

Latin Name: Laminaria digitata (kelp)
Fucus vesiculosus (bladderwrack)

Also known as: Kelpware, Bladderwrack, Bladder Fucus, Seawrack, Seaweed, Tangleweed, Black-tang, Kombu

### **Scientific Classification**

Kelp is not a true plant, but a type of brown algae seaweed. Worldwide there are about 1500-2000 species of brown algae. The designation 'seaweed' loosely describes any type of vegetation growing in the ocean, including many types of algae and plants.

Brown algae that are of particular use herbally are kelp and bladderwrack. They are placed in different order classifications, but have similar physical and nutritional makeup. In herb texts, the names are often used interchangeably, as their herbal use is similar. They also work synergistically with each other.

## Two distinctions are:

- 1) Physically, kelp plants (Laminaria genus) do not have air sacs called bladders. Plants of the bladderwrack genus (Fucus) usually have bladders, but not always.
- 2) Nutritionally, laminaria plants contain ten times the amount of iodine and are preferred when commercially harvesting for iodine.

Class: Phaeophyceae – brown algae

Order: Laminariales Family: Laminariaceae Genus: Laminaria

Species: L. digitata - true kelp

Class: Phaeophyceae - brown algae

Order: Fucales
Family: Fucaceae
Genus: Fucus

Species: F. vesiculosus – bladderwrack, also called kelp by some

Influence on the Body	(PRINCIPLE ACTIONS are listed in CAPITAL LETTERS)
Blood and Circulatory System	anemia • CLEANS ARTERIES • alterative (cleanses and purifies the blood, and facilitates efficient removal of waste products) • arteriosclerosis • high blood pressure • heart disease
Blood Sugar	diabetes

Body System

ENERGY • stimulant (increases internal heat, dispels chill and strengthens metabolism and circulation) • tonic (increases energy and strength throughout the body) low vitality • debility • mucilant (a soft and slippery sugar molecule that protects mucous membranes and inflamed tissues) • DEMULCENT (softens and soothes inflammation of mucous membranes) • BIRTH DEFECT PREVENTION

Bones and Teeth

fractures

Cancer

TUMORS • cancer

Digestive Tract

NUTRITIVE (supplies substantial amount of nutrients) • poor digestion • nausea • COLITIS • gas • expels worms and parasites

Endocrine System

GLANDULAR BALANCE • THYROID IMBALANCE • LOW THYROID • HYPOTHYROIDISM • GOITER (swelling of the thyroid gland related to iodine deficiency) • enlarged glands low thyroid fatigue
 ADRENAL GLAND WEAKNESS ENDOCRINE GLANDS • PITUITARY GLAND • pancreas

Infections and Immune System

INFECTION • antibiotic • antiseptic

Inflammation

arthritis • bursitis

Liver

gallbladder

Lungs and Respiratory System expectorant (loosens and removes phlegm in the respiratory tract)

Muscles

leg cramps

Nervous System

headaches • neuritis (inflamed and weakened nerves)

Poisoning

RADIATION POISONING • lead poisoning

Reproductive System

Male: • tones prostate gland

Female: • MENOPAUSE • hot flashes • MORNING SICKNESS • PREGNANCY • hypermenorrhea (excessive menstruation) • dysmenorrhea (painful or difficult

menstruation) • endometriosis

Skin, Tissues & Hair

emollient (softens and soothes skin when applied externally, and mucous membranes when taken internally)

- COMPLEXION ACNE caused by thyroid imbalance
- ECZEMA psoriasis FINGERNAILS NAIL PROBLEMS
- HAIR LOSS

**Urinary Tract** 

kidneys • water retention • diuretic (increases urine flow)

Weight

**OBESITY** • weight distribution

Other Uses

fertilizer • cattle feed

# Key Properties:

- <u>SUPPORTS GLANDULAR BALANCE</u> strengthens, tones, and provides nutrients for endocrine system balance and health (particularly thyroid, adrenal, pituitary, and reproductive glands)
- <u>alterative</u> cleanses, purifies, and detoxifies the spleen, liver, kidneys, and bowels, improves digestion, assimilation, and skin health
- <u>NUTRITIVE</u> <u>tonic</u>

Primarily affecting: THYROID • ENDOCRINE GLANDS • BRAIN • KIDNEYS

## **History**

People of Japan, China and Korea have eaten kelp as a 'vegetable from the sea' for thousands of years. The Chinese have recommended it for treating thyroid disease and lowering blood pressure. The Japanese bathe with strips of kelp to help ease nervous disorders.

Kelp was discovered in 1811 as an original source of iodine and then used extensively to treat goiter. In the 1860s, kelp and bladderwrack were marketed for their ability to increase the metabolic rate for the obese, and they have since been featured in numerous weight-loss products.

### **Attributes**

Key Components: (including, but not limited to)

Vitamins A • B1 (thiamine) • B2 (riboflavin) • B3 (niacin) • B5 (pantothenic acid) • B6 (pyridoxine) • B9 (folic acid) • B12 (cobalamin) • Biotin • Choline • Inositol • PABA (Para-Amino Benzoic Acid) • C • E

<u>Calcium</u> • <u>Chlorine</u> • <u>Chromium</u> • <u>Cobalt</u> • <u>Copper</u> • <u>Fluorine</u>

- <u>Iodine</u> <u>Iron</u> <u>Magnesium</u> <u>Manganese</u> <u>Phosphorous</u>
- <u>Potassium</u> <u>Selenium</u> <u>Sodium</u> <u>Sulfur</u> <u>Vanadium</u> <u>Zinc</u>
- other Trace Minerals

All eight <u>Essential Amino Acids</u> • <u>Algin</u> (a carbohydrate commercially used as a thickening agent) • <u>Mannitol</u> (a very sweet type of sugar) • <u>Mucilage</u>

Kelp abounds in calcium, chlorine, magnesium, potassium, and especially iodine. It is also a good source of folic acid.

Mannitol is sometimes used as a sweetener in diabetic foods

## General

Kelp promotes glandular balance and health which, in turn, affects many systems of the body. It offsets the effects of stress, aids digestion and respiration, guards against sickness, and generally promotes healthy function and balance in the body.

Kelp is well known for its healthful qualities and many use it alone. I have found that when bladderwrack is taken along with kelp, the combination is even more powerful.

#### Nutritive

As a product of the ocean, kelp has numerous elements that the ocean contains. The brown algae seaweed has minerals and vitamins that stimulate the body's metabolism, and strengthen and tone organs such as the thyroid gland.

Kelp helps build cell membranes and contributes to the healthy growth of hair, skin and nails. Kelp is especially useful during pregnancy and for ailing and convalescent patients who need concentrated nutrients that are easy to assimilate.

# Thyroid and All Endocrine Glands

Kelp has a high content of natural plant iodine, which is absorbed much more slowly (and therefore more safely) than chemical iodine. Iodine is necessary for the proper function of the thyroid gland and production of thyroid hormones. The thyroid is required for growth, energy, and metabolism. Kelp is especially useful for hypothyroid conditions (insufficient thyroid hormone production).

For its ability to restore normal metabolism and energy, some have marketed kelp as a metabolism stimulant to lose weight. Kelp helps individuals who have a dysfunctional thyroid gland lose weight and take off excess pounds in the hip area.

Kelp can act as an antibiotic. It assists the thyroid in releasing iodine into the blood stream when pathogens are present. Iodine fights infection and helps prevent disease. Kelp also helps soothe an irritated throat and inflamed mucous membranes. It quiets coughs, dissolves firm masses (such as tumors), reduces edema, and is used for enlarged thyroid, lymph nodes, swollen and painful testes – all of which may be caused by malfunction of the thyroid gland.

Kelp activates endocrine glands of the body and helps regulate the thyroid and pituitary glands. (Among other things, the pituitary gland helps adjust the body's core temperature). Kelp aids in the function of digestive glands and other endocrine organs and stimulates the pancreas and adrenals.

Taken in normal doses, kelp is a good nutritional source during pregnancy because it normalizes glands and hormones and has a high mineral content. Preliminary tests in Japan indicate that kelp may help prevent certain fetus abnormalities.

Immune System

Japanese studies show a direct relationship between the ingestion of algin (found in kelp) and the prevention of breast cancer. Researchers conclude this is due to both a mechanical function (fiber content of the kelp) and a biochemical action (ability to enhance immune system function). It is believed that alginates improve T-cell function in the immune system.

Cleansing

Kelp neutralizes wastes from the body fluids, so they may be easily eliminated from the body. It also helps lower serum cholesterol and hypertension, relieving the heart and blood vessels.

Inflammation

Uric acid contributes to rheumatic pain. Kelp has elements that help contain and eliminate uric acid from the body. Kelp helps relieve rheumatism and rheumatoid arthritis, both when it is used internally and as an external application upon inflamed joints.

Acidity and lack of essential nutrients for nerves and their insulating sheaths lead to inflammation and neuritis. Iodine acts as a tranquilizer and interrupts the cycle of disease-pain-aggravation-more disease-pain, and so on.

Nervous System

Kelp provides nutritional support to the nervous system and heart, and is important in herbal combinations for improving mental alertness.

Digestion

Another quality of alginic acid is that it swells upon contact with water. When it is taken orally, it forms a type of 'guard' at the top of the stomach and, for this reason, is used in several over-the-counter preparations for heartburn. Alginates give kelp its mild laxative properties as well.

Genito-Urinary Tract

Kelp is used by Asian herbalists to treat genito-urinary tract problems of the kidney, bladder, prostate, and uterus. Clinical documentation shows that taking kelp daily reduces enlarged prostates in older men and urination becomes painless.

Women

Bladderwrack helps women with abnormal menstrual cycles or menstrual-related disease histories. Repeated small doses can decrease breast milk in nursing mothers.

In one Japanese study it was observed that taking bladderwrack appears to regulate the menstrual cycle by increasing the length of the cycle, stimulating ovulation and lowering the estrogen-progesterone ratio in pre-menopausal women. Such changes may be beneficial to women at high risk of estrogen dependent diseases or who are experiencing fertility problems.

Results also suggest that bladderwrack may alleviate hypermenorrhea (excessive menstruation) and dysmenorrhea (painful or difficult menstruation), which may provide some relief in the treatment of endometriosis.

Radiation and Pollution

Studies at the Gastrointestinal Research Laboratories of McGill University in Montreal, found a factor called sodium alginate in kelp that binds with radioactive strontium-90 in the intestines and carries it out of the body. This factor aids in detoxification of the intestines.

Sodium alginate also binds and cleanses the body of barium and cadmium. Barium sulfate is used as a radio-contrast agent for X-rays of the digestive system and is normally eliminated through digestion. Barium in higher doses begins to adversely affect the nervous system.

Small amounts of cadmium are found in foods, but it is more readily absorbed through the lungs. Air-born cadmium exposure comes from tobacco smoke and air pollution around hazardous waste sites, metal refining factories, and cadmium product manufacturing plants (batteries, coatings and plastics). Inhaling cadmium-laden dust quickly leads to respiratory tract and kidney problems which may be fatal (due to renal failure).

Kelp also helps to reduce the risk of poisoning from environmental pollution by providing fiber that increases digestive bulk, reduces cholesterol levels, and retards bile acid absorption.

**Herb Parts Used** 

The whole plant

**Preparations** 

Most kelp is harvested wild from the oceans. Norwegian

and Remedies	kelp is considered by some to be a cleaner source of kelp, as it comes from the cold North Sea which is freer of pollution than other sources.
	The plants are dried on screens, then powdered and put into capsules and other herbal preparations. Kelp is most often used in combination with other herbs.
Poultices	Slippery Elm Poultice: (see SLIPPERY ELM preparations)
Safety	No health hazards or adverse side effects are known. If kelp is not needed, headaches may occur. Kelp is better tolerated when taken with other herbs.

## **Plant Profile**

## Natural Habitat:

Kelp is a plant of the sea and is found along rocky seashores almost everywhere in the world. It is particularly harvested on the North Sea, Western Baltic, Atlantic, and Pacific coasts.

## Description

Laminaria digitata (true kelp) have strap-like blades that grow three to four feet long and float upward, toward the water's surface and sunlight.

Fucus vesiculosus (bladderwrack) have fronds that are thick and flexible, but very tough. It has a dark, glossy browngreen color that is paler at the extremities, and turns black when dried. The flattened, branching fronds grow up to six feet in length, have an obvious midrib, and are covered with spherical air bladders which tend to occur in pairs on either side of the mid-rib (in small plants, air bladders may be entirely absent). Forked and pointed reproductive structures occur at the tips of the fronds. There are separate male and female plants, and reproduction takes place once a year.

The air bladders keep the fronds in illuminated waters, where it is able to photosynthesize. In exposed areas, it is beneficial for the water plant to lack bladders, as this minimizes the potential for severe damage and the risk of being detached and swept away.

Both plants of the sea have an extremely tough, expanded woody root fiber with a disc called a holdfast that attaches itself to rocks. These water plants live for up to three years. They smell strongly seaweed-like and have a nauseous saline taste.