# Pomegranate Seed Oil Health and Beauty Benefits

Pomegranate seed oil is a powerful and fragrant natural oil, cold–pressed from the seeds of the pomegranate fruit that can provide many powerful health and beauty benefits. You can find pomegranate seed oil in many different cosmetic products, such as shampoos, soaps, moisturizers, and skin ointments, but this oil can also be used in aromatherapy and diffusers. The soothing properties of pomegranate seed oil make it especially useful in massage therapy.

Pomegranates are gorgeous unique red fruits and one of the healthiest superfoods and have unrivaled benefits for health and beauty. As a "superfood" the pomegranate is packed with powerful phytonutrients that promote health and longevity. Pomegranates are known to have more antioxidants than red wine and green tea.

The flowers and fruit peel of the pomegranate have traditionally been used as dyes for fabric and leather, and the seeds were used as a source of food, as well as for medicinal and beauty purposes.

# DESCRIPTION OF THE POMEGRANATE

The pomegranate (*Punica granatum*) is a fruit–bearing deciduous shrub (a perennial woody plant that sheds its leaves in autumn) in the flowering plant family Lythraceae, subfamily Punicoideae, which grows between 5–10 m (16–33 ft.) tall.

The pomegranate has multiple spiny branches and is long–lived, with some specimens in France surviving for 200 years. *P. granatum* leaves are opposite or sub–opposite, glossy, narrow oblong, whole, between 3–7 cm  $(1+\frac{1}{4}-2+\frac{3}{4})$  in long and 2 cm  $(\frac{3}{4})$  in broad. The flowers are bright red and 3 cm  $(1+\frac{1}{4})$  in diameter, with three to seven petals. Some fruitless varieties are grown for the flowers alone.

#### FRUIT

Botanically, the edible fruit is a berry (a fleshy fruit without a stone or pit) with seeds and pulp produced from the ovary (or *gynoecium*, the female reproductive organ) of a single flower. The fruit is intermediate in size between a lemon and a grapefruit, 5–12 cm (2–4+ $\frac{1}{2}$  in) in diameter with a rounded shape and thick husk. The fruit is typically in season in the Northern Hemisphere from October to February, and in the Southern Hemisphere from March to May.

Red–purple in color, the pomegranate fruit husk (the outer shell or coating) has two parts: an outer, hard *pericarp* (part of the structure of fruit surrounding the seed), and an inner, spongy *mesocarp* (white "albedo"), which comprises the fruit's inner wall where seeds attach.

## SARCOTESTA AND SEEDS

Membranes of the *mesocarp* are organized as non–symmetric chambers that contain seeds inside *sarcotestas*, which are embedded without attachment to the *mesocarp*. Containing juice, the *sarcotesta* (fleshy seedcoat containing no arils) is formed as a thin membrane derived from the epidermal cells (outermost layer) of the seeds. The number of seeds in a pomegranate can vary from 200–1,400.

## JUICE

As intact *sarcotestas* or in juice form, pomegranates are used in baking, cooking, juice blends, meal garnishes (an edible decoration accompanying a prepared dish), smoothies (a beverage made by puréeing ingredients in a blender), and alcoholic beverages, such as cocktails (an alcoholic mixed drink) and wine.

In mature fruits, the juice obtained by compressing the seeds yields a sour flavor due to low pH–4.4 (the acidity or basicity) and high contents of *polyphenols* (organic compounds abundant in plants, includes *flavonoids*, *tannic acid*, and *ellagitannin*), which may cause a red indelible stain on fabrics.

The pigmentation (pigments are colored inorganic compounds that are insoluble in water, opposite of dyes, which are organic and water–soluble) of pomegranate juice results primarily from the presence of *anthocyanins* (water–soluble vacuolar pigments that appear red, purple, blue, or black depending on pH) and *ellagitannins* (hydrolysable tannins formed from the oxidative linkage of galloyl groups).

## Comedogenic Rating

Pomegranate seed oil has been given a <u>comedogenic rating of 1</u>, meaning it is non-comedogenic and should not cause any adverse reactions, even in sensitive or easily irritated skin. For this reason, pomegranate seed oil is often used as a <u>carrier oil</u>, to dilute essential oils.

# THE ETYMOLOGY OF THE POMEGRANATE

The name pomegranate derives from Medieval Latin (Latin used in Roman Catholic Western Europe during the Middle Ages) *pomum* "apple" and *granatum* "seeded". Possibly stemming from the old French word for the fruit, *pomme–grenade*,

The pomegranate was known in early English as "apple of Grenada"—a term which today survives only in *heraldic blazons* (the design, display and formal description of a coat of arms, flag or emblem). This is a folk etymology (a change in a word of the replacement of an unfamiliar form by a familiar one), confusing the Latin *granatus* with the name of the Spanish city of Granada, which derives from Arabic.

Garnet (a name of Middle English origin, derived from the dark red gemstone) derives from Old French *grenat* by *metathesis* (the transposition of sounds or syllables in a word, or of words in a sentence), from Medieval Latin *granatum* as used in a different meaning "of a dark red color".

This derivation may have originated from *pomum granatum*, describing the color of pomegranate pulp, or from *granum*, referring to "red dye, *cochineal*" (a sessile parasite and insect in the suborder Sternorrhyncha, from which the natural dye "carmine" is derived). The term "balaustine" (Latin: *balaustinus*) is also used for a pomegranate–red color.

The modern French term for pomegranate, *grenade*, has given its name to the military grenade (an explosive weapon).

# THE CULTIVATION OF THE POMEGRANATE

*P. granatum* is grown for its fruit crop, and as ornamental trees (plants that are grown for decorative purposes) and shrubs in parks and gardens. Mature specimens can develop sculptural twisted–bark, multiple trunks and a distinctive overall form.

Pomegranates are drought-tolerant (can survive a prolonged shortage in atmospheric, surface or ground water), and can be grown in dry areas with either a Mediterranean winter rainfall climate or in summer rainfall climates. In wetter areas, they can be prone to root decay from fungal (any member of the group of eukaryotic organisms) diseases. They can tolerate moderate frost (a thin layer of ice that forms from water vapor in above–freezing atmospheres), down to about  $-12^{\circ}$ C ( $10^{\circ}$ F).

Pomegranate grows easily from seed, but is commonly propagated from 25–50 cm (10–20 in) hardwood cuttings to avoid the genetic variation of seedlings. Air layering (a common means of vegetative propagation of species in natural environments) is also an option for propagation, but grafting is not as it appears to fail.

Pomegranates are widely cultivated throughout the Middle East and Caucasus region (geography between the Black and Caspian Seas; comprising Armenia, Azerbaijan, Georgia, and parts of Russia), north and tropical Africa, Iran, Armenia, the Indian subcontinent (geography in Asia projecting south into the Indian Ocean, comprising Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka),

Central Asia (geography situated east of the Caspian Sea, west of China, north of Afghanistan and south of Russia, comprising Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), the drier parts of Southeast Asia (geography situated south of China, east of India and north of Australia), and the Mediterranean Basin.

## **DISEASES AND PESTS**

Insect pests of the pomegranate can include the butterflies *Virachola isocrates* (*Deudorix isocrates*, the common "guava blue", in the family Lycaenidae), *Iraota timoleon* (the "silverstreak blue", a species of lycaenid or blue butterfly), *Deudorix epijarbas* (the "cornelian" or "hairy line blue", a species of lycaenid or blue butterfly), and the leaf–footed bug *Leptoglossus zonatus* (a type of true bug), fruit flies and ants are attracted to unharvested ripe fruit.

## THE VARIETIES OF POMEGRANATE

*P. granatum* var. *nana* ("variety" is a taxonomic rank below that of species and subspecies) is a dwarf variety of *P. granatum* popularly planted as an ornamental plant in gardens and larger containers, and used as a bonsai (the Japanese art of growing miniature trees in pots, developed from the traditional Chinese art form of "penjing") specimen tree. *P. granatum* var. *nana* could well be a wild form with a distinct origin. It has gained the <u>Royal Horticultural Society</u> (RHS) <u>Award of Garden Merit</u> (AGM).

The only other species in the genus *Punica* is the Socotran pomegranate (*P. protopunica*, commonly known as the pomegranate tree), which is endemic (the state of being found in a single geographic location) to the Socotran archipelago of four islands located in the Arabian Sea, the largest island of which is also known as Socotra. The Socotran archipelago is part of the nation of Yemen. It differs in having pink (not red) flowers and smaller, less sweet fruit.

#### CULTIVARS OF THE POMEGRANATE

*P. granatum* has more than 500 named cultivars (a plant that people have bred for desired traits), but evidently has considerable synonymy in which the same genotype (the complete set of genetic material of an organism) is named differently across regions of the world.

Several characteristics between pomegranate genotypes vary for identification, consumer preference, preferred use and marketing. The most important characteristics are fruit size, maturity, exocarp color (outer skin color, which can range from yellow to purple, pink and red being the most common), seed– coat color (ranging from white to red) and hardness, and juice content (as well as its acidity, sweetness and astringency).

# THE PRODUCTION AND EXPORT OF THE POMEGRANATE

During 2019, Chile, Peru, Egypt, Israel, India and Turkey supplied pomegranates to the <u>European</u> (the EU is a political and economic union of 27 member states) market.

Chile was the main supplier to the U.S. market, which has a limited supply from Southern California (geographical area southernmost of the state, includes the L.A. metropolitan area, the second most populated city in the U.S.).

China was self–sufficient for its pomegranate supply in 2019, while other South Asia markets were supplied mainly by India.

Pomegranate production and exports in South Africa (RSA, the southernmost country in Africa) competed with South American shipments in 2012–18, with export destinations including Europe, the Middle East, the UK and Russia. South Africa imports pomegranates mainly from Israel.

# THE HISTORY OF THE POMEGRANATE

The pomegranate is native to a region from modern–day Iran to northern India. Pomegranates have been cultivated throughout the Middle East, South Asia, and Mediterranean region (the areas of land that surround the Mediterranean Sea) for several millennia.

The pomegranate was introduced into Spanish America in the late 16th century and into California by Spanish settlers in 1769. Pomegranates are cultivated in the Central Valley of California (a broad, elongated, flat valley inland and parallel to the Pacific, between the Coast Ranges and the Sierra Nevada) and in Arizona.

Pomegranates may have been domesticated as early as the 5<sup>th</sup> millennium BC, as they were one of the first fruit trees to be domesticated in the eastern Mediterranean region.

Carbonized exocarp of the fruit has been identified in early Bronze Age (the 2<sup>nd</sup> principal period of the three–age system, from 3300–1200 BC) levels of Tell es–Sultan (also known as "Tel Jericho" or "Ancient Jericho") a UNESCO–nominated archaeological site, located adjacent to the Ein as–Sultan refugee camp in the West Bank (also called "Judea" or "Samaria", a landlocked area near the coast of the Mediterranean bordered by Jordan, the Dead Sea and Israel).

As well as late Bronze Age levels of Hala Sultan Tekke (or the Mosque of Umm Haram), a mosque and tekke complex on the west bank of Larnaca Salt Lake. Umm Haram was the wife of Ubada bin al–Samit, a companion of the Islamic prophet Muhammad and foster sister of Muhammad's mother, Aminah bint Wahb) on Cyprus and Tiryns (a Mycenaean archaeological site in Argolis in the Peloponnese), and the location from which the mythical hero Heracles performed his Twelve Labors.

A large, dry pomegranate was found in the tomb of Djehuty, the butler of Queen Hatshepsut (the 5<sup>th</sup> pharaoh of the Eighteenth Dynasty of Egypt and the 2<sup>nd</sup> female pharaoh, after Sobekneferu) in Egypt;

Mesopotamian (a region within the Tigris–Euphrates river system, in the northern Fertile Crescent, modern–day Iraq) *cuneiform* (a logo–syllabic script used to write several languages of the Ancient Near East) records mention pomegranates from the mid–3<sup>rd</sup> millennium BC onwards.

Waterlogged pomegranate remains have been identified at the 14th century BC Uluburun shipwreck (a Late Bronze Age shipwreck discovered in the Mediterranean Sea in 1982) off the coast of Turkey. Other goods on the ship include perfume, ivory (a hard, white material from the tusks and teeth of elephants) and gold jewelry, suggesting that pomegranates at this time may have been considered a luxury good.

Other archaeological finds of pomegranate remains from the Late Bronze Age have been found primarily in residences of the elite, supporting this inference.

Pomegranates are also extensively grown in southern China and in Southeast Asia, whether originally spread along the route of the "Silk Road" (a network of Eurasian trade routes active from the 2<sup>nd</sup> century BCE until the mid–15th century) or brought by sea traders. Kandahar (a city in southern Afghanistan) is famous for its high–quality pomegranates.

Although not native to Korea or Japan, the pomegranate is widely cultivated there, where many cultivars have been developed. It is frequently used for bonsai because of its flowers and for the unusual twisted bark the more mature specimens can attain.

Spanish colonists later introduced the fruit to the Caribbean and Spanish America, (refers to the Spanish territories in the Americas), but in the English colonies (the colonial territories of the English Empire), it was less at home. As the English gardener and Quaker (people belonging to denominations of Protestant

Christianity) Peter Collinson, Fellow of the Royal Society (FRS) wrote to the early Anglo–American colonial botanist, horticulturist and explorer John Bartram in Philadelphia, 1762.

The pomegranate had been introduced as an exotic to England the previous century, by English naturalist, gardener, collector and traveler John Tradescant "the Elder", but the disappointment that it did not set fruit there led to its repeated introduction to the American colonies, even New England. It succeeded in the South: John Bartram received a gift of fruit in Charleston, South Carolina, 1764 and is said to have partook of pomegranates with English–born carpenter Noble Jones at Wormsloe Plantation (now the Wormsloe Historic Site), a state historic site near Savannah, Georgia, in September 1765.

American statesman, diplomat, lawyer, architect, philosopher, Founding Father and 3<sup>rd</sup> president (1801– 1809) of the U.S. Thomas Jefferson planted pomegranates at Monticello (his primary plantation located in the Piedmont region outside Charlottesville, Virginia) in 1771, which he began designing after inheriting land from his father at age 26; he had them from George Wythe of Williamsburg (the first American law professor, noted classics scholar, Virginia judge and Founding Father), the 1<sup>st</sup> of the seven Virginia signatories of the U.S. Declaration of Independence.

# THE CULINARY USES OF POMEGRANATE

Pomegranate juice can be sweet or sour, but most fruits are moderate in taste, with sour notes from the acidic *ellagitannins*. Pomegranate juice has long been a popular drink in Europe and the Middle East, and is now widely distributed in the U.S. and Canada.

"Grenadine syrup" (a nonalcoholic bar syrup and popular cocktail ingredient renowned for its flavor and color) originally consisted of thickened and sweetened pomegranate juice, is now only a marketing name for a syrup made from various berries, citric acid, and food coloring.

Dried pomegranate seeds, found in some natural specialty food markets, still contain some residual water, maintaining a natural sweet and tart flavor. Dried seeds can be used in several culinary applications, such as trail mix (or "scroggin", a snack, typically a mix of granola, dried fruit, nuts, and sometimes candy, meant to be eaten while hiking), granola bars, or as a topping for salad, yogurt or ice cream.

## HARVESTING POMEGRANATE SEEDS

One way of quickly harvesting the seeds is by scoring the pomegranate with a knife and breaking it open, the seeds can be manually separated from the peel and from the internal pulp membranes. Separating the seeds is easier in a bowl of water because the seeds sink and the inedible pulp floats. Another effective way of quickly harvesting the seeds is to cut the pomegranate in half, hold it over a bowl, and smack the rind with a large spoon. For more detailed instructions, check out our <u>Pomegranate Seed Oil Recipes</u>.

Nutritional value per 100 g (3.5 oz.) of pomegranate seeds, raw		
Energy	346 kJ (83 kcal)	
Carbohydrates	18.7 g	
Sugars	13.67 g	
Dietary fiber	4 g	
Fat	1.17 g	

#### The Nutritional Value of the Pomegranate

Protein	1.67 g	
Vitamins	Quantity	%DV <sup>†</sup>
Thiamine (B <sup>1</sup> )	0.067 mg	6%
Riboflavin (B <sup>2</sup> )	0.053 mg	4%
Niacin (B <sup>3</sup> )	0.293 mg	2%
Pantothenic acid (B <sup>5</sup> )	0.377 mg	8%
Vitamin B <sup>6</sup>	0.075 mg	6%
Folate (B <sup>9</sup> )	38 μg	10%
Choline	7.6 mg	2%
Vitamin C	10.2 mg	12%
Vitamin E	0.6 mg	4%
Vitamin K	16.4 µg	16%
Minerals	Quantity	% <b>D</b> V <sup>†</sup>
Calcium	10 mg	1%
Iron	0.3 mg	2%
Magnesium	12 mg	3%
Manganese	0.119 mg	6%
Phosphorus	36 mg	5%
Potassium	236 mg	5%
Sodium	3 mg	0%
Zinc	0.35 mg	4%
Other constituents	Quantity	
Water	78 g	

<sup>†</sup>Percentages are roughly approximated using US recommendations for adults. Source: <u>USDA FoodData Central</u>

A 100 g (3.5 oz.) serving of the edible portion of raw pomegranate, the *sarcotesta* (seeds) provides 10% of the Daily Value (or DV, the daily intake of nutrients considered enough to meet the requirements of healthy individuals) for folate (folic acid).

Pomegranate seeds are a rich source of dietary fiber (or "roughage", the parts of plant food that cannot be broken down by digestive enzymes) which is entirely contained in the edible seeds.

# THE PHYTOCHEMISTRY OF THE POMEGRANATE

The most abundant phytochemicals (chemical compounds produced by plants) in pomegranate juice are *polyphenols*, including the hydrolyzable tannins (or pyrogallol–type tannins) called *ellagitannins*. Pomegranate *ellagitannins* (also known as *punicalagin isomers*) form when ellagic and gallic acids (polyphenols) bind with a carbohydrate (a biomolecule consisting of carbon (C), hydrogen (H) and oxygen (O) atoms). Pomegranate *ellagitannins* are found in the *sarcotestas*, rind (peel) and bark or heartwood of pomegranates.

The red color of the juice is attributed to *anthocyanins*, such as *delphinidin* (a primary plant pigment and antioxidant), *cyanidin* (a natural organic compound found in red berries), and *pelargonidin* (plant pigments producing orange color) glycosides (molecules where sugar is bound to another group via a glycosidic bond).

Generally, an increase in juice pigmentation occurs during fruit ripening. The phenolic content of pomegranate juice is degraded by processing and pasteurization techniques (a process in which foods are treated with heat of less than 100°C (212°F), to eliminate pathogens and extend shelf life).

Pomegranate peel contains high amounts of *polyphenols*, condensed tannins, *catechins* (a subgroup of flavonoids), and *prodelphinidins* (the tannins composed of *gallocatechin*, which yields *delphinidin* during oxidation). The higher phenolic content of the peel yields extracts (tinctures or powders) for use in dietary supplements and food preservatives (a chemical added to products to prevent microbes or chemical changes).

Pomegranate seed oil (plant oil obtained from the seed, *endosperm*, rather than the fruit, *pericarp*) contains 65% *punicic acid* (a polyunsaturated fatty acid), 5% *palmitic acid* (saturated fatty acid), 2% *stearic acid* (saturated fatty acid), 6% *oleic acid* (a monounsaturated omega–9 fatty acid), and 7% *linoleic acid* (an omega–6 fatty acid).

## Illegal Health Claims Concerning the Pomegranate

Despite limited research data, manufacturers and marketers of pomegranate juice have liberally used results from preliminary research to promote products. In February 2010, the U.S. <u>Food and Drug</u> <u>Administration</u> (FDA) issued a warning letter (an official message to a manufacturer that has violated a rule in a federally–regulated product) to one such manufacturer, <u>POM Wonderful</u>, for using published literature to make illegal claims of unproven anti–disease effects.

In May 2016, the U.S. <u>Federal Trade Commission</u> (FTC) declared that POM Wonderful could not make health claims in its advertising, followed by a <u>U.S. Supreme Court</u> (SCOTUS) ruling that declined a request by POM Wonderful to review the court ruling, upholding the FTC decision.

# THE CULTURAL SIGNIFICANCE OF THE POMEGRANATE

## IN ANCIENT EGYPT

Ancient Egyptians regarded the pomegranate as a symbol of prosperity, fertility and ambition. Pomegranates were painted in tombs and walls of the ancient Egyptian pharaohs as a symbol of life after death. The pomegranate was referred to by the Semitic (a branch of the *Afroasiatic* language family) names of "jnhm" or "nhm". According to the *Ebers Papyrus* (also known as Papyrus Ebers), one of the oldest (*c.* 1500 BC) Egyptian medical writings of herbal knowledge and among the most important medical *papyri* of ancient Egypt, Egyptians used the pomegranate for the treatment of tapeworms (intestinal worms) and other infections.

## IN ANCIENT AND MODERN GREECE

The Greeks were familiar with the fruit even before it was introduced to Rome via Carthage (the capital of the Carthaginian civilization, east of Lake Tunis in what is now Tunisia), and it figures in multiple myths and artworks.

In Ancient Greek mythology (a branch of classical mythology), the pomegranate was known as the "fruit of the dead", and believed to have sprung from the blood of Adonis (the mortal lover of the goddess Aphrodite).

The pomegranate is featured in the myth of Persephone (also called Kore or Cora), the daughter of Zeus and Demeter, where she becomes queen of the Underworld (a distinct realm where an individual goes after death). She becomes queen after her abduction by her uncle Hades, god of the dead and king of the Underworld, and the eldest son of Cronus and Rhea.

The myth prominently features her consumption of pomegranate seeds, requiring her to spend a certain number of months in the Underworld every year. In the myth the number of seeds, and therefore months, vary. During the months that Persephone sits on the throne of the Underworld beside her husband Hades, her mother Demeter (Olympian goddess of harvest and agriculture, governs crops, grains and food) mourned and no longer gave fertility to the earth. This was the ancients' explanation for the seasons.

According to professor of classical studies at Boston University Carl A. P. Ruck and Classical mythologist (Blaise) Daniel "Danny" Staples, the chambered pomegranate is also a surrogate for the Middle Eastern poppy flower's narcotic capsule (from which opium is derived), with its comparable shape and chambered interior.

On a Mycenaean seal illustrated in American writer and professor of literature at Sarah Lawrence College Joseph John Campbell's *Occidental Mythology* (1964), the seated Goddess of the double–headed axe (called "labrys", the Lydian word according to Plutarch) offers three poppy pods in her right hand and supports her breast with her left. She embodies both aspects of the dual goddess, life–giving and death–dealing at once.

The Titan Orion (a giant huntsman whom Zeus placed among the stars as the constellation of the same name) was represented as "marrying" Side (his first wife and mother to daughters Metioche and Menippe), who was cast into Hades by Hera because she rivaled the goddess in beauty. "Side" in Boeotia means "pomegranate", thus consecrating the primal hunter to the goddess.

In the 5<sup>th</sup> century BC, Polycleitus (among the most important sculptors of classical antiquity) took ivory and gold to sculpt the seated Argive Hera in her temple (in Argos, a city in Argolis, the Peloponnese). She held a scepter in one hand and offered a pomegranate, like a "royal orb" (the *globus cruciger*, also called "the orb and cross", an orb surmounted by a cross, a symbol of authority), in the other.

In the 2<sup>nd</sup> century, Greek traveler and geographer Pausanias is said to have proclaimed the story of the pomegranate a "holy mystery." The pomegranate has a *calyx* shaped like a crown. In Jewish tradition, it has been seen as the original "design" for the proper crown.

A pomegranate is displayed on coins (numismatic objects) produced at Side. The ancient Greek city of Side was in Pamphylia, a former region on the southern Mediterranean coast of Asia Minor (modern-day Antalya province, located on the coast of Turkey, between the Taurus Mountains and the Mediterranean Sea).

Within the Heraion of Samos at the mouth of the Sele (an archaeological site consisting of a sanctuary complex on the island of Samos, Greece, dedicated to the goddess Hera), near Paestum (a major city on the coast of the Tyrrhenian Sea), Magna Graecia (name the Romans gave to the coastal areas of Southern Italy in present—day Calabria, Apulia, Basilicata, Campania and Sicily), is a chapel devoted to the *Madonna del Granato*, "Our Lady of the Pomegranate", whom excavator Helmut Kyrieleis believed to be the Christian successor of the goddess Hera by virtue of her epithet and attribute of a pomegranate.

Modern Greeks, still attribute strong symbolic meaning to the pomegranate. When one buys a new home, it is convention for a guest to bring a pomegranate as a housewarming gift, it is placed near the

"ikonostasi" (the icon corner, sacred corner or red corner, a small worship space) as a symbol of abundance, fertility, and good luck.

The icon corner has pre–Christian roots and it can be found in the homes of Eastern Orthodox, Greek– Catholic and Roman Catholic Christians. Pomegranate decorations for the home are very common in Greece and sold in most home goods stores.

When Greeks commemorate their dead, they make "kollyva" (a dish used liturgically in the Eastern Orthodox Church) as offerings. The dish consists of boiled wheat, mixed with sugar and decorated with pomegranate seeds.

In Turkey, pomegranate sauce (Turkish: "nar ekşisi") is used as a salad dressing, to marinate meat, or simply to drink straight. Pomegranate seeds are also used in salads and sometimes as garnish for desserts like "güllaç" (made with milk, pomegranate and pastry, eaten during Ramadan). Pomegranate syrup or molasses is used in "muhammara", a spicy dip made of roasted red pepper (capsicum), walnut, garlic and breadcrumbs popular in Syria and Turkey.

In Greece, pomegranate is used in many recipes, including "kollivozoumi", a creamy broth made from boiled wheat, pomegranates, and raisins (dried grapes), legume salad (a plant in the family Fabaceae, the dried seeds are also called "pulses") with wheat and pomegranate, traditional Middle Eastern lamb kebabs with pomegranate glaze, pomegranate eggplant (*Solanum melongena*, "aubergine" or "brinjal", in the family Solanaceae) relish, and <u>avocado</u>-pomegranate dip.

Pomegranate is also made into a liqueur (an alcoholic drink composed of spirits and additional flavorings), and as a popular fruit confectionery (such as "spoon sweets") used as ice cream topping, mixed with yogurt (a food produced by bacterial fermentation of milk), or spread as jam (fruit preserves) on toast.

## IN ANCIENT ISRAEL AND JUDAISM

The pomegranate is mentioned in the Torah many times. It is also included in coinage and various types of ancient and modern cultural works.

For example, pomegranates were known in Ancient Israel as the fruits that the scouts brought to Moses to demonstrate the fertility of the "promised land". The Book of Exodus (the second book of the Bible) describes the *me'il*, "robe of the ephod" (a type of apron), one of the sacred articles of clothing closely connected with oracular practices and priestly ritual worn by the Hebrew high priest (title of Judaic religious officials from post–exile until the Romans destroyed the Second Temple in 70 CE Jerusalem).

The "me'il" is described as having pomegranates embroidered on the hem, alternating with golden bells, which could be heard as the high priest entered and left the "Holy of Holies" (in the Hebrew Bible it refers to the inner sanctum of the Tabernacle, where God's presence appeared), the area was defined by four pillars that held up the covering, under which the Ark of the Covenant was held, the Ark was said to contain the Ten Commandments).

According to the Books of Kings (in the Hebrew Bible writings that conclude the Deuteronomistic history of Israel, including the books of Joshua, Judges and Samuel), the capitals of the two pillars ("Jachin" and "Boaz"), copper, brass or bronze pillars used as symbols in Freemasonry and religious architecture, that stood in front of Solomon's Temple (also known as the First Temple) in Jerusalem were engraved with pomegranates.

Jerusalem, a city Situated on a plateau in the Judaean Mountains between the Mediterranean and Dead Seas, is one of the oldest cities in the world and is considered holy by the three major Abrahamic

religions: Judaism, Christianity and Islam. King Solomon is said to have designed his coronet based on the pomegranate's "crown" (*calyx*).

Some Jewish scholars believe the pomegranate to be the forbidden fruit from the tree of knowledge of good and evil, which God commanded mankind not to eat, but which Adam and Eve ate and are exiled from the Garden of Eden ("Garden of God" or "Terrestrial Paradise", the biblical paradise described in Genesis 2–3 and Ezekiel 28 and 31).

Additionally, pomegranates are one of the *Seven Species* (Hebrew: חינימה תעבש, "Shiv'at Ha–Minim"), seven agricultural products, five fruits and two grains named in the Hebrew Bible ("Tanakh" or "Mikra", the collection of Hebrew scriptures, including the Torah, the Nevi'im and the Ketuvim, <u>Deuteronomy</u> <u>8:8</u>) as special products of the "Land of Israel" (traditional Jewish name), English names include the "Land of Canaan", the "Promised Land", the "Holy Land" and Palestine.

The Songs of Solomon (Song of Solomon 4:3) reference the pomegranate, comparing the fruit to a temple. Consuming pomegranates on Rosh Hashana (Jewish New Year) is traditional because, with its numerous seeds, it symbolizes fruitfulness.

Pomegranates are said to contain 613 seeds, which corresponds with the 613 commandments of the Torah (collectively the first five books of the Hebrew Bible, the books of Genesis, Exodus, Leviticus, Numbers and Deuteronomy). This particular tradition is referred to in the opening pages of Australian writer Ursula Dubosarsky's novel *Theodora's Gift*.

The pomegranate appeared on the ancient coins of Judea, and when not in use, the handles of Torah scrolls (or "Sefer Torah", a handwritten copy) are sometimes covered with decorative silver globes called "rimmonim", similar in shape to pomegranates.

Pomegranates symbolize the mystical experience in the Jewish tradition, or "kabbalah" (esoteric method, discipline and school of thought), the typical reference being entering the *pardes rimonim*, "garden of pomegranates". *Pardes Rimonim* is also the title of a book by the leader of a mystical school in 16th–century Safed, Ottoman Syria, Moses ben Jacob Cordovero, known by the acronym the RAMAK.

## IN EUROPEAN CHRISTIAN IMAGERY

In the earliest incontrovertible appearance of Christ in a mosaic, a 4th–century floor mosaic from Hinton St. Mary (a village and civil parish) in Dorset, southern England, now in the British Museum (public museum located in London), the bust of Christ and the chi rho are flanked by pomegranates.

The Chi Rho is one of the earliest forms of *Christogram*, formed by superimposing the first two (capital) letters—chi and rho (XP)—of the Greek word XPIΣTOΣ (Christos) in such a way that the vertical stroke of the rho intersects the center of the chi.

Pomegranates continue to be a motif often found in Christian mythological (an Abrahamic monotheistic organized religion) decoration. They are often woven into the fabric of vestments and liturgical hangings ("antependium" or "parament") or wrought in metalwork.

Pomegranates figure in many religious paintings by the likes of Early Renaissance Italian painter Alessandro di Mariano di Vanni Filipepi (known as Sandro Botticelli) and High Renaissance Italian polymath, painter, draughtsman, engineer, scientist, theorist, sculptor and architect Leonardo di ser Piero da Vinci (Leonardo da Vinci), often in the hands of the Virgin Mary (a 1st–century Jewish woman of Nazareth, wife of Joseph and mother of Jesus, both Bible and Quran describe her as a "virgin") or the infant Jesus ("Christ Child", "Divine Infant", "Baby Jesus", "Divine Child", "Child Jesus", "Holy Child" and "Santo Niño"). The fruit, broken or bursting open, is a symbol of the fullness of Jesus' suffering (the crucifixion occurred in Judea, likely in 30 or 33 AD) and resurrection (the belief that God raised Jesus on the 3<sup>rd</sup> day after his crucifixion).

In the Eastern Orthodox Church (or simply Orthodox Church, the second–largest Christian church), pomegranate seeds may be used in "kolyva" (also spelled "kollyva", "kollyba" or "colivă"), a dish prepared for memorial services (a liturgical ceremony for the departed), as a symbol of the sweetness of the heavenly kingdom (Heaven).

#### IN ISLAM

Chapter 55 (Ar–Rahman is the "Surah", with 78 verses, or "āyāt") of the Quran (also Qur'an or Koran, the religious text of Islam, believed by Muslims to be a revelation from God) mentions the pomegranate as a "favor" to be offered to those fearful to the "Lord" (Arabic: Allah) in "two Gardens" (*Jannah*, lit. "paradise, garden"), the final abode of the righteous.

#### IN ARMENIA

The pomegranate is one of the main fruits in Armenian culture (alongside apricots and grapes). Its juice is used in Armenian food, heritage or wine. The pomegranate is a symbol in Armenia, representing fertility, abundance and marriage.

It is also a semi–religious icon. For example, the fruit played an integral role in a wedding custom widely practiced in ancient Armenia; a bride was given a pomegranate fruit, which she threw against a wall, breaking it into pieces. Scattered pomegranate seeds ensured the bride future children.

*The Color of Pomegranates*, a 1969 Soviet Armenian art film directed by film director, screenwriter and artist Sergei Parajanov, is a biography of the 18<sup>th</sup> century Armenian poet, musician and "ashug" Sayat–Nova (King of Song) which attempts to reveal the poet's life visually and poetically rather than literally.

#### IN AZERBAIJAN

The pomegranate is considered one of the symbols of Azerbaijan, where it is used mainly for juice. Annually in October, a cultural festival is held in Goychay, known as the "Goychay Pomegranate Festival". The festival features Azerbaijani fruit–cuisine mainly the pomegranates from Goychay, which is famous for its pomegranate growing industry. At the festival, a parade is held with traditional Azerbaijani dances and music.

A sauce from pomegranate juice "narsharab", (Persian: "a)nar" + "sharab", lit. "pomegranate wine") is usually served with fish or "tika kabab" (a cooked meat dish).

Pomegranate was depicted on the official logo of the 2015 European Games (also "Baku 2015" or "Baku 2015 European Games") held in Azerbaijan. "Nar the Pomegranate" was one of the two mascots of these games. Pomegranates were also featured on the jackets worn by Azerbaijani male athletes at the games' opening ceremony.

## IN CHINA

Introduced to China during the imperial Han Dynasty (206 BC–220 AD, established by Liu Bang and ruled by the House of Liu), the pomegranate (Chinese: 石榴; pinyin: "shíliu") was considered an emblem of fertility and numerous progeny.

This symbolism is a pun on the Chinese character  $\neq$  (*zi*), which can mean "seed" as well as "offspring", thus a fruit containing so many seeds is a symbol of fecundity. Pictures of the ripe fruit with the seeds bursting forth were often hung in homes to bestow fertility and bless the dwelling with numerous children, an important facet of traditional Chinese culture.

#### IN INDIA

In some Hindu traditions, the pomegranate (Hindi: "anār") symbolizes prosperity and fertility. It is associated with both Bhoomidevi ("Bhumi", "Bhudevi" or "Vasundhara", the goddess of the Earth) and Lord Ganesha ("Ganapati", "Vinayaka" or "Pillaiyar"), one of the best–known and most worshipped deities. Ganesha is referred to as "the one fond of the many–seeded fruit".

#### IN ANCIENT PERSIA AND MODERN IRAN

Iran is the second–largest producer and largest exporter of pomegranates in the world. In Persian, pomegranate is known as "anar". Pomegranate skins were and still are made into dye and used to stain wool and silk in the carpet industry.

Before tomatoes (the edible berry of *Solanum lycopersicum*, a fruit endemic to the Americas) arrived in the Middle East, pomegranate juice, molasses (a viscous liquid resulting from refining a sweet substance), and vinegar (aqueous solution containing 5–6% acetic acid by volume) were widely used in Iranian cuisine (often called Persian cuisine), e.g. chicken, "ghormas" and refreshment bars.

These ingredients are still found in traditional recipes such as "fesenjān" (a stew from Northern Iran), is a thick sauce made from pomegranate juice and ground walnuts, usually spooned over duck or other poultry (domesticated birds kept as a food source) and rice, and in "ash–e anar" (pomegranate soup), an Iranian dish made from pomegranate juice and seeds, yellow split peas, mint leaves and spices.

Pomegranate seeds are used as a spice known as "anar dana" (Persian or Farsi: "anar" + "dana", pomegranate + seed), most notably in Indian and Pakistani cuisine. Dried whole seeds can often be obtained in ethnic Indian markets. These seeds are separated from the flesh, dried for 10–15 days, and used as an acidic agent for chutney (a spread or relish made from a variety of ingredients) and curry (a dish seasoned with a mix of spices) preparation.

Ground "anardana" is also used, which results in a deeper flavoring in dishes and prevents the seeds from getting stuck in teeth. Seeds of the wild pomegranate variety from the Himalayas known as "daru" are regarded as high–quality sources for this spice.

#### IN MEXICO

Pomegranates are commonly used to adorn the traditional dish "chiles en nogada" (chiles stuffed with "picadillo" topped with a walnut cream sauce called "nogada", pomegranate seeds and parsley), representing the colors of the Mexican flag, the green (poblano pepper), white ("nogada" sauce) and red (pomegranate seeds) tricolor.

# THE HEALTH AND BEAUTY BENEFITS OF POMEGRANATE SEED OIL

There are quite a few important benefits of pomegranate seed oil, such as its ability to prevent premature signs of aging, soothe skin inflammation, strengthen hair, promote hair growth, stop dandruff, protect the heart, stimulate circulation, boost the immune system, lower blood pressure, ameliorate inflammatory conditions and fight cancer.

The beneficial nutrients found in pomegranate seed oil are organic compounds that provide many significant health and beauty benefits. Each compound provides a different set of powerful benefits, although these often overlap. The results may differ depending on the method of application and may vary from person to person.

• **Oleic acid** is an omega–9 fatty acid that helps soften your skin, reduce signs of aging, boost your immune system, alleviate joint pain and inflammation, stimulate hair growth, eliminate dandruff and provide powerful antioxidant properties.

- Linoleic acid is an omega-6 fatty acid that the body can't manufacture on its own, linoleic acid is known to help regulate immunity and fight off serious illnesses. It also stimulates hair growth, locks in moisture for both skin and hair, quickens the healing of wounds, treats acne outbreaks and offers many other anti-inflammatory properties.
- **Punicic acid** is great for alleviating muscle pain, reducing inflammation and swelling, increasing the production of collagen, and strengthening hair follicles and roots.
- **Stearic acid** is a powerful cleanser that also helps protect damaged hair and soften the skin; this acid also acts as a natural preservative that greatly extends the oil's shelf life.
- **Palmitic acid** is the most common fatty acid found in many vegetable and essential oils. It acts as a powerful emollient that soften the skin and hair.
- *Ellagic acid* is a small phytochemical (plant–based biologically active compound) with naturally occurring antioxidant properties.
- **Flavonoids** are phytonutrients (plant nutrients) that are responsible for many health benefits of fruits and vegetables. They belong to the *polyphenol* group of antioxidants, often used in traditional natural healing practices.
- *Phytosterols* boost the production of collagen, promote new cell growth, boost the immune system, protect the skin from damage due to sun exposure and reduce the appearance of blemishes.
- Vitamin E is recognized as a powerful nutrient that has antioxidant properties, repairs damaged skin, adds moisture to the skin and hair, provides relief from burns, cleanses pores and balances oil (sebum) production.
- Vitamin C, also known as ascorbic acid, provides antioxidant benefits and plays an important role in the health of skin, bone and connective tissues.

## 1. PREVENTS AND REDUCES THE SIGNS OF AGING

Pomegranates and the seed oil from the fruit are a great source of powerful antioxidants like vitamin A (*retinol*) and vitamin C (*ascorbic acid*). When applied to the skin, pomegranate seed oil can help neutralize the damaging effects of free radicals that cause oxidative stress and restore skin's youthful appearance. These antioxidants can help prevent or diminish the appearance of wrinkles, fine lines and other age–related blemishes.

## 2. BRIGHTENS SKIN AND FADES DARK SPOTS

Sun spots and skin darkening (hyperpigmentation) are caused by overproduction of *melanin* (a skin pigment). Both <u>vitamin C</u> and *ellagic acid* interfere with this overproduction, preventing darkening of the skin. Pomegranate seed oil also helps reduce the appearance of dark spots and brightens the complexion.

## 3. MOISTURIZES DRY SKIN

The skin is the largest organ in our body and one of the two first lines of defense against environmental damage from free radicals and pathogens. One of the simplest ways to ensure that your skin stays hydrated is by drinking plenty of water.

The phytochemicals and rich antioxidants in pomegranate seed oil help improve the circulation of blood and nutrients to the skin. With its unique molecular structure, pomegranate seed oil is able to deeply penetrate skin and hair to deliver intense hydration. Pomegranate seed oil has moisturizing qualities for both oily and dry skin. It won't leave an oily residue on the skin or clog pores.

# 4. PROMOTES CELL REGENERATION

Keratinocytes are the primary type of cell found in the epidermis, the outermost layer of the skin. They make keratin, a protein that provides strength to skin, hair, and nails. These cells form in the deep basal-cell layer of the skin, and take about a month to reach the surface. In humans, they constitute 90% of epidermal skin cells.

Epidermal skin cells are constantly exposed to environmental conditions that cause them to become old and die off. These "dead" cells contribute to skin looking dull. Regular exfoliation helps get rid of dead skin cells and stimulates cell regeneration (the creation of new cells).

The vitamin C in pomegranate seed oil promotes collagen and elastin production—stimulating this "<u>keratinocyte proliferation</u>" process, promoting a bright, fresh complexion. Pomegranate seed oil mixed with other ingredients in homemade exfoliating treatments makes an excellent exfoliator suitable for all skin types.

## 5. HELPS IMPROVE SKIN TEXTURE

As we age our body's natural collagen reserves become depleted, decreasing skin elasticity and firmness. Collagen is the key building block in our skin, providing both structure and elasticity—however, our bodies' collagen reserves are finite.

Pomegranate seed oil <u>protects and extends the lifespan of fibroblasts</u>. Fibroblasts are responsible for the production of collagen and elastin—the very things that keep the skin strong, elastic and youthful–looking. The vitamin C in pomegranate seed oil helps smooth skin texture and <u>reduce skin roughness</u>, keeping it firm and plump.

# 6. REDUCES THE CHANCES OF SCARRING

The *punicic acid* found in pomegranate seed oil helps speed wound healing. It promotes collagen and protein synthesis—necessary components for cell regeneration. The *flavonoids* in pomegranate seed oil <u>reduce the risk of wounds becoming inflamed</u>, reducing the formation of scar tissue.

# 7. HELPS CLEAR ACNE

Hormonal imbalance and clogged pores are the root cause of acne and pimples. The antioxidants found in pomegranate seed oil can help clear acne by regulating the production of sebum (oil) in skin. Sebum is an oil–like substance produced by sebaceous glands in the skin to keep it moist and form a protective barrier.

Sebum in appropriate quantity is essential to the skin but excess oil will clog pores. Clogged pores will lead to pimples. Pomegranate seed oil is easily absorbed by the skin and will not clog pores. Its anti– inflammatory properties help reduce the swelling of pimples and may help soothe the symptoms of other skin conditions like eczema and psoriasis.

The antibacterial, antimicrobial and antiseptic properties of pomegranate seed oil can help kill fungus and acne–causing bacteria. Using pomegranate seed oil topically on the face can help clear up the signs of acne and pimples.

## 8. PROTECTS THE SKIN FROM SUN DAMAGE

Pomegranate seed oil has some natural SPF that protects the skin from the harmful effects of UV rays, and helps the skin recover from prolonged sun exposure. Anti–inflammatory and antioxidant compounds like vitamin C, *punicic acid* and *flavonoids* can protect against free radical damage and sun exposure.

Studies have shown that *ellagic acid*—found in pomegranate seed oil—can help protect skin cells <u>from</u> <u>damage caused by UVB rays</u> and can help <u>disrupt the process of wrinkle formation</u>. A <u>study published in</u> <u>2003</u> found that applying pomegranate seed oil to mice significantly reduced the incidence of skin cancer in animals exposed to carcinogenic chemicals.

# 9. Strengthens and Stimulates Hair Growth

Pomegranate seed oil is not only great for your skin, it can also be applied to your hair and nails. It can help add life and moisture to dry and dull hair, and can keep frizz under control.

# 10. PREVENTS DANDRUFF

Massaging small amounts of pomegranate seed oil into the scalp is a great way to hydrate and stimulate blood flow. This can effectively increase the health of your hair, counteract premature hair loss and even stimulate hair growth from healthy follicles.

Pomegranate seed oil contains anti-fungal and antibacterial properties that can help treat common scalp conditions like dandruff. It can also help soothe irritation, itching and inflammation of the scalp.

# 11. HAS ANTI-INFLAMMATORY PROPERTIES

The omega fatty acids and antioxidants of pomegranate seed oil have anti–inflammatory effects that can help reduce swelling and eliminate pain associated with conditions like arthritis, joint disorders, headaches, hemorrhoids and edema.

While drinking pomegranate juice and eating the fruit seeds can have excellent effects against inflammation, you may also <u>apply the oil topically to ease inflammation</u> in joints and muscles. You can also apply the oil topically to help reduce skin inflammation, redness, dryness and irritation.

# 12. IMPROVES CIRCULATION

Optimal blood circulation in the body is a great way to prevent chronic diseases, improve the efficiency of the immune system and speed healing. Pomegranate seed oil has antioxidant properties, which can aid in weight loss efforts by optimizing your metabolism and reducing levels of fat deposits.

# 13. BOOSTS THE IMMUNE SYSTEM

The high content of vitamin C in pomegranate seed oil can provide a necessary boost to the body's defenses. It is also effective in protecting immune activity in the skin, preventing airborne pathogens from attacking the body's largest organ.

# 14. IMPROVES HEART HEALTH

Studies have linked the consumption of pomegranate seeds and juice to improved heart health. Some studies have found that the consumption of pomegranate seeds and juice could help reduce the risk of heart disease, atherosclerosis, heart attacks and strokes. The oil of pomegranate seeds can offer similar benefits.

The combination of phytochemicals, monounsaturated fatty acids, and polyunsaturated fatty acids found in pomegranate seed oil have a significant impact on overall heart health. It can help lower LDL (bad) cholesterol levels, increase HDL (good) cholesterol, promote circulation and lower blood pressure.

# 15. MANAGES CHOLESTEROL

One <u>study published in 2010</u> found that pomegranate seed oil could reduce cholesterol and triglyceride levels. Participants in the study were given pomegranate seed oil daily for a period of four weeks. The research findings showed that it helped reduce total cholesterol levels and triglycerides.

## 16. PREVENTS CONSTIPATION

Pomegranate seeds are rich in fiber. Consuming appropriate amounts of fiber daily helps add bulk to waste for smooth bowel movements.

## 17. PROTECTS AGAINST CANCER

A number of studies have found that pomegranate fruit, juice and oil could help fight various forms of cancer. One <u>study in 2017</u> found that compounds found in pomegranate were effective against prostate cancer, while another <u>study in 2010</u> linked pomegranate juice intake to a reduced risk of breast cancer.

*Punicic acid,* the main active ingredient in pomegranate seed oil, has antiproliferative effects on breast cancer. It stops the spread of cancer cells by inhibiting their mitochondria and preventing their replication.

## 18. IMPROVES COGNITION

A <u>small-scale study of 30 patients in Israel</u> has found that multiple sclerosis patients taking a nanoengineered nutritional supplement made out of pomegranate seed oil showed "significant cognitive improvement" after just three months.

The study was conducted at the Multiple Sclerosis Center at Hadassah Ein Kerem Hospital in Jerusalem by Professor Dimitrios Karussis, director of the center and a senior neurologist. Results showed that patients taking the supplement witnessed an average 12% improvement in learning ability and text comprehension, word recall and categorization, in the three months of treatment.

# THE THERAPEUTIC USES OF POMEGRANATE SEED OIL

Ayurvedic practices referenced the use of the pomegranate fruit for lowering fevers, and Greek medicinal practices used it to treat diabetes. The roots and bark of the bush were also traditionally used to treat bleeding wounds, dysentery and ulcers.

Pomegranate seed oil is rich in vitamins, minerals, antioxidants, and nutrients that make it a very effective ingredient for skincare. These <u>homemade recipes using pomegranate seed oil</u> are very useful for daily skin care.

- 1. **Daily Skin Care:** Apply pomegranate seed oil to your skin alone or use it as a carrier oil for your favorite skin friendly essential oils.
- 2. Moisturize Dry Skin: Apply 2–3 drops under your regular moisturizer.
- 3. Acne Treatment: Apply a few drops of pomegranate seed oil to the affected areas of your skin.
- 4. For Eczema and Other Skin Conditions: Use it as a carrier oil combined with a few drops of your favorite essential oils.
- 5. Additional Sunscreen: Smooth 2–3 drops over your skin before applying your sunscreen or add to your existing sunscreen lotion. Pomegranate seed oil contains natural SPF which may protect against sunburn. Apply to your skin after a long day in the sun.
- 6. Soothe Irritated Skin: Gently rub 2–3 drops of pomegranate seed oil on irritated skin.
- Hair Growth Treatment: Add 2–3 drops of pomegranate seed oil to your conditioner. Alternatively, you can apply 2–3 drops of pomegranate seed oil to the ends of your hair and comb it in.
- 8. **Prevent Dandruff:** Add 3–4 drops of pomegranate seed oil to your regular shampoo and massage it well into your scalp.
- 9. **Dandruff Hot Oil Treatment:** Combine pomegranate seed oil with coconut oil in a ratio of 1:4. Warm up the ingredients and massage into your scalp. Leave in for 2–3 hours. Wash out with your usual shampoo.

10. **Soothe Inflammation:** Add 2–3 drops of your favorite essential oils to 1 Tbsp. pomegranate seed carrier oil. Massage it into the affected areas for quick relief.

## VARIETIES OF POMEGRANATE SEED OIL

You may find pomegranate seed oil available in different varieties, which may include oil that is organic or oil that has been refined:

- **Refined pomegranate seed oil** is less potent and does not provide as many nutritional benefits as unrefined oil. This oil is more of a carrier oil and is typically used in skin and hair care routines.
- **Organic pomegranate seed oil** is much more potent and has higher concentrations of nutrients. This oil is packed full of essential fatty acids that provide powerful benefits, regardless of the application method.

# FREQUENTLY ASKED QUESTIONS

#### Is pomegranate seed oil good for acne?

Yes it is. Pomegranate seed oil is ideally suited to treating acne because of its anti–inflammatory and antimicrobial properties. It also contains *linoleic acid* which can help keep sebum (oil) production under control. The *punicic acid* found in pomegranate seed oil also has excellent antioxidant properties that can protect your skin from darkening and scarring.

#### Is pomegranate seed oil good for the skin?

Yes. It is very good for moisturizing the skin. It is organic and safe for all skin types.

#### Is pomegranate seed oil effective for anti-aging?

Yes. Pomegranate seed oil helps reduce the signs of aging and can help fade the appearance of fine lines and wrinkles.

#### Does pomegranate seed oil benefit all skin types?

Yes. Pomegranate seed oil is beneficial for all skin types. It is safe and has a low comedogenic rating.

#### Does pomegranate seed oil brighten skin?

Yes. Pomegranate seed oil brightens the skin by exfoliating dead skin cells. It lightens the appearance of blemishes and scars.

#### Is it good to eat pomegranate seeds?

Yes it is. Pomegranate seeds are nutrient-dense. They contain numerous minerals, important vitamins and plenty of fiber. In fact, the majority of the fruit's fiber comes from the seeds.

#### What is the pomegranate good for?

Pomegranates are good your health in a number of ways. They are a great source of fiber, vitamins and essential nutrients. They are rich in antioxidants and have antimicrobial and anti–inflammatory properties.

Studies have linked the consumption of pomegranate seeds, juice and oil to a reduced risk of <u>heart</u> <u>disease</u> and <u>cancer</u>. As well as improving memory and protecting against neurodegenerative diseases like Alzheimer's.

# PRECAUTIONS

Pomegranate seed oil is generally safe to use, it can even be used straight out of the bottle. Avoid use if you are allergic to pomegranates. Some people may still experience side effects after use. These side effects might include an upset stomach, nausea, vomiting, diarrhea and other gastrointestinal problems, or inflamed or irritated skin, or possible pregnancy complications.

If nursing or pregnant, consult your physician prior to using pomegranate seed oil. Use essential oils with extreme caution on children, be sure that it is safe for use on children. Some brands clearly labels their essential oils "KidSafe" on the bottle if it can be used on children ages 2–10.

Pomegranate seed oil is known for its ability to help lower blood pressure. Avoid use if currently taking blood thinners or any high– blood pressure medication as this combination could cause your blood pressure to fall below normal levels.

Never ingest essential oils. Pomegranate seed oil should only be used for topical application. Do not apply pomegranate seed oil directly to broken or damaged skin. Do not apply directly to open wounds. Never use pomegranate seed oil in eyes or in mucous membranes. Pomegranate seed oil can cause skin irritation or an allergic reaction.

When applying pomegranate seed oil topically (on your skin), always perform a 24–hour skin patch test first using 1–2 drops, <u>read how for further details</u>. Use only 100% authentic oils. Store in tightly–sealed dark glass containers; in a cool, dark place away from light. If you are interested in trying pomegranate seed oil, be sure to choose a product that is 100% pure and organic. Pomegranate seed oil can be found at most health food stores or online.