



A STUDY OF TRADITIONAL USE AND MEDICINAL IMPORTANCE OF FLAXSEED PLANT BY TRIBES AND NON-TRIBALS OF JASHPUR DISTRICT, CHHATTISGARH STATE

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Abstract

Flaxseeds are a very good source of essential fatty acids and can be an alternative for consumers other than fish. Not only focus on developing new varieties of crops through different breeding techniques for higher yield and oil quality. Further studies need to be done in the fields of agronomy, pathology, entomology, food science etc. Due to Jashpur district being a tribal dominated district and most of the tribal people being associated with agricultural activities, flaxseed is cultivated in maximum quantity. That along with using it as edible oil, flaxseed is also used for various types of physical disorders and being the plateau area of Jashpur district, flaxseed is cultivated in maximum quantity and linseed is also a major source of income. The people of Jashpur district have been using flaxseed traditionally as a medicine since many years ago by local vaidyaraj's.

Keywords: Flaxseed seeds, Oil, Fatty Acids, Tribes, Traditional Uses, Jashpur District.

Introduction: Flaxseed is one of the oldest crops and has been cultivated since the beginning of civilization. The Latin name for flaxseed is *Linum usitatissimum*, which means "very convenient". Flax was first introduced to the United States by settlers, primarily to produce textiles for clothing. All parts of flaxseed plants are used commercially, either directly or after processing. The stem provides high quality fiber that is strong and durable. Until the 1990s, flaxseed oil was mainly used in the production of towels (linen) and paper, and flaxseed oil and its by-products were used in the formulation of animal feeds. There are subtle differences in the usage of the terms flaxseed and flaxseed. Flaxseed (*Linum usitatissimum* L.) is an oil seed used in industrial and natural health products. Flaxseed is rich in many biologically active compounds and elements such as linolenic acid, linoleic acid, lignans, cyclic peptides, polysaccharides, alkaloids, cyanogenic glycosides and cadmium. Most flaxseed biological and clinical studies have focused on extracts containing α -linolenic acid or lignans.

Its growing popularity is due to its beneficial effects in reducing cardiovascular disease, especially in reducing the risk of cancer of the breast and prostate, anti-inflammatory, laxative, menopausal symptoms and osteoporosis. This review is an attempt to cover the history of flaxseed oil and flaxseed oil, the path from drugs to functional food sources, and their health benefits. Various tribes and non-tribes residing in Jashpur district have been using the linseed plant traditionally for various types of physical problems and for the treatment of various diseases and also to get income by selling linseed in the markets regarded as a major resource.



Figure No.1: Flaxseed Seeds



Figure No.2: Whole plant of flaxseed

Flaxseed Oil and Lipids:

Flax seeds are the most abundant vegetable source of the three fatty acids. Alpha-linolenic acid (ALA) flaxseed oil is low in saturated fatty acids (9%), moderate in monounsaturated fatty acids (18%), and rich in polyunsaturated fatty acids (73%). Of all the lipids in flaxseed oil, α -linolenic acid is the most important fatty acid in the range of 39.00 to 60.42% acid, followed by oleic acid, linolenic acid, palmitic acid and stearic acid.

Table No.1: Range of Fatty Acids in Flaxseed Oil

S.No.	Fatty Acid	Range in %
1	Stearic acid	2.26–4.58
2	Linoleic acid (ω -6)	13.25–17.42
3	Palmitic acid	4.92–8.00
4	α -Linolenic acid (ω -3)	40.90–60.39
5	Oleic acid	12.64–19.09

Protein in Flaxseed: The protein content of flaxseed between 2030% and is composed of about 80% globulin (Linin and Conlinin) and 20% Glutelin. Flaxseed has an amino acid profile similar to soybeans and is gluten-free. Flax protein is not considered a complete protein due to the limitation of the amino acid lysine. It also contains peptides with biological activity that are associated with the reduction of risk factors for cardiovascular disease. Whole flaxseed, flaxseed meal, and isolated proteins are rich in glutamic acid / glutamine, arginine, branched-chain amino acids (valine and leucine), and aromatic amino acids ($R-CH(NH_2)-COOH$). The total nitrogen content of flaxseed is 3.26g / 100g of seeds.

Flaxseed: An Ayurvedic and Traditional Medicine: Flaxseeds and plants have been consumed by humans for thousands of years. Ayurveda is one of the world's oldest and most thriving traditions, spanning India, Sri Lanka, and other countries with philosophical and empirical roots. The major canonical writings that contain thorough descriptions of more than 700 herbs are the Atharvaveda (approximately 200 BC), CharakaSamhita (1000-500 BC), and SushrutaSamhita (1000-500 BC). The scientific presentation of Charaka and Sushruta's legacy in current language, which frequently attempts to remark from the perspective of modern medicine and science, offers insight into ancient wisdom. Many common techniques exist between Ayurveda and the traditional Indian medical system, which has a lengthy history. Over 200 plants, minerals, and lipids are included in the Ayurvedic literature for skin treatment.

Ayurveda is far older than any historical period. Historians had woven the enchantment of flax into ancient historical ages after Ayurveda. The human race has been eating this seed from the dawn of time, according to records. Linseed's therapeutic properties are noted in Hippocrates, Qantas, and Discords works, as well as mediaeval publications on medicinal herbs in Jashpur and all tehsil levels.

Table No. 1: Traditional and medicinal uses of flaxseed in various health problems.

Preparation method	Traditional and medicinal health benefits
10 grams of flax powder for the affected disease is made a paste based on honey, 3040 g of this paste is swallowed on an empty stomach in the morning.	Stomach ulcer, tuberculosis, strengthens the memory, intestines and abdominal pain.
Unwrapped flaxseeds are soaked in water for 30 minutes. The seeds are then removed while the water is heated moderately	asthma, bronchitis and cough

Health Benefits: Flaxseeds have potential health benefits beyond nutrition, mainly for three reasons: first, because of their high content of the three α linolenic acids; second, rich in soluble and insoluble fiber; and third, because of its high content of lignans, which act as antioxidants and phytoestrogens. ALA can be metabolized in the body to docosahexaenoic acid (DHA) (ω 3) and eicosapentaenoic acid (EPA) (ω 3). The health benefits of all three fatty acids (ALA, EPA and DHA) have been widely reported for a number of diseases, including cardiovascular disease, hypertension, atherosclerosis, diabetes, cancer, inflammation joints and osteoporosis, autoimmune and neurological disorders.

Use of whole flaxseeds plant and flaxseed oil in products for human consumption:

Flaxseeds can be used as roasted and ground seeds, while flaxseed oil can be used in various food formulations as virgin oils, stabilized emulsions and microencapsulated and some powders. The Western bread industry has adopted the method of adding ground flaxseed to mixed grain breads in an effort to satisfy customer demand. Flaxseed or flaxseed oil has been incorporated into baked goods, and the water-binding ability of the insoluble fiber in flaxseed increases bowel mass, which is useful in treating constipation, bowel syndromes irritation and diverticulosis. The soluble fiber in flaxseed mucilage increases the viscosity of substances in the intestines and slows down gastric emptying and nutrient absorption.

Conclusion: Various clinical trials have shown that flaxseed components provide preventive and therapeutic benefits against disease. This encourages the development of healthy and functional branded foods made with flaxseeds, oils and pastries. More in vivo studies are needed to determine the health benefits of flaxseed components and know the minimum amount of flaxseed needed to explore its therapeutic potential for all population groups, including both pregnant and lactating women, and for possible problems from high dose. There is a need to develop rapid, reproducible and economical techniques for the analysis of nutrients from flaxseeds.

Role of flaxseed lignans and 3 fatty acids in reducing risk associated with heart and coronary disease, cancer (breast, colon, ovarian and prostate) and other health risk factors man is well known. When heart health is one of the most sought after and requested health benefits of dietary supplements; and where the goal of the food industry is to develop innovative solutions to nutritional challenges, flaxseed will play an important role in the same. Flaxseeds can help improve the availability of healthy food options, including improving the nutritional composition of foods through the reduction of salt, sugar, and saturated fat; and increased content of 3 fatty acids and other bioactive compounds. With the contribution of these factors, the global cardiovascular foods market is expected to grow rapidly in the coming years. Therefore, flaxseed and flaxseed oil may be favored ingredients in functional foods and nutritional foods in the future. The flaxseed plant and the oil obtained from flaxseed seeds are traditionally used by the tribes living in Jashpur for various medicinal purposes.

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