

Herbs & Supplements

What you should know before surgery

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Over 60 million Americans use herbal medications and supplements on a regular basis. People who use herbal remedies tend to be well educated and want to take an active role in promoting their health, preventing and treating disease, and aging gracefully. Over half of the people who have elective surgery have used herbal supplements in their lifetime, and at least one-third use herbal remedies on a regular basis.

Despite the fact that so many people use herbal medications and supplements, studies have found that less than 10% of all herbal supplement users inform their physicians before surgery. Often, people believe that since herbal medications and supplements are promoted as natural, they are safer and less likely to cause side effects than prescription medications. This is not always the case.

The fact is that 30% of all modern, conventional medicines are derived from plants, and herbal supplements often have significant medicinal activity, as well as potential for adverse effects and drug interactions.

Your surgeon needs to know if you have been using herbal medicines or supplements in order to prevent avoidable complications associated with common medications and stress on the body during surgery.

This guide is designed to provide information about some of the most commonly used herbal medications and supplements in the United States and the complications associated with their use during surgery. If you use any herbal medication or supplement it is prudent to follow the general recommendation of the American Society of Anesthesiologists and discontinue their use 2-3 weeks before your scheduled surgical procedure.

Ginko Biloba

Uses: improve memory, Alzheimer's dementia, vascular disease

Surgical Complications: increases bleeding especially around brain and spinal cord, prolongs sedation, allergic skin reaction

Discontinue 36 hours before surgery

Garlic Tablets

Uses: lowers blood pressure and cholesterol levels, protects against heart disease

Surgical Complications: increases bleeding

Discontinue one week before surgery

Ginger

Uses: nausea, motion sickness, aids digestion

Surgical Complications: increases bleeding, increases blood sugar

Discontinue one week before surgery

Herbal Supplements Known To Increase Bleeding

Many herbal medications and supplements can significantly increase bleeding during and after surgery. This not only adds to the length of the procedure, but also increases the risk of infection, postoperative pain, and scar formation.

Ginko biloba
Garlic
Ginger
Ginseng
Omega-3
Vitamin E
Chondroitin
Dong quai
Saw palmetto
Feverfew
Bromelain

Ginseng

Uses: increases physical or mental energy, enhances performance

Side Effects: insomnia, headaches, nosebleeds

Surgical Complications: increases bleeding, Lowers blood sugar

Discontinue one week before surgery

Saw Palmetto

Use: male urinary complaints related to enlarged prostate

Surgical Complications: increases bleeding

Discontinue 2-3 weeks before surgery

Dong Quai

Uses: menstrual & menopausal complaints

Surgical Complications: increases bleeding

Discontinue 2-3 weeks before surgery

Omega-3, EFA, Flax & Fish Oil

Uses: rheumatoid arthritis, protects against heart disease, some skin disorders

Surgical Complications: increases bleeding

Discontinue 2-3 weeks before surgery

Glucosamine & Chondroitin

Use: osteoarthritis

Surgical Complications: increases bleeding

Discontinue 2-3 weeks before surgery

Feverfew

Use: migraines

Side Effects: may cause headaches, insomnia, or joint pain if stopped abruptly

Surgical Complications: increases bleeding

Discontinue one week before surgery

Herbal Medications with Serious Complications or Drug Interactions During Surgery

Ephedra/Ma Huang	-	seizure, heart attack, stroke
St. John's Wort	-	heart failure
Kava	-	coma
Valerian	-	heart failure, delerium
Ginko Biloba	-	bleeding in brain & spinal cord
Licorice	-	heart attack

Ephedra/Ma Huang

Uses: increase energy,
weight loss, asthma

Side Effects: heart
palpitations, chest pain,
panic attacks

Surgical Complications:
interacts with anesthesia
and can cause seizures,
heart attack, or stroke

**Discontinue 24 hours
before surgery**

St John's Wort

Uses: mild depression,
anxiety, sleep disorder

Side Effects: sensitivity
to sunlight

Surgical Complications:
interacts with
anesthesia, can cause
heart failure, prolongs
sedation

**Discontinue 5 days
before surgery**

Kava

Uses: anxiety

Side Effects: "kava
dermatopathy" causes red
eyes, scaly skin, and
yellow discoloration of
skin, hair, & nails.

Surgical Complications:
interacts with
anesthesia, coma,
prolonged sedation

**Discontinue 24 hours
before surgery**

Herbal Supplements Which Increase Sedation

Many herbal supplements can
prolong sedation during and
after surgery, which slows
recovery from anesthesia.

Ginko Biloba
Echinacea
St. John's Wort
Valerian
Kava
Goldenseal

Valerian

Uses: sleep aid, mild
relaxant

Surgical Complications:
delirium, heart
failure, prolonged
sedation

**Discontinue 1 week
before surgery**

Licorice

Uses: sore throat,
stomach ulcers

Surgical Complications:
increases bleeding,
may cause heart
attack

**Discontinue 2-3 weeks
before surgery**

Vitamin E

Uses: protects the heart
- especially in diabetics,
slows skin aging

Surgical Complications:
increases bleeding,
impairs wound healing
- especially tendons

Discontinue 2-3 weeks before surgery

Echinacea

Uses: stimulates immune system

Side Effects: suppresses immune system with long-term use

Surgical Complications:
prolongs sedation, poor wound healing, allergic reaction

Discontinue 2-3 weeks before surgery

**Some Herbal Supplements are known to affect the skin and may cause:
Sun Sensitivity
or Allergic Rash**

St John's Wort
Ginko Biloba
Kava
Echinacea
Goldenseal
Arnica

Goldenseal

Uses: gastrointestinal and skin infections

Surgical Complications:
prolongs sedation, sensitivity to sunlight

Discontinue 2-3 weeks before surgery

Resources:

Center for Food Safety and Applied Nutrition, Food & Drug Administration:
<http://vm.cfsan.fda.gov/~dms/supplmnt.html>

National Center for Complementary and Alternative Medicine, National Institutes of Health:
<http://nccam.nih.gov>

Quackwatch:
<http://www.quackwatch.com>

HerbMed:
<http://herbmed.org>

ConsumerLab:
<http://www.consumerlab.com>

American Botanical Council:
<http://www.herbalgram.org>

Office of Dietary Supplements, National Institutes of Health:
<http://dietary-supplements.info.nih.gov>

References:

- Adusumilli PS, Ben-Porat L, Pereira M, Roesler D, Leitman M. "The Prevalence and Predictors of Herbal Medicine Use in Surgical Patients." **J Am Coll Surg** 2004; 198(4):583-590.
- Ang-Lee MK, Moss J, & Yuan C. "Herbal Medicines and Perioperative Care." **JAMA** 2001; 286(2):208-216.
- Ciocon JO, Ciocon DG, & Galindo DJ. "Botanicals can affect surgical outcomes and follow-up." **Geriatrics** 2004; 59(9):20-24.
- Dinehart SM & Henry L. "Dietary Supplements: Altered Coagulation and Effects on Bruising." **Dermatol Surg** 2005; 31(7-2):819-826.
- Heller J, Gabbay JS, Ghadjar K, Jourabchi M, et al. "Top-10 List of Herbal and Supplemental Medicines Used by Cosmetic Patients: What the Plastic Surgeon Needs to Know." **Plast Reconstr Surg** 2006; 117(2):436-445.
- Leung JM, Dzankic S, Manku K, & Yuan S. "The Prevalence and Predictors of the Use of Alternative Medicine in Presurgical Patients in Five California Hospitals." **Anesth Analg** 2001; 93(4):1062-1068.
- Petry JJ. "Surgically Significant Nutritional Supplements." **Plast Reconstr Surg**; 97(1):233-240.
- Pribitkin E & Boger G. "Herbal Therapy: What Every Facial Plastic Surgeon Must Know." **Arch Facial Plast Surg** 2001; 3:127-132.
- Tessier DJ & Bash DS. "A Surgeon's Guide to Herbal Supplements." **J Surg Research** 2003; 114(1):30-36.