baldness.

While aloe vera is not a cure-all, many users attest to its positive effect in their lives. These testimonials often come from people who had given up on finding relief from a debilitating, recurring condition, having resigned themselves to a painful existence with many physical limitations. These people say aloe vera changed their lives. Of course, there is no guarantee that what worked for one aloe vera user will work for someone else. Still, aloe vera frequently delivers benefits in unexpected ways.

Therapeutic Possibilities

Aloe vera has been used effectively for an extensive array of medical conditions throughout history and all over the world. The following list covers the most common applications for aloe vera.

Acne	Eye irritations	Sinus infections
Abrasions	Headache	Skin and scalp dryness
Aging spots	Gum infections	Sore throats
Allergies	Hemorrhoids and bleeding piles	Stings
Arthritis pain	Infections	Stomach disorders
Asthma	Insomnia	Sunburn
Athlete's foot	Irregularity	Ulcers
Chronic fatigue	Kidney stones	Vaginitis
Cold sores	Menstrual cramps	Varicose veins
Colitis	Poison Ivy/Oak	Yeast infections
Constipation	Psoriasis and eczema	Viruses
Cuts		Warts
Digestive problems		
Earaches		

Chapter 2

Scientific and Medical Research on Aloe Vera's Healing Potential

Laboratory researchers who have conducted human and animal studies since the 1930s in the United States, Japan, England, Israel, Sweden and elsewhere have analyzed aloe vera's therapeutic properties. Highlights of that research are reported below.

An Immune System Enhancer

Laboratory tests at the University of Texas Southwestern Medical Center in the early 1990s showed that acemannan, an aloe derivative, boosts the immune system. Acemannan is a mucopolysaccharide from the mannan family of aloe components and is believed to be a key healing agent in aloe vera.

In one study, researchers mixed lymphocytes (white blood cells) from people of different blood types in a test tube and added acemannan. Lymphocytes respond to invaders (antigens) in the blood stream. Researchers wanted to see if acemannan would increase lymphocyte reaction to antigens (in the study, the foreign blood cells). From the results, researchers concluded that acemannan is an important immuno-enhancer.

Promising studies in cancer treatment

In 1989, the *Japanese Journal of Cancer Research* reported that aloe contained at least three anti-tumor agents: emodin, mannose, and lectin. They concluded that aloe is effective in the treatment of leukemia and

sarcoma and could help prevent the development of tumors. Another group of Japanese researchers concluded that aloe vera has antimutagenic properties.

A study at the University of Texas M.D. Anderson Cancer Center, reported in the February 1994, issue of the *Journal of Investigative Dermatology*, found that aloe restored the skin's immune response after low dosages of UV radiation, in this case, from a sunlamp. Since exposure to UV rays plays a role in the formation of skin cancer, using aloe vera could theoretically help prevent some forms of skin cancer. Another study in Japan showed that a topical aloe vera ointment eliminated precancerous skin lesions.

Animal studies are currently underway using an aloe vera—based medicine to treat skin tumors. The medicine combines aloe vera, squalene and vitamin E. A study at the University of Alabama, reported in the March 19, 1996, issue of *Cancer Letter*, used mice and found that 33.34% of tumors regressed in the mice treated with the aloe product, compared to 3.44% in the untreated group. (Whether those results will hold true for humans remains to be seen.)

A potential treatment for AIDS

One of the most dramatic, and controversial, therapeutic possibilities relates to aloe vera's potential use in treating Acquired Immune Deficiency Syndrome (AIDS). Some researchers believe that while aloe vera does not cure AIDS, it may be effective in improving the quality of life for people with the disease.

Laboratory tests at the Fort Worth Medical Center Complex in Texas showed that at least in the test tube, adding aloe vera mucopolysaccharides to human leukocytes (white blood cells that help the body fight infection) rendered them resistant to the virus that causes AIDS.

Other studies at Vanderbilt Medical Center in Nashville, Tennessee, and the Southern Research Institute showed that aloe mucopolysaccharides seem to inhibit the reproduction of the virus that causes AIDS. Some researchers believe the substance may help control the immunological effects of AIDS. Normally the virus continues to reproduce until the body's natural defenses are overwhelmed. For patients with AIDS, aloe's ability to inhibit HIV reproduction may mean an increased lifespan and fewer opportunistic infections.

An article in the December 24, 1992, issue of the *Dallas Morning News* described preliminary results of a year-long clinical trial of acemannan, involving 60 AIDS patients. The aloe vera-derived drug slowed the rate of decrease in CD4 cells, key players in the immune system infection-fighting arsenal.

In this double-blind study, conducted in Canada, 30 patients were given acemannan and 30 were given a placebo. Both groups continued to take AZT, an oft-prescribed AIDS treatment. Dr. Gailen Marshall, a researcher at the University of Texas Health Science Center in Houston, reported in the *Dallas Morning News* article that the rate of CD4 decline decreased in the "overwhelming majority" of patients taking acemannan. Although the drug did not stop the destruction of the CD4 cells, it did slow the rate of destruction dramatically. Any decrease in the destruction of CD4 cells means fewer opportunistic infections and a better quality of life.

However, a later study failed to replicate these results. In 1996, a double-blind, placebo-controlled pilot trial of acemannan for advanced AIDS patients reported no statistically significant difference between patients in the acemannan group and placebo groups.

Even its most zealous proponents do not claim aloe vera is a cure for AIDS. A July 9, 1990, *Wall Street Journal*

column about a company developing an AZT supplement in the treatment of AIDS put the issue in perspective: *“But the clear impression from scientists, drug industry executives, and the alternative AIDS research community is that aloe vera — long used for healing wounds — is one of a large number of ‘maybes’ in the AIDS battle.”*

It remains to be seen if aloe vera will become more than a “maybe” in the fight against AIDS.

A Potent Antiviral, Antibacterial Agent

Numerous laboratory studies in the last 10 years confirm aloe vera’s antiviral and antibacterial properties.

In the test tube, acemannan exhibits strong antiviral activity, inhibiting the reproduction of herpes, measles and other viruses. Not everything that works in the test tube works when taken by humans, so these results may not be reproducible in clinical tests. FDA-approved clinical studies of acemannan’s effectiveness are currently underway and may someday provide answers to this intriguing question.

Aloe vera’s antibacterial properties have been tested in the lab as well. Microbiologist John P. Hegggers at the University of Texas and his colleagues added aloe vera gel to cultures of 12 types of bacteria that produce skin infections. The results showed aloe vera’s promise as an antibacterial agent.

Treatment for Digestive System Disorders

Aloe vera contains a type of long-chain sugar molecule called a mucopolysaccharide that gives the gel its mucilaginous qualities and is thought to be one of the key healing agents in the plant.

An FDA-sanctioned clinical pilot study in 1986 using aloe mucopolysaccharides for treating ulcerative colitis and Crohn’s disease produced encouraging results. During 1993—1994, further study at the

Vanderbilt Medical Center Gastroenterology Department produced such promising results that a second phase of the study began in 1995.

Several studies indicate that aloe may be effective as a treatment for inflammatory bowel diseases because of its immune enhancing and antiviral properties, and its ability to soothe and heal tissues in the gastrointestinal (GI) system. Gastroenterologist Ivan Danhof, M.D., Ph.D., has studied the use of aloe vera in treating inflammatory bowel diseases such as ulcerative colitis and Crohn's disease. He believes that in addition to its anti-inflammatory properties, aloe may induce protective changes in the cells of the GI system.

Dr. John C. Pitmann, M.D., of the Carolina Center for Bio-oxidative Medicine, believes that poor digestion and many chronic digestive disorders are caused when food is not broken down completely in the intestine. Pitmann says this irritates the lining of the digestive tract, which causes it to become inflamed and increases intestinal permeability. This increased permeability allows partially digested food particles to be released into the bloodstream. The body sees those particles as foreign invaders and alerts the immune system to build up antibodies to attack them. This puts the body in a hyperimmune state that can lead to autoimmune disorders such as rheumatoid arthritis and lupus.

Pitmann recommends aloe vera for his patients with digestive disorders and says it heals the lining of the intestine, decreases swelling and tightens the cells of the intestinal wall, which reduces permeability.

Peter Atherton, M.D., is another who believes aloe vera is an effective treatment for irritable bowel syndrome (IBS). In an article in the February 14, 1995, issue of the *Daily Mail*, Atherton said, "Last year a patient asked me if I had heard of aloe vera as a healing agent. I ordered all current research on it and I was astonished to find 39 out of 40 research papers were positive.

Immediately I initiated trials on some of my long-term chronically ill patients who were suffering not only IBS but also psoriasis, eczema and arthritis, and had received no benefit from orthodox treatments.”

In the same article, a man who suffered debilitating pain from irritable bowel syndrome for more than 10 years spoke of finally finding relief after starting a daily regimen of drinking aloe vera juice. He said the relief was marvelous and that for the first time in 10 years he could eat whatever he wanted.

A study conducted at the Linus Pauling Institute of Science & Medicine in California concluded that aloe vera juice promotes digestive health by breaking down and loosening impacted material in the bowel and by detoxifying the colon. This effect may explain why so many people who suffer from irritable bowel syndrome and other chronic digestive disorders find relief by using aloe vera. In his book *Natural Health, Natural Medicine*, published in 1990, Andrew Weil, M.D., recommends that people with gastric or duodenal ulcers take a teaspoon of aloe vera juice after meals.

Attacking diabetes and hypoglycemia

A team of Japanese scientists at the Institute of Pharmacognosy School of Medicine, Fujita Health Center, report tests confirming aloe's effectiveness as a blood glucose normalizer, making it a possible treatment for diabetes and hypoglycemia. When the researchers gave aloe to diabetic patients, the patients' fasting blood glucose levels went down. They noted the same results with hypoglycemic patients. How aloe vera produces these results is not clearly understood at this time. Further research may help scientists unlock aloe vera's potential as a blood sugar normalizer.



91.22	92.91	95.95	(97)	101.1	102.91	106.4	107.880	112.41
72	73	74	75	76	77	78	79	80
Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg
178.50	180.95	183.86	186.22	190.2	192.2	195.09	197.0	200.61

58	59	60	61	62	63	64	65	66
Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy
140.13	140.92	144.27	(147)	150.35	152.0	157.26	158.93	162.5

96	97	98
Bk	Cf	
(247)	(249)	

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As a Treatment for Burns and Wounds

Aloe vera has a centuries-old history in many cultures throughout the world as a healing agent for minor burns and wounds. It appears to reduce the pain of these types of injuries, while promoting healing and reducing scarring. It seems to inhibit infections associated with burns and wounds as well.

Some of the earliest clinical uses for aloe vera in this country were for patients with radiation burns. Studies conducted in the 1930s showed that aloe vera was an effective healing agent for these severe burns. In those days, it was difficult to determine the proper dosage of radiation for x-ray therapy, and occasionally patients were severely burned. These burns resulted in stubborn sores and skin ulcers that would not go away despite a variety of conventional treatments. Doctors using aloe vera leaves were able to achieve a cure.

Animal studies in the late 1950s showed that aloe vera healed burns at least 30% faster than other treatments, with greatly reduced scarring.

Studies in the last 10 years at the University of Texas found that burn patients treated with aloe extracts healed more rapidly and had less tissue loss than patients treated with standard techniques.

A study reported in the July 15, 1995, *International Journal of Radiation Oncology Biology Physics* described how a wound dressing gel containing acemannan, an active ingredient in aloe vera, reduced radiation-induced skin reactions in mice. Some hospitals recommend that patients undergoing radiation treatment use pure aloe vera gel as a treatment for radiation skin reactions.

A study reported in the August 1995 issue of the *Journal of the Medical Association of Thailand* offers more evidence of aloe's effectiveness for burns and wounds. In the study, doctors found an aloe vera gel to be an effective treatment for partial thickness burn.

Researchers speculate that the plant heals burns the way it heals itself, preventing air from drying it out. If you cut an aloe leaf, it will begin to heal itself within a few minutes.

Frostbite

Frostbite injures the skin as much as burns. A study at the Detroit Receiving Hospital's Burn Center in the 1980s showed that injuries from frostbite were reduced in patients treated with aloe extracts. All patients in the study received the standard treatment for frostbite: gradual warming, drugs to reduce inflammation and pain killers. About a third of the patients were also treated with an aloe vera cream that was applied directly to the frostbitten skin.

The frostbite patients treated with the aloe vera cream had far fewer complications than those treated with conventional methods. In the aloe vera group 67% of the patients recovered with no loss of skin, compared to 33% in the control group. Only 7% of the aloe vera group required amputation, compared to 33% in the control group.

Psoriasis

Aloe vera has a long history as a folk remedy for psoriasis, eczema and other skin diseases. Now, clinical studies are backing up those claims. A double-blind study in Sweden reported in the August 1996 issue of *Tropical Medicine and International Health* showed stabilized aloe vera to be an effective treatment for psoriasis.

Researchers conducted a placebo-controlled double-blind study of topical aloe vera extract in a 0.5% hydrophilic (able to hold moisture) cream. In the study, patients with chronic plaque-type psoriasis, who had suffered the disease for an average of 8.5 years, were treated three times a day for five consecutive days, up to

four weeks. The aloe vera-treated patients showed a progressive reduction of lesions and decreased erythema (redness caused by dilation of superficial capillaries). Twenty-five out of 30 (83.3%) of the patients treated with the aloe product were considered cured. Only two of 30 (6.7%) of the placebo group saw any improvement. Researchers observed no toxic or other side effects.

Wounds

A study reported in the November 1989 issue of the *Journal of the American Podiatric Medical Association* showed that aloe vera is effective both as an oral and a topical agent for wound healing. Researchers at the Pennsylvania College of Podiatric Medicine in Philadelphia placed aloe vera in the drinking water of wounded mice. When compared with controls, the aloe vera-treated mice showed a 62.5% reduction in wound diameter size.

Animals treated with a 25% topical aloe vera preparation showed a 50.8% reduction in wound diameter size compared to the controls.

Other studies reported in the February and December 1994 issues of the *Journal of the American Podiatric Medical Association* confirm aloe vera's anti-inflammatory and wound healing properties.

Aloe vera's wound healing ability may come from an ester of cinnamic acid found in the plant. Cinnamic acid is a proteolytic (protein digesting) enzyme. The proteolytic component helps break down dead body tissues, which speeds up the regeneration of healthy tissue.

Conclusion

Over the past several decades, scientific evidence of aloe vera's healing qualities has continued to mount. Traditional doctors as well as nontraditional healers are using it successfully to treat an increasing variety of conditions.

Chapter 3

Why Aloe Vera Works

The answer to that question may lie in the complex interaction of the many components that make up aloe vera. Few plants offer as many nutritional and potentially medicinal elements as aloe vera. Dr. Wendell Winters at the University of Texas Health Science Center in San Antonio calls aloe a “pharmacy in a plant” that contains more than 140 substances.

Aloe vera contains at least 22 amino acids, which may play a role in boosting the immune system; complex carbohydrates such as polysaccharides, glucose, galactose and xylose; vitamins including B1, B2, B6, C, niacinamide, choline and folic acid; minerals including calcium, iron, potassium, sodium, manganese, magnesium, zinc, copper and chromium; lignins (a cellulose-like organic substance able to penetrate human skin); glycosides, a chemical compound that has a sugar and a non-sugar component (believed to have cleansing and antiseptic capabilities); and anthraquinones, including aloin (believed to be painkillers and antibacterial agents).

Aloe vera has at least six antiseptic agents: lupeol, salicylates, urea nitrogen, cinnamonic acid, phenols, and sulfur. These elements kill or reduce viruses, bacteria, fungi and molds. Salicylates are the same painkilling and anti-inflammatory agents as found in aspirin.

In the test tube, some of aloe vera’s components show strong antibacterial and anti-fungal properties against a broad spectrum of microbes. This may be one reason why aloe vera seems so effective as a healthful

tonic and why so many users say they rarely get sick or catch any of the many viruses that make the rounds each winter.

A Natural Anti-Inflammatory and Painkiller

Aloe vera has been used throughout history to treat a variety of inflammatory conditions. The plant contains two natural anti-inflammatory fatty acids called campesterol and B-sitosterol, which may explain why many people find it effective as a treatment for rheumatoid arthritis, acid indigestion, ulcers and inflammatory conditions of the digestive system and other internal organs.

Some of aloe vera's pain-controlling properties come from bradykinase, an enzyme Japanese researchers have identified in the plant. Bradykinase breaks down bradykinin, a substance that is formed in inflammation. Bradykinin is a substance that produces pain in inflamed tissues.

Aloe also inhibits a vasoconstrictor known as TxA2. Vasoconstrictors are substances in the body that constrict or narrow blood vessels. This inhibiting ability of aloe vera in part explains how it reduces pain by allowing increased blood flow to affected areas.

The emollient, moisturizing and healing properties of aloe vera are probably due to polysaccharides present in the plant. The polysaccharides work with other components in the plant to accelerate the healing of injured surfaces.

Some researchers believe that aloe heals burns and cuts by making water available to injured tissue without sealing it off from the air.

Magnesium lactate, another substance found in aloe vera, inhibits histamine reactions. Histamines are substances produced by the immune system in response to irritants such as bug bites or allergens. Histamine

reactions cause itching and irritation. Many cultures have traditionally used aloe vera to treat psoriasis, eczema, poison ivy, poison oak and other skin irritations. Magnesium lactate may be the aloe component that makes it effective for these conditions.

An additional component, mucopolysaccharides, may play a key role in aloe vera's healing properties. Mucopolysaccharides are long-chain sugar molecules composed of interconnected mannose and glucose molecules. They come in a variety of sizes each thought to play a specific role in healing.

Ivan Danhof, M.D., Ph.D., is a gastroenterologist who has studied the use of aloe vera in treating inflammatory bowel diseases such as ulcerative colitis and Crohn's disease. Danhof writes that smaller mucopolysaccharide molecules appear to reduce inflammation.

According to Danhof, medium mucopolysaccharide molecules act as intracellular antioxidants and free radical scavengers, while the largest mucopolysaccharide molecules are powerful immune system boosters and also cause the body to produce a natural chemical, called tumor necrosis factor, that shuts off the blood supply to tumors.

As researchers further study the plant's chemistry, the mechanisms by which these elements heal will become better understood.



Chapter 4

Aloe Vera and Arthritis

For some the pain of arthritis is simply uncomfortable. For others it can be excruciating and virtually unbearable. Although there is no cure for arthritis, there are treatments that can reduce pain and swelling. But many of those treatments have side effects that can be as painful as the disease they were designed to treat.

Many of the most commonly used arthritis medications —ibuprofen, naproxen, chloroquine, ACTH gel, aspirin, among others — have serious side effects for many users, such as stomach and intestinal bleeding, anemia, swelling, hives and more.

Although it is not a cure, aloe vera shows great potential as a treatment for symptoms of arthritis. And aloe vera offers several advantages not found in standard arthritis medications. It's safe, gentle, has no known side effects, and is a natural anti-inflammatory.

Some arthritis sufferers find relief through aloe vera alone, while others use aloe vera to supplement prescription arthritis medications. Those who use aloe in addition to arthritis medications are often able to reduce the amount of prescription pain relievers and anti-inflammatory drugs they use, and reduce the likelihood of side effects in the process.

The most common side effect of prescription anti-inflammatory medications is gastrointestinal irritation. Aloe vera's ability to aid in healing the digestive system may protect those who take prescription arthritis drugs from the gastrointestinal upset and bleeding that

sometimes accompany these medications.

Although few clinical studies have been conducted to test aloe vera as an arthritis treatment, people around the world have written about how it relieved their arthritis symptoms and enabled them to once again lead active lives. Laboratory evidence of aloe vera's anti-inflammatory powers seems to back the word-of-mouth testimony of aloe vera users. Also, as discussed in Chapter 3, the presence of bradykinase probably suppresses pain-producing chemicals.

In some cases, using aloe vera has meant the difference between living a normal life and becoming a semi-invalid.

Chapter 5

Aloe Vera and Sports Injuries

Topical aloe vera has long been popular in the world of professional and college sports. An article in the January 1983 issue of *Runner's World* highlighted several coaches and trainers who use aloe vera as a treatment for sprains and other sports injuries. Other sports publications praise aloe vera as a treatment for these injuries. Researchers say aloe vera's unique penetrating properties offer clues to its usefulness.

Researchers at the University of Texas say that both animal and human studies show that aloe vera is a substance of "enormous therapeutic potential." They say it penetrates injured tissue, relieves pain, is anti-inflammatory and dilates capillaries — increasing the blood supply to areas with injuries.

The standard treatment for ankle sprains is rest, ice, compression and elevation. Some professional trainers use that principle and add aloe vera by wrapping the injured ankle in gauze soaked in aloe vera gel, then applying an elastic bandage loosely and applying ice. Other trainers and athletes prefer to use a topical ointment that may contain other ingredients, such as methyl salicylate.

Aloe vera's ability to penetrate allows it to act as a transport system to increase absorption of the other active ingredients in a product, while offering its own soothing, healing and anti-inflammatory properties.

Many athletes find aloe vera an effective treatment for tendinitis as well. This painful inflammation of a tendon, typically shoulder or elbow, is difficult to treat



and tends to linger for months. A careless pitch or football toss can irritate the injured area and cause a flare up. Topical aloe vera products can reduce deep muscle pain, soreness and inflammation, and speed healing.

Runners tout aloe vera as a treatment for healing blisters, breaking down calluses and curing athlete's foot. One trainer quoted in the *Runners World* article reported curing a stubborn case of athlete's foot in just three days using repeated applications of aloe vera.

Other athletes praise aloe vera for stopping pain, reducing inflammation, rebuilding body tissue and offering an energy boost.

According to an article in the March 3, 1996, *Sunday Mirror*, aloe vera has taken the horse racing world by storm. Many of the jockeys quoted in that article and one in the December 23, 1995, issue of *Sporting Life* see aloe vera as more than a treatment for injuries. They call it an "elixir of life" that keeps them healthy and full of sustained energy as opposed to a short adrenaline burst. They say this sustained quality of energy increases endurance and gives them a competitive edge.



Chapter 6

Aloe Vera and Your Pet

Not surprisingly, aloe vera shows promise as a veterinary medicine. A study by Ian R. Tizard, Ph.D., at Texas A & M, reported in the *Journal of Molecular Biotherapy*, showed the aloe component mannose was highly effective against feline leukemia and soft tissue cancer in cats and dogs. In 1992, Dr. James Duke of the U.S. Department of Agriculture conditionally approved the use of mannose as a treatment for soft tissue cancer in animals and feline leukemia.

Aloe seems particularly effective against feline leukemia, a deadly disease to cats. More than 70% of cats with the disease die within eight weeks of infection. One study showed that infected cats treated with an injected aloe derivative showed a 75% survival rate after 18 weeks. Aloe vera may prove a boon to animal lovers everywhere if further tests confirm these results.

Some pet owners report that aloe vera is also an effective, natural treatment for fleas that prevents the need to use pesticides.



Chapter 7

Tips for Buying Aloe Vera Products

Which is the best form of aloe vera for you? That all depends on your personal preference and on your particular ailment.

For external use, aloe is available in the form of a topical ointment. Aloe vera ointments are frequently applied topically on aching muscles and joints. For internal use, aloe is available in liquid, or capsule form.

Concentrated aloe vera, taken internally, has potent anti-inflammatory powers, appears to boost the immune system, acts as a detoxicant and normalizes blood glucose levels. It also acts as a powerful antibacterial and antiviral agent and pain reducer.

For burns, sunburns, skin irritations and sports injuries, topical ointments are the treatment of choice. Aloe vera ointment penetrates injured tissue, increasing blood supply to the injured area.

Getting Started

Whatever form of aloe vera you try for internal use, start with a small amount and see how your body responds. Although aloe appears to be safe even at high intakes, it is best to go slow in the beginning, as you would with any food supplement or dietary change. Gradually increase the amount in your diet. Some patients with chronic health problems find that after they achieve relief from disease symptoms, they are able to maintain good health on a smaller amount.

There are hundreds of products on the market

featuring aloe vera, some using it as the main ingredient, many others as an additive.

While there are many reputable suppliers of aloe vera products, there are also some exceptions to the rule. As in other industries, suppliers have intense but honest disagreements about the most effective ways to process and use aloe vera products.

Here are six suggestions to help you get started:

Consider the Processing Method

One key point to consider when choosing an aloe vera product is the processing method used to produce it. Any reputable supplier will be glad to answer your questions and explain the processing to you.

Products must be stabilized or the active ingredients that make aloe vera valuable will break down and render the product useless. Excessive heat during processing can destroy aloe vera's active ingredients.

Prompt processing is essential

Aloe should be processed immediately after harvesting. It should not be allowed to stand in the sun or wind. The goal should be to cut and bleed the aloe leaves within minutes of picking them. Processing should begin within 1 to 2 hours (the industry standard is 4 hours).

The amount of heat used in processing must be carefully controlled. Some heat is necessary to destroy any bacteria that may be lingering on the aloe leaves. But too much heat, or prolonged heating, may reduce the effectiveness of aloe's active ingredients. The mucopolysaccharide molecule, a key healing agent, is fragile and breaks down easily. If the plant is not processed carefully, enzymes in the plant break the mucopolysaccharides down into simpler sugars and

reduce their effectiveness as healing agents.

To produce the powdered aloe vera used in capsules, after harvesting, the leaves should be washed, sliced, and placed in a temperature-controlled dehydration unit which allows the water to escape while the nutrients remain. A cryogenic mill should then process the dehydrated aloe vera slices into a fine powder. Throughout processing, the aloe vera should be kept at low temperatures. If the leaves were properly filleted to begin with, no filtration should be necessary.

The aloe powder should then be packed in airtight drums to avoid adulteration, and transported, per all applicable codes of the Federal Food & Drug Act, to the packaging facility.

Know How Much Aloe Vera the Product Contains

Another important consideration is the concentration of aloe vera in the product. While aloe vera probably enhances any product that contains it, in many cases a product contains only minute amounts, so the benefits are minimal. Read the label. If aloe vera is one of the last ingredients listed, then it is not one of the primary ingredients.

There can be dramatic differences in the quality and amount of aloe vera products contain. For example, one industry group says that liquid aloe vera can be called aloe vera “juice” if it contains at least 50% aloe vera. But that means the other 50% may be water, flavoring or something else.

Much of the aloe vera juice sold in stores is reconstituted from concentrate, a process that requires stringent, exacting conditions. The critical balance of the various elements can be lost easily, which can modify and even destroy delicate enzymes. This can greatly reduce the product’s effectiveness. Consequently,

juice from concentrate should not be the preferred choice.

When buying aloe vera juice, keep in mind that even if a product says it's 100% aloe vera, you still may not be getting the health benefits you are paying for. Look for products that say "undiluted," or "not made from concentrate," or "not reconstituted."

Concentration of aloe vera in topical products varies greatly also. Many industry insiders say a topical aloe vera ointment should contain an aloe vera concentration of at least 70% for maximum effectiveness.

Read and Understand the Literature and Labels

Carefully reading a product's literature and labeling can give you important clues as to how natural a product really is, how it was processed and grown and whether the product comes from the whole leaf or just the gel.

Many within the industry believe that the most effective products are made from the whole leaf, and that no single agent is responsible for the plant's ability to heal. According to this view, the closer you stay to nature, the better. Products that include all the parts of the plant, the way it is found in nature, may enhance synergism and achieve maximum benefits.

Consider Your Personal Needs and Preferences

People often ask about the best method for using aloe vera to treat a particular ailment. There is no single answer, but there are some guidelines for you to consider.

The first is personal preference. To relieve a specific

pain, you may prefer to use an ointment on the affected area only. Or, you may want to try a capsule, gel or juice to reach the affected area internally and extend the aloe vera benefits.

Capsules are typically the first choice among aloe products since they are the most cost-effective and easiest way to take aloe vera.

Select a Supplier Carefully

Aloe vera products are available in many retail outlets such as health food and drug stores, and through mail-order suppliers. Before selecting the source for your needs, you might ask such questions as:

What would be the most convenient way for me to get aloe vera products regularly?

How can I get my questions about this product answered by other users?

Does my supplier have an established track record in the business?

And, perhaps most important:

Is there a money-back guarantee for these products if I'm not satisfied?

A knowledgeable, reputable supplier will not hesitate to answer these questions and should be able to provide some detail about its production process.

Give Aloe Vera A Fair Trial

When you are in severe pain, it is human nature to want immediate relief. And there have been cases of aloe vera users experiencing amazingly fast results.

But those cases are exceptional. Most people see a gradual lessening of symptoms and increasing feelings of well-being. Different people with similar conditions will respond on their body's own timetable. Some people begin to see and feel the benefits of aloe vera in 60 days or less, while others take longer. Thus, giving the product at least a two-month trial is the best course of action.

Some find aloe vera relieves the specific problem they sought treatment for, while others discover unexpected health benefits. Some people use it just occasionally, while others make it part of their daily good health regimen.

If you are using aloe vera to treat pain, keep in mind that aloe vera is not a painkiller like aspirin. Rather, it is a natural anti-inflammatory that stimulates the body's own repair systems, so it may take time. It may also take some experimentation to find the right intake for you.

Finally, even though aloe vera is nontoxic and has been safely taken with many different kinds of prescription medications, it is always good practice to consult your pharmacist or physician.





Chapter 8

Growing your own “First Aid Plant”

Aloe vera makes an excellent house or garden plant to keep on hand as a fast remedy for minor burns and skin irritations. It is easy to grow and requires only minimal care. Its compact root system doesn't require a huge container, making it an ideal houseplant. In fact, many aloe vera plants sit right on the window sill.

The plant can easily grow outside in subtropical climates such as Texas, Florida and California. And in other locations it can grow outdoors as long as it is protected from frost. It will not survive a hard freeze, but can stand temperatures down to 40°F. Plants grown outdoors will grow at a faster rate than those grown indoors.

When choosing an aloe vera plant, keep in mind that the plant's healing properties increase with age, so it is best to buy the biggest, most mature plant that you can find.

If you are going to grow it outdoors, plant it where it will receive indirect light. The leaves turn brown in direct sunlight. Whether you plant it indoors or out, avoid overwatering aloe vera. The plant needs very little water or light.

How to use fresh aloe vera

Use the leaves closest to the bottom first because they are older and have more potency. Also, the plant grows from the center out and the cut leaves do not grow back.

To prepare a leaf for using as a remedy, trim the

thorny edges, then slice it across lengthwise to expose the inner gel. You can apply the cut side of the leaf itself to a wound or burn and wrap it with a bandage, similar to a poultice, or scrape out the gel and just apply it. Your skin will usually absorb most of the gel within a few minutes. Wrap any partially used leaves in foil or plastic wrap and store them in the refrigerator. They should last a few days. Use a clean knife to scratch the cut aloe surface and release more gel.

Although the plant is handy for treating minor burns, scratches, abrasions and insect bites, it is probably impractical to grow enough aloe vera to meet your needs if you wish to drink the juice as a healthful tonic. In any case, preparing your own aloe juice for drinking is not recommended. The leaves contain aloin and aloe emodin, which are both harsh laxatives. (As discussed in Chapter 7, these elements are filtered out of most commercial preparations.) Commercial sources of aloe vera products cultivate thousands of acres of aloe vera and stand ready to supply all you need.

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