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HERBAL MEDICINES USED DURING PREGNANCY, CHILDBIRTH AND POSTPARTUM CARE

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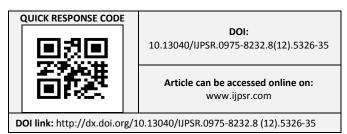
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ABSTRACT: Pregnancy and childbirth have been an essential part of human existence for millennia, but unfortunately the experience has not been easy for all women. Although many pharmaceutical drugs are available but the potential of drugs to cause harm, exemplified by thalidomide in 1958 cannot be ignored. Therefore, many pharmaceutical drugs are not recommended for use during pregnancy either because of known or suspected problems or because not enough is known to say that they are safe. In this respect, herbal medicine is gaining popularity both in developing and developed countries because of their natural origin and relative safety with fewer side effects. This article briefly reviews some of those plants all over the world which are being used during pregnancy, childbirth and postpartum care. About 122 plants species belonging to different families were reviewed among which the most common were Asparagus racemosus (Liliaceae), Apium graveolens (Apiaceae), Rheum officinale (Polygonaaceae), Veratrum nigrum (Melanthiaceae). From the present studies it can be conclude that, herbal medicines can be used during pregnancy, childbirth and postpartum care after proper validation of the plants.

INTRODUCTION: Since ancient times, mankind has used plants to cure diseases and relieve physical sufferings¹. The plants provided food, clothing, shelter and medicine. Much of the medicinal use of plants seems to have been developed through observations of wild animals and by trial and error. As time went on, each tribe added the medicinal power of herbs in their area to its knowledge base ².



Because of better cultural acceptability, better compatibility with the human body, lesser side effects and effectiveness many traditional medicines is now an accepted fact.

More than 35,000 plant species are being used in various human cultures around the world for medicinal purposes ¹. Herbal medicines, since times immemorial, have been used in virtually all cultures as a source of medicine. The widespread use of herbal remedies and healthcare preparations, as those described in ancient texts such as the Vedas and the Bible, and obtained from commonly used traditional herbs and medicinal plants, has been traced to the occurrence of natural products with medicinal properties. The use of traditional medicine and medicinal plants in most developing

countries, as a normative basis for the maintenance of good health, has been widely observed. About 80% of world populations are still dependent on traditional medicines for primary healthcare ³.

Herbal Medicines: "Herbal formulation means a dosage form consisting of one or more herbs or processed herb(s) in specified quantities to provide specific nutritional, cosmetic benefits, and/or other benefits meant for use to diagnose treat, mitigate diseases of human beings or animals and/or to alter the structure or physiology of human beings or animals". Herbal preparations are obtained by subjecting whole plant, fragmented or cut plants, plants parts to treatments such as extraction, distillation, expression, fractionation, purification, concentration or fermentation. These include comminuted or powdered herbal substances, tinctures, extracts, essential oils, expressed juices and processed exudates ².

Advantages: 4

- 1. Mostly herbal drugs are well tolerated by the patient, having fewer unintended consequences and fewer side effects than traditional medicine, and may be safer touse.
- 2. Herbal drugs are more effective for longstanding health complaints that don't respond well to traditional medicine.
- 3. Cost of herbal drugs is much less than prescription medications. Research, testing, and marketing add considerably to the cost of prescription medicines. Herbs tend to be inexpensive compared to drugs.
- 4. Herbs are available without a prescription. Simple herbs, such as peppermint and chamomile, can be cultivated at home.

Limitations: 4

- 1. An herbalist would not be able to treat serious trauma, such as a broken leg, nor would he be able to heal appendicitis or a heart attack as effectively as a conventional doctor using modern diagnostic tests, surgery, and drugs.
- 2. Self-treatment with herbal drugs may consist of many risk factors. Moreover with no proper direction of doses may lead to overdose.
- 3. Consumption of herbal drugs without correct identification of plant *i.e.* use of wrong part of plant may lead to poisoning.

4. All herbal drugs are not safe; some may be poisonous or may cause allergenic reactions.

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5. Curing period is usually longer in comparison to conventional medication. Immense patience while undergoing herbal treatment is needed.

Pregnancy and childbirth have been an essential part of human existence for millennia, but unfortunately the experience has not been easy for all women. Medicinal plants have a significant role during pregnancy, birth and postpartum care in many rural areas of the world. Plants used in women's health related conditions such as female fertility, menorrhea, birth control, pregnancy, birth (parturition), postpartum (puerperium) lactation, including infant care, has been documented for various ethnic groups 5-10. Even though modern medical systems are available, most of the people are still depending on the rich local health traditions for mother and child care.

Therefore, herbal medicine is gaining popularity both in developing and developed countries because of their natural origin and relative safety with fewer side effects. Herbal medicines are finished, labelled medicinal products that contain active ingredients, aerial or underground part of plants or other plant materials, or combination thereof, whether in the crude state or as plant preparations ¹¹. The aim of present article is to briefly review some of those plants all over the world which are being used during pregnancy, childbirth and postpartum care.

RESULT AND DISCUSSION: About 122 plants species belonging to 50 different families were reviewed among which the most common were Asparagus racemosus, Apium graveolens, Rheum officinale, Veratrum nigrum, Momordica charantia, Azadiracta indica, Emblica officinalis, Zea mays which were used for complications that are common during pregnancy (**Table 1**).

Induction of labour may be necessary in certain conditions, in this respect herbal medicines play an important role (**Table 2**). The nature of action involves the modulation of uterine contraction at labour, resulting in either the stimulation or inhibition of myometrial muscle contractions. Postpartum care includes the recovery of women after childbirth, to treat postpartum weakness,

haemorrhage and reconstitute women. **Table 3** Herbal plants used for other ailments during gives the herbal plants used for postpartum care. Pregnancy and Childbirth are discussed in **Table 4.**

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TABLE 1: HERBAL PLANTS USED DURING PREGNANCY

Sr.	Botanical	Local	Family	Part(s)	Ethno medicinal uses /
No.	Name	Name		Used	Mode of Administration
1	Asparagus racemosus	Shatavari	Asparagaceae	Root extract	Female tonic, in threatened abortion, preeclampsia associated with pregnancy, galactogogue, to treat
2	Apium graveolens	Celery	Apiaceae	Whole plant	diabetes Fresh juice for hypertension associated with pregnancy
3	Rheum officinale or R. palmatum	Rhubarb	Polygonaceae	Root	Hypertension associated with pregnancy
4	Veratrum nigrum	Black false hellebore	Melanthiaceae	Root	to treat preeclampsia during pregnancy
5	Picralima nitida	Akuamma plant	Apocynaceae	Seeds	in diabetic pregnancy
6	Nauclea latifolia	pin cushion tree	Rubiaceae	Root and stem	in diabetic pregnancy
7	Oxytenanthera abyssinica	Bamboo	Gramineae	Leaves	in diabetic pregnancy
8	Momordica charantia	Bitter melon	Cucurbitaceae	Fruit and leaf	Anti-diabetic
9	Azadiracta indica	Neem	Meliaceae	leaves	To treat anemia and anti- diabetic
10	Emblica officinalis	Amla	Euphorbiaceae	Fruit	Increases red blood cell counts and therefore improves anemia
11	Abrus precatorious	Chirmi	Mimosaceae	Roots	Grind roots, add water and drink infusion for Cough, Anti-diabetic
12	Zingiber officinale	Ginger	Zingiberaceae	Rhizomes	To treat <i>hyperemesis</i> gravidarum (serious cases of "morning sickness"), especially during the first trimester of pregnancy
13	Jateorrhiza bukobensis	Yellow fever	Menispermaceae	Tuber	Soak in water and drink infusion for Malaria
14	Breonadia microcephala	Chonya	Rubiaceae	Bark	Soak in water and drink infusion for Pneumonia
15	Ficus capensis	Nkuyu	Moraceae	Bark	Pound and add powder in porridge for Pneumonia and <i>Trichomonas vaginalis</i>
16	Cissus zombensis	Mwanamphepo	Vitaceae	Roots	Soak in water and drink concoction for <i>Trichomonas</i> vaginalis
17	Ormocarpum kirkii	Nsungachuma	Papilionaceae	Leaves and stem	Boil and drink infusion for Trichomonas vaginalis
18	Vaccinium macrocarpon	Cranberry	Ericaceae	Fruit	Cranberry extract for Urinary tract infection
19	Zea mays	Corn/maize	Poaceae	Fruit	Fruit to treat Urinary tract infection
20	Aspalathus linearis	Rooibos tea	Fabaceae	Leaves and stem	Herbal tea is used during pregnancy to relieve heat burn and nausea
21	Abutilon indicum	Thuthi	Malvaceae	Root	Decoction is used as an antihypertensive and health promotion tonic
22	Boerhaavia diffusa	Sarandakodi	Nyctaginaceae	Root	To treat anaemia
23	Citrullus colocynthis	bitter cucumber	Cucurbitaceae	Fruit	Used in Pregnancy
24	Diplazium esculentum	Vegetable fern	Athyriaceae	Leaf	Given to Pregnant mothers for nutrition

25	Arctostaphylos uva-ursi	Bearberry	Ericaceae	Fruit	Fruit to treat Urinary tract
					infection
26	Rubus idaeus and R.	Raspberry	Rosaceae	Leaf	To prevent miscarriage, ease
	occidentalis				morning sickness and
					ensure a quick birth
27	Hymenocardia acida	Therutheru	Euphorbiaceae	Roots	Soak in water and drink
					infusion for diarrhoea
28	Parinari excelsa	Muula	Chrysobalanaceae	Roots	Warm on fire and make a
					compress on ribs to treat
					Pneumonia
29	Musa paradisiaca	Nthochi	Musaceae	Fruits	Wear around waist to treat
					Pneumonia
30	Ekebergia benguelensis	Mulepa	Meliaceae	Roots	Cook and drink infusion for
					the treatment of
					Trichomonas vaginalis
31	Sida alnifolia	Arrow leaf sida	Malvaceae	Whole plant	Fresh whole plant paste in
					milk is taken (after 7
					months of pregnancy) for
					normal delivery
32	Cissus quadrangularis	Perandai	Vitaceae	Roots	Used during Pregnancy
33	Syzygium jambolanum	Black plum	Myrtaceae	Fruit	in diabetic pregnancy
34	Syzygium cuminii	Naval palam	Myrtaceae	Seed Powder	Taken orally for diabetes
35	Biophytum sensitivum	Jhalai	Oxalidaceae	leaves	Leaves of this plant and
					groundnut seeds are crushed
					and eaten twice daily by
					pregnant women as diuretic
36	Eremurus himalaicus	Tache	Asphodelaceae	Whole plant	young leaves are used as
					vegetables in case of
					anaemia

TABLE 2: HERBAL PLANTS USED TO INDUCE LABOUR AND EASE CHILDBIRTH

Sr.	Botanical	Local	Family	Part(s)	Ethno medicinal uses /
No.	Name	Name		Used	Mode of Administration
1	Aerva lanata	Cherula	Amaranthaceae	Whole plant	Decoction mixed with cow's
					milk is taken twice daily
					from 7 th month of pregnancy
					for easy delivery
2	Mullugo pentaphylla	Parpadakapullu	Aizoaceae	Whole plant	Whole plant decoction with
					water is given to ease
					delivery
3	Cleome gynandra	Eshogi	Capparaceae	Roots	aqueous herbal extract to
					induce childbirth hence
					hasten labour process
4	Vernonia amygdalina	Bitter leaf	Asteraceae	Leaves	aqueous herbal extract to
					induce childbirth hence
					hasten labour process
5	Clivia miniata	Boslelie	Amaryllidaceae	whole plant	Infusions are taken regularly
				(leaves,	during pregnancy to help
				roots and	with childbirth. Stronger
				rhizome)	concentrations are used to
					induce labour.
6	Cassia fistula	Garmala	Leguminosae	Pods and bark	Pods bark paste with kesar,
					mishri and rose water is
					given for easy and painless
					delivery
7	Carica papaya	Papaya	Caricaceae	Latex	Crude papaya latex is used

					to induce labour
8	Bidens pilosa	Sere	Asteraceae	Leaf	aqueous extract used to
					induce labour
9	Luffa cylindrica	Ekyangu	Cucurbitaceae	Leaf, fruit	aqueous extract used to
				and root	induce labour
10	Musa acuminata	Banana	Musaceae	Root	chewing after roasting used to induce labour
11	Cajanus cajan	Pigeon pea	Papilionaceae	Leaf	aqueous extract used to induce labour
12	Butea monosperma	Dhok, Khakhra	Fabaceae	Gum	25 gm gum mixed with 200 gm jiggery, given orally at the time of delivery for easy delivery
13	Brassica oleracea	Cabbagge	Brassicaceae	Root	Root is chewed to induce
14	Achyranthes aspera	Kadaladi	Amaranthaceae	Whole plant	Given orally to ease childbirth and mitigate labour pain
15	Quassia cedron	Hikuribianda	Simaroubaceae	Inner bark	Decoction is used to assist childbirth
16	Wrightia tinctoria	Khirni	Apocynaceae	Whole plant	Applied externally on vagina for easy delivery
17	Physalis peruviana	Kitutu	Solanaceae	Leaf	aqueous extract used to induce labour
18	Pennisetum purpureum	Elephant grass	Poaceae	Leaf	aqueous extract used to induce labour
19	Merwillana talensis	Blue Squill	Hyacinthaceae	Bulb	For menstrual pains, infertility and to support the process in women to deliver
20	Apeiba echinata	barudaballi	Tiliaceae	Inner bark	their babies Decoction is used to hasten childbirth
21	Eugenia michelii	Pitanga, Suriname cherry	Myrtaceae	Stem and Leaves	Stem shows antimicrobial activity, leaf infusion is used for easy delivery
22	Dactyloctenium aegyptium	Egyptian crowfoot grass	Poaceae	Leaf	Infusion is used to accelerate childbirth
23	Guazuma ulmifolia	bay cedar	Sterculiaceae	Stem	Decoction is used to facilitate childbirth
24	Sterculia excelsa		Sterculiaceae	Inner bark	Soaked and boiled in water; used to hasten childbirth
25	Agapanthus africanus	Lily of the Nile	Liliaceae	Whole plant	To ensure easy childbirth
26	Anastatica hierochuntica	white mustard flower	Brassicaceae	Whole plant	For infertility problems and to ensure easy childbirth
27	Caulophyllum thalictroides	Blue cohosh	Berberidaceae	Whole plant	To augment labour during pregnancy and to treat
28	Gloriosa superba	glory lily	Liliaceae	Root	urinary tract infection Fresh root paste is applied on the supra pubic region and the vagina to promote
29	Franseriaambrosioides	Canyon Ragweed	Asteraceae	Whole plant	labour pain Promotes labour, given near
30	Tectonagrandis	Theku	Verbenaceae	Bark	parturition Orally given to ease labour and mitigate abdominal pain
					during labour
31	Anogeissus latifolia	dhawra	Combretaceae	Bark	Infusion of bark given for easy delivery
32	Musa sapientum	French plantain banana	Musaceae	Leaf	Infusion of leaf is used to hasten childbirth

TABLE 3: HERBAL PLANTS USED FOR POSTPARTUM CARE

Sr.	Botanical	Local	Family	Part(s)	Ethno medicinal uses /
No.	Name	Name		Used	Mode of Administration
1	Cardiospermum halicacabum	Mudakathan	Sapindaceae	Seeds	Infusion of seedling is used to clear the uterus after childbirth
2	Cestrum latifoluim	Bitawali	Solanaceae	Stem and leaf	The tops are used for recovery of women after childbirth
3	Sida cordifolia	Khironti	Malvaceae	Root	For postpartum weakness
4	Pentanisia prunelloides	Icimamliloq	Rubiaceae	Root	Decoction is taken to aid in the expulsion of retained placenta
5	Euphorbia hirta	Snake Weed, Asthma weed	Euphorbiaceae	Whole plant	To increase lactation after childbirth
6	Zingiber montanum	Moorada	Zingiberaceae	Rhizome	To treat postpartum haemorrhage and weakness of women after childbirth
7	Acorus calamus	Sweet Flag, Calamus	Araceae	Root	To treat postpartum haemorrhage
8	Cynara scolymus	Kharchouf, tagemmut, Amazzûgh	Compositae	Roots	Decoction is taken for postpartum care
9	Salvia leucantha	Mexican bush sage	Lamiaceae	Leaves	Leaf infusion is taken to reconstitute women after childbirth
10	Achyanthes aspera	Kadaladi	Amaranthaceae	Whole plant	Whole plant is ground, cooked/boiled in coconut oil and taken after delivery to get rid of debris in the
11	Clitoria ternatea	Sankupushpam	Fabaceae	Flower	womb Flowers crushed and mixed with honey, taken early morning to clean the uterus after delivery and also to check the bleeding from the uterus
12	Moringa oleifera	Muringa	Moringaceae	Roots and leaves	Roots are used to expel the placenta. Leaves are highly nutritious food for pregnant women before and after delivery
13	Argemone mexicana	Dhaturi	Papaveraceae	Whole Plant	To treat postpartum bleeding
14	Physalis angulata	winter cherry	Solanaceae	Seeds	Preparation given to women after childbirth
15	Gunnera perpensa	River Pumpkin	Halorrhagidaceae	Root	Decoction of root is used to facilitate the due expulsion and proper cleaning of the womb
16	Bouteloua gracilis	blue grama	Poaceae	Whole plant	Whole plant is made into a soup and used as a postpartum medicine
17	Adiantum caudatum	tailed maidenhair	Adiantaceae	Leaf	Extract of leaf juice is used to stop excess bleeding
18	Melastoma malabathricum	Malabar melastome	Melastomataceae	Whole plant	after childbirth To treat leucorrhoea and post childbirth problems
19	Trigonella foenum- graecum	Fenugreek	Fabaceae	Seeds	Lactagogues or galactagogues
20	Galega officinalis	Goat's rue	Fabaceae	Leaf	Lactagogues or

					galactagogues
21	Calotropis gigantea	Madar	Asclepidaceae	Latex and	To prepare medicated water
			-	plant leaves	for bathing the mother after
					delivery
22	Limnophila geoffrayi	Hummingbird tree	Scrophulariaceae	Whole plant	Lactagogues or
					galactagogues
23	Borassus flabelifer	Palmira	Araceae	Roots	Lactagogues or
					galactagogues
24	Ficus amplisima	Piper, Pipali	Maraceae	Latex	Lactagogues or
					galactagogues

Sr.	Botanical	Local	Family	Part(s)	Ethno medicinal uses /
No.	Name	Name		Used	Mode of Administration
1	Abarema jupunba	Caracoli	Mimosaceae	Seeds	As a fertility drug
2	Cynosurus indicus	sambali	Poaceae	Whole plant	Boiled with black sago and used to treat fever, cold, malaria and for post childbirth cleansing of mother
3	Datura metel	Karuoomathai	Solanaceae	Whole plant	For painful menstruation
4	Artemisia abrotanum	southernwood	Asteraceae	Whole plant	Used for female problems
5	Hamamelis virginiana	witch hazel	Hamamelidaceae	Whole plant	Used to treat women's problems
6	Stachys lavandulifolia	wood betony	Lamiaceae	Whole plant	Abortifacient
7	Sphaeralcea coccinea	scarlet globemallow	Malvaceae	Leaves	Used by pregnant women for pains associated with pregnancy
8	Atylosia scarabaeoides	Wild kulthi	Fabaceae	Whole plant	For the treatment of delivery problems and swelling and pain in leg during pregnancy
9	Maesa indica	Wild Berry	Myrsinaceae	Whole plant	For headache and dizziness of mothers after childbirth
10	Plumbago zeylanica	Shada	Plumbaginaceae	Root	Abortifacient
11	Mangifera indica	Mango	Anacardiaceae	Stem bark	Infusion is used to cure stomach pain
12	Bauhinia petersiana	Kalahari White Bauhinia	Fabaceae	Stem bark	To prevent miscarriage
13	Ricinus communis	castorbean	Euphorbiaceae	Roots and leaves	Soak in water and drink infusion to cure for post maturity
14	Dalbergia melanoxylon	African blackwood	Fabaceae	Seeds	To avoid miscarriage
15	Apodytes dimidiata	white pear	Icacinaceae	Leaves and roots	Pound add water and drink infusion for post maturity
16	Ficus kirkii	Crown-fruited fig	Moraceae	Bark	cure Pound, cook in water and add to porridge for damage in the stomach after delivery
17	Dalbergia nitidula	Glossy flat-bean	Papillionaceae	Roots	Boil in water and drink infusion for infertility
18	Cissampelos species	velvetleaf	Menispermaceae	Tuber	Grind, squeeze and drink the part of the fluid. Add remnant to cooked porridge
19	Vitex doniana	Afetewa	Verbenaceae	Leaves	for pseudo pregnancy Add to porridge for stomach pains (associated

Vitaceae

Roots

Chikomba

Cissus integrifolia

20

with miscarriage)

Mix with hot water and

					make a compress over the
					make a compress over the
21	Cissus species	veldt grape	Vitaceae	Roots	leg Pound make an infusion
21	Cissus species	veiut grape	v naceae	Roots	and drink to avoid
					miscarriage
22	Hippocratea parviflora		Celastraceae	Leaves and	Leaves pound and add to
22	Пірростивей ратуціота		Celastraceae	roots	porridge to avoid
				10013	miscarriage. Roots- boil
					and drink infusion to cure
					stomach pain
23	Adhatoda vasica	Malabar nut, adulsa	Acanthaceae	Leaves	For curing body aches
24	Bacopa monnierii	brahmi	Scrophulariaceae	Whole plant	For getting relief from
27	Висори топпен	Oranni	Scropharaceae	whole plant	abdominal pain and for
					increasing foetal growth
25	Benincasa hispida	white gourd	Cucurbitaceae	Fruit	To prevent gas trouble
26	Cuminum cyminum	Cumin	Apiaceae	Seeds	Powdered seeds mixed with
20	Cumulium Cymunum	Cumm	ripiaceae	Beeds	ghee and honey is given
					orally to children against
					vomiting. Seeds boiled in
					water and given to the child
					for getting relief from
					stomach pain
27	Curculigo orchioides	Nilappanai	Amaryllidaceae	Rhizome	To get relief from stomach
	Ţ.		·		pain after delivery
28	Trachyspermum	Wild Celery	Apiaceae	Seeds	For reducing stomach pain
	roxburghianum				after delivery
29	Basella rubra	Kodipasalai	Basellaceae	Leaves	To decrease the hip pain
					during childbirth
30	Jatropha curcas	Kattaamankku	Euphorbiaceae	Bark and	Decoction prepared from
				latex	bark is used for the
					treatment of stomach
					problems during pregnancy.
					Latex is taken orally for
				_	same purpose
31	Carissa congesta	Karvand	Apocynaceae	Roots	Decoction of roots is given
					to women to relieve from
					delivery pain after
22	V:	Dambana 1	Ealar	C 1.	childbirth.
32	Vigna subterranean	Bambara groundnut	Fabaceae	Seeds	Infusion is used after
					delivery to dispose of
					remnant with placenta

CONCLUSION: Even from early civilization, herbs have been considered to be a powerful tool in treating illnesses. In places where physicians cannot reach, people have invented their own concoction of herbs and plants to deal with the common afflictions of daily life. At times, these herbal treatments have proved more superior and effective than its chemical counterparts, not to mention even of its safety and economy. The knowledge of these valuable plant remedies have not been documented and was orally dissipated by the tribal populations. But these tribal possessed knowledge remarkably accurate about medicinal use of the plants around them. Numerous drugs have entered the global market and

international pharmacopoeia through the study of ethno-pharmacology and traditional medicine.

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Major thrust by whole of the pharmaceutical design industry is focused towards development of new innovative / indigenous plant based drugs through investigation of leads from system of medicine. traditional Ayurvedic medicinal plant products are most convenient and have greater acceptance amongst the users due to their easy availability easy biodegradability, easy to handling, economic cost, mankind and environment friendly nature both and minimum side effect. Pregnancy is a time of rapid physical and emotional changes in the body.

Herbs can be very useful in toning and nourishing the system to help allay potential problems and remedy discomforts that pregnant women may experience. Attention to nutrition can go long way inpreventing possible complications. Malnutrition during pregnancy can cause constipation, haemorrhoids, anaemia, and even preeclampsia. It's absolutely vital to get enough Vitamins, minerals and protein during pregnancy. Medicinal Plants (herbs) in their original form contain a host of ingredients-alkaloids, bio-flavonoids. natural glycosides, minerals, Vitamins, volatile oils, and other natural substances that not only support an herb's healing benefits but also safeguard against potential toxicity. Herbal medicines can be very beneficial during pregnancy, childbirth

postpartum care but after proper validation of the

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