
بسم الله الرحمن الرحيم

مکمل های غذایی و غذاهای فراویژه در مدیریت دیابت

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مکمل غذایی

- مرکز ملی سلامت تکمیلی و یکپارچه (NCCIH): طب مکمل و جایگزین (CAM) را بررسی می کند. در ابتدا به عنوان دفتر طب جایگزین (OAM) ایجاد شد و قبل از دریافت نام فعلی، به مرکز ملی طب مکمل و جایگزین (NCCAM) تغییر نام داد. یکی از ۲۷ مرکز زیر نظر NIH است.

- مأموریت NCCIH: "از طریق تحقیقات علمی دقیق، مفید بودن و ایمنی مداخلات پزشکی مکمل و جایگزین و نقش آنها در بهبود سلامت و مراقبت های بهداشتی را تعریف کند"

- تعریف FDA از مکمل رژیمی: محصولی است که از غذا گرفته شود، از طریق دهان مصرف شود (بجز تزریقی ها) و حاوی "یکی از اجزای اصلی مواد غذایی" باشد که برای تکمیل رژیم غذایی مورد استفاده قرار می گیرد.

  - قانون بهداشت و آموزش مکمل های غذایی در سال ۱۹۹۴ (DSHEA) توسط FDA . این قوانین هم برای غذا و هم مکمل های غذایی ست.

- مکمل های غذایی در اشکال مختلف مانند قرص ، کپسول ، بار ، پودر و مایعات وجود دارد.

DESHEA includes:

- General Dietary Supplement Labeling
- Identity Statement
- Net Quantity of Contents
- Nutrition Labeling
- Ingredient Labeling
- Claims
- Pre-market Notification of New Dietary Ingredients
- Other Labeling Information

General Dietary Supplement Labeling

- **What is required on a dietary supplement label?**
- Five statements are required:
- 1) the statement of identity (name of the dietary supplement)
- 2) the net quantity of contents statement (amount of the dietary supplement)
- 3) the nutrition labeling
- 4) the ingredient list
- 5) the name and place of business of the manufacturer, packer, or distributor.
- **It must placed all required label statements either on the front label panel (the principal display panel) or on the information panel**
- **specified the country of origin**

Identity Statement

- used the term "dietary supplement" except:

that you may delete the word "dietary" and replace it with the name of the dietary ingredient(s) (e.g., “calcium supplement”) or an appropriately descriptive term indicating the type of dietary ingredient(s) (e.g., “herbal supplement with vitamins”

Net Quantity of Contents

- net quantity of contents statement in either weight, measure, numerical count or a combination of numerical count and weight or measure
- must has been specified both metric (grams, kilograms, milliliters, or liters) and U.S. Customary System (ounces, pounds, or fluid ounces) terms.

Nutrition Labeling

- called a "Supplement Facts" panel
- Total calories, calories from fat, total fat, saturated fat, cholesterol, sodium, total carbohydrate, dietary fiber, sugars, protein, vitamin A, vitamin C, calcium, and iron must be listed when they are present in measurable amounts

• Ingerdient labeling

- "ingredient" refer to the compounds used in the manufacture of a dietary supplement. For instance, when calcium carbonate is used to provide calcium, calcium carbonate is an "ingredient" and calcium is a "dietary ingredient." The term "ingredient" also refers to substances such as binders, colors, excipients, fillers, flavors, and sweeteners.
- must has been listed the ingredients in descending order of predominance by weight
- spice and coloring agents (certified or non-certified)

Claims

- A nutrient content claim expressly or by implication characterizes the level of a nutrient in a dietary supplement.
- Claims in FDA:
- "High (contains at least 20% of the Daily Value (DV)“, "Good Source(10 to 19% of DV)“, "More“, "High potency“, "Antioxidant“, "Light" or "Lite“, "Calorie or Sugar" , "Sodium or Salt“, "Fat, fatty acids, and cholesterol“, "Healthy"
- ….

Supplement Facts

Serving Size 1 Tablet

	Amount Per Serving	% Daily Value
Vitamin A (as retinyl acetate and 50% as beta-carotene)	5000 IU	100%
Vitamin C (as ascorbic acid)	60 mg	100%
Vitamin D (as cholecaliferol)	400 IU	100%
Vitamin E (as dl-alpha tocopheryl acetate)	30 IU	100%
Thiamin (as thiamin in mononitrate)	1.5 mg	100%
Riboflavin	1.7 mg	100%
Niacin (as niacinamide)	20 mg	100%
Vitamin B6 (as pyridoxine hydrochloride)	2.0 mg	100%
Folate (as folic acid)	400 mcg	100%
Vitamin B12 (as cyanocobalamin)	6 mcg	100%
Biotin	30 mcg	10%
Pantothenic acid (as calcium pantothenate)	10 mg	100%

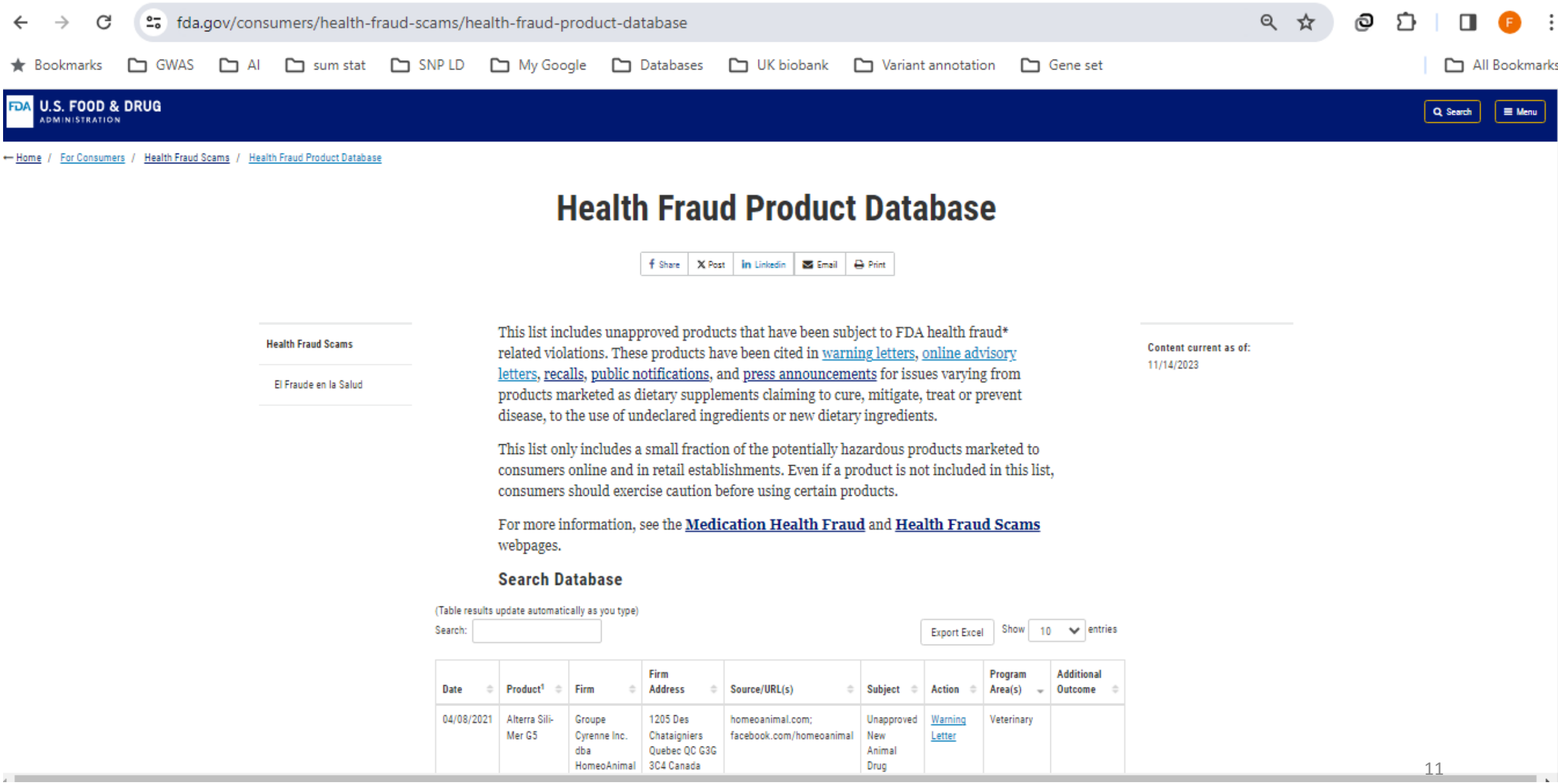
Other ingredients: Gelatin, lactose, magnesium stearate, microcrystalline cellulose, FD&C yellow No. 6, propylene glycol, propylparaben, and sodium benzoate.

- نظارت بر مکمل ها در امریکا: FDA (تایید یا رد ایمن بودن مکمل ها) و کمیسیون فدرال تجارت FCT (تبلیغات، برچسب ها و ادعاهای سلامتی)
- تنها مکمل های ممنوع شده توسط FDA: Ephedra sinica و DMAA (1,3-dimethylamylamine)

- بیشترین نگرانی درباره:
- مکمل های کاهش وزن، افزایش عملکرد ورزشی، اختلال عملکرد جنسی
- در آخرین نسخه بروزرسانی FDA از اظهارنظر درباره ۱۹۶۷ مکمل رژیمی سلب مسئولیت نموده که ۳۰٪ آنها مکمل های کاهش وزن و درصد بالایی نیز افزایش عملکرد ورزشی هستند.
- عمده این مکمل ها کاهش وزن حاوی یکی از این اجزاء پنهان مضر شامل sibutramine،phenolphthalein ، fluoxetine، Tadalafil، DMAA، Benproperine، phenolphthalein و سایر داروها هستند.
- FDA امکان بررسی همه این مکمل ها را ندارد و بعضا ممکن است عوارض خطرناکی بخاطر داروهای پنهان داشته باشد.

- در سطح بین المللی Codex (کمیسیون مستندات غذایی) در برچسب گذاری تغذیه ای و نظارت بر مکمل های رژیمی فعالیت دارد.

لینک صفحه تقلب دارویی و مکمل های سلب مسئولت شده:



متولی کنترل و نظارت بر مکمل های خوراکی تولید داخل یا خارج در ایران:

سازمان غذا و دارو – اداره کل امور فرآورده های طبیعی، سنتی و مکمل

آخرین قوانین برچسب های مورد نیاز روی بسته بندی مکمل ها:

دستورالعمل تهیه مندرجات بسته بندی فرآورده های مکمل – تاریخ ۱۴۰۲/۲/۲۰ شماره سند: WIN-NTS-NSO-001و استفاده از این اطلاعات صرفا با ذکر منبع (تارنمای سازمان غذا و دارو) مجاز می باشد.

دستورالعمل صدور و تمدید پروانه ساخت فرآورده های مکمل (تولید داخل) – شماره سند: WIN-NTS-NSO-002و استفاده از این اطلاعات صرفا با ذکر منبع (تارنمای سازمان غذا و دارو) مجاز می باشد.

لینک:

https://www.fda.gov.ir/fa/%D8%AA%D8%B3%D8%AA-%D8%AC%D8%AF%DB%8C%D8%AF/%D8%B6%D9%88%D8%A7%D8%A8%D8%B7-%D9%88-%D8%AF%D8%B3%D8%AA%D9%88%D8%B1%D8%A7%D9%84%D8%B9%D9%85%D9%84-%D9%85%DA%A9%D9%85%D9%84

درج موارد به شرح ذیل در بسته بندی شامل (جعبه، برچسب ظرف و برچسب کارتن/شرینک) فرآورده های مکمل **الزامی** است.

۱-**نام فرآورده:** نام هر فرآورده باید به فارسی و انگلیسی (با فونت و سایز یکسان) روی بسته بندی فرآورده ها درج شود.

۲-**مقدار ماده/مواد موثره** :(Strength) مقدار هر یک از مواد موثره با توجه به شکل، واحد و دوز مصرف در واحد حجم، وزن یا مقدار در هر وعده (size serving) بیان شود.

۳-**تعداد، وزن و حجم بسته بندی**: تعداد هر واحد مصرف، وزن یا حجم بستهبندی با توجه به شکل مصرف فرآورده به فارسی و انگلیسی درج شود.

۴-**شکل دارویی فرآورده**: (Form Dosage) شکل فرآورده روی بستهبندی به فارسی و انگلیسی درج شود.

۵-**طعم فرآورده**: طعم فرآورده به زبان فارسی یا تصویر روی بسته بندی ذکر شود.

۶-**ترکیب** (اجزای اصلی و مواد جانبی): نوع و مقدار مواد موثره (فارسی یا انگلیسی) بر اساس سرونگ سایز یا دوز مشخص باید درج شود و نام مواد جانبی (فارسی یا انگلیسی) هم ذکر شود.

۷-**مورد مصرف**: درج مورد مصرف بر اساس مستندات علمی و هم چنین با توجه به موارد مصرف مصوب این اداره کل، بارگذاری شده در تارنمای سازمان غذا و دارو الزامی است. موارد مصرف نباید ادعایی در خصوص تشخیص، یشگیری یا درمان بیماری داشته باشند.

۸-**مقدار مصرف**: درج مقدار مصرف بر اساس مستندات علمی و هم چنین جدول مقادیر مجاز مکمل ها، بارگذاری شده در تارنمای سازمان غذا و دارو الزامی است.

۹-**موارد احتیاط، هشدارها، موارد منع مصرف و تداخالت احتمالی**: موارد احتیاط، هشدارها، موارد منع مصرف و تداخلات احتمالی با توجه به منابع معتبر علمی باید روی بسته بندی درج شود.

۱۰-**الصاق تصویر پرچم، آدرس سایت، شماره تماس، آدرس و لوگوها**: درج تصویر رچم هیچ کشوری به جز ایران بر روی بسته بندی مجاز نیست. در مورد الصاق آدرس سایت، شماره تماس، آدرس و لوگوها هم صرفا اطلاعات مربوط به شرکت تحت لیسانس مجاز می باشد.

۱۱- بسته بندی **فرآورده های وارداتی**: در مورد فرآورده های وارداتی مندرجات بسته بندی باید از مبدا دو زبانه باشد. همچنین تمامی الزامات بسته بندی مکمل های وارداتی نیز مطابق این دستورالعمل رعایت شود.

۶-۱۲ شناسه‌های رهگیری و ردیابی و کنترل اصالت: شناسه رهگیری (UID) تعریف شده طبق دستورالعمل رهیابی ردگیری و کنترل اصالت، شماره تجاری فرآورده (GTIN)، شماره سری ساخت (Batch/Lot) و تاریخ انقضا (Expiry Date) بصورت متنی و بارکد دوبعدی (GS1-Data Matrix) در ابعاد ۲۰ در ۴۰ میلیمتر با پس زمینه نوشتاری سفید و حاشیه زرد بشرح مثال زیر، روی قسمتی از بسته‌بندی ترجیحا در یک وجه مجزا درج/الصاق شود.

محل درج شناسه ها روی طرح جعبه (Artwork)

یا طرح برچسب در صورت استفاده از برچسب

نمونه شناسه های درج شده

۱۳-**نام صاحب پروانه فرآورده**: درج نام صاحب روانه ثبت، در تمامی سطوح بسته بندی الزامی است.

۱۴-**نام کارخانه تولید کننده**: در خصوص شرکت های تولید قراردادی می توان به نام کارخانه سازنده اشاره کرد یا به درج عبارت "ساخت ایران" به جای ذکر نام کارخانه در فرآورده های تولید داخل و تولید تحت لیسانس بسنده نمود.

۱۵-**شرایط نگهداری**: شرایط نگهداری با توجه به شرایط اقلیمی و براساس آزمایشات ایداری درج شود.

۱۶-**کیفیت بسته بندی**: جنس بسته بندی می بایست به نحوی انتخاب شود که کیفیت فرآورده در طول عمر قفسه ای و خدمات داروخانه ای مورد نظر، آن را تحت تاثیر قرار ندهد. مندرجات بسته بندی فرآورده ها باید به زبان فارسی و انگلیسی و با رعایت کامل آئین نگارش باشد. کلیه مندرجات باید خوانا، واضح و قابل فهم بوده و از روی بسته بندی پاک نشود.

۱۷-مواد آلرژن احتمالی/ محدودیت های موجود: مانند مواد رنگ دهنده، طعم دهنده، مواد نگهدارنده، شکر، نشاسته، شیر، لاکتوز، گلوتن گندم، مخمر، ماهی و سدیم درج شود.

۱۸-**نشانی پستی یا الکترونیکی یا شماره تماس**: برای ارتباط با مصرف کنندگان نشانی پستی یا الکترونیکی یا شماره تماس قید شود تا در صورت بروز عوارض جانبی دارویی ناخواسته یا شکایت احتمالی مشکل خود را به اطلاع تولید کننده برسانند.

Functional food

1.Functional food refers to a category of food that goes beyond its traditional nutritional value and provides **additional health benefits.**

2.These foods are designed to help prevent chronic diseases, improve overall health, and manage specific health conditions.

3.Functional foods are often fortified with bioactive compounds, such as vitamins, minerals, antioxidants, and probiotics.

4.They may also be enriched with prebiotics, which are dietary fibers that promote the growth of beneficial bacteria in the gut.

5.Functional foods can be found in a variety of forms, including beverages, snacks, supplements, and meals.

Examples of functional foods:

Yogurt with added probiotics, **orange juice** fortified with calcium and vitamin D, and **breakfast cereals** with added fiber and omega-3 fatty acids.

Functional food examples

1.Chocolate - Dark chocolate contains flavanols

2. Blueberries - are rich in anthocyanins

3. Kefir - is a fermented milk drink that contains probiotics

4. Spinach - is high in lutein and zeaxanthin

5. Nuts - such as almonds, walnuts, and pistachios are rich in healthy fats, fiber, and protein

6. Miso soup - is made from fermented soybeans and contains probiotics

7. Green tea - contains catechins

8. Quinoa - is a gluten-free grain that is high in protein, fiber, and minerals such as iron and magnesium.

9. Salmon - Salmon is rich in omega-3 fatty acids.

10. Turmeric – is a spice that contains curcumin.

5 Things To Know About Type 2 Diabetes and Dietary Supplements

- If you have diabetes, talk with your health care provider before taking a dietary supplement. Some supplements can interact with medicines, and some have been linked to kidney disease.
- Don't take a dietary supplement instead of your diabetes medicine.
- A few dietary supplements, such as chromium, cinnamon, or berberine, might help improve blood sugar control. However, the research isn't strong enough to allow definite conclusions to be reached about their effects.
- Alpha-lipoic acid might help to reduce pain associated with diabetic neuropathy (nerve damage). It has not been shown to be helpful for controlling blood sugar in people with diabetes, preventing diabetic macular edema (an eye condition that can cause vision loss), or improving kidney function in people with diabetic nephropathy (kidney damage).
- Diabetes products that sound too good to be true may be scams. The U.S. Food and Drug Administration is warning consumers about illegally marketed products that falsely promise to prevent, treat, or cure diabetes. Marketing claims for these products may say things like "**natural diabetes cure**" or "**replace your diabetes medicine**." Some of these products are harmful in themselves, and all are harmful if they're used in place of effective diabetes treatment.

https://www.nccih.nih.gov/health/tips/things-to-know-about-type-diabetes-and-dietary-supplements

Some Supplements May Increase the Effects and Side Effects of Medications

- Sometimes, taking a medication and a supplement together may **increase** a medication's effects. This can result in the medication being too strong and raise the risk of unwanted side effects.

- For example, glucosamine may increase the effects of anticoagulants (blood thinners) such as warfarin (Coumadin), which can increase the risk of serious bruising and bleeding.
- Ashwagandha seems to have sedative effects, and there is some preliminary evidence that it may increase the effects of some benzodiazepines (Valium) and other sedatives and anti-anxiety drugs, including Xanax.

- https://www.nccih.nih.gov/health/know-science/how-medications-and-supplements-can-interact/some-supplements-may-increase-the-effects-and-side-effects-of-medications

Some Supplements May Decrease the Effects of Medications

- Sometimes, taking a medication and supplement together may **decrease** the medication's effects. This means that you aren't getting the full benefit from the medication that your health care provider wants you to have.
- The popular herbal supplement St. John's wort (گل راعی یا هزارچشم) is known to decrease the effects of drugs. It does this by speeding up the processes in your body that change drugs into inactive substances.
- **Some common medications that are affected by St. John's wort include:**
- Antidepressants
- Birth control pills
- Cyclosporine, which prevents the body from rejecting transplanted organs
- Some heart medications, including digoxin and ivabradine
- Some HIV medications, including indinavir and nevirapine
- Some cancer medications, including irinotecan and imatinib
- Warfarin, an anticoagulant (blood thinner)
- Certain statins, including simvastatin

- Recent research found that levels of metformin (the most commonly prescribed medication for people with type 2 diabetes) decreased about 25 percent in healthy adults who were given goldenseal extract plus metformin. This drop was enough to potentially hinder glucose control in people with type 2 diabetes taking metformin.
- In addition, green tea at high doses has been shown to reduce blood levels and therefore the effectiveness of the drug **nadolol**, a beta-blocker used for high blood pressure and heart problems. It may also interact with other medicines.

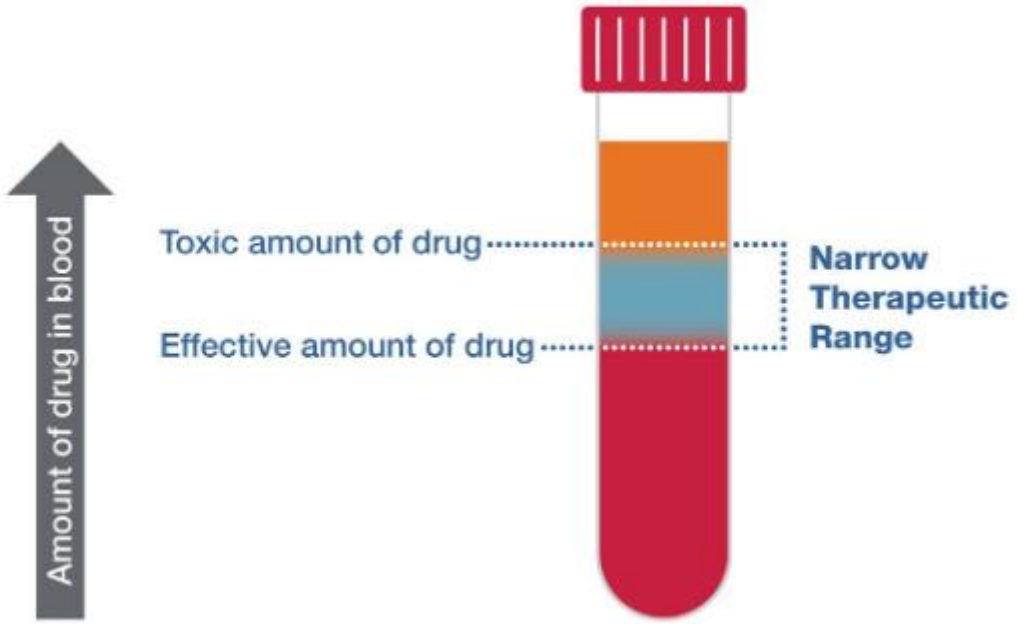
Interactions With Over-the-Counter Medications

- When people think about interactions, they often think about prescription medicine.
- But some medications that are available without a prescription can also interact with supplements.
- Black cohosh and St. John's wort supplements may interfere with the effectiveness of fexofenadine (Allegra). Additionally, goldenseal, St. John's wort, kratom, and cannabidiol (CBD) may interact with many medications, including those available without a prescription.
- If you're considering taking both an over-the-counter drug and a dietary supplement, it's a good idea to talk with your health care provider or a pharmacist about possible interactions.

Some Medication-Supplement Interactions Can Be Serious

- **two situations when medication-supplement interactions are especially important:**
- When you're taking a medication that has what health care providers call a "narrow therapeutic range"
- When you're going to have surgery
- In these situations, it's particularly important to talk with all your health care providers about the dietary supplements you're taking now and any you may be considering taking in the future.

Medications With a Narrow Therapeutic Range



- Having the right level of certain medications in your body is crucial. If the amount of the medication is even a little too low or too high, it can cause serious reactions that can be life-threatening or have life-altering outcomes.
- Medications like these are said to have a “narrow therapeutic range” or “narrow therapeutic index.” Interactions are of special concern for medications with a narrow therapeutic range.
- **Examples of medications with a narrow therapeutic range:**
- Carbamazepine (used to prevent seizures)
- Cyclosporine (used to prevent organ transplant rejection)
- Digoxin (used to treat heart problems)
- Phenytoin (used to prevent seizures)
- Warfarin (an anticoagulant—also called a blood thinner)
- If You’re Going To Have Surgery
- If you’re going to have surgery, talk with your health care providers as far in advance of the procedure as possible, and tell them about all dietary supplements that you’re taking.
- Some dietary supplements may cause problems during surgery because:
- They may affect your response to anesthetics or to other medicines that you may be given before, during, or after the operation
- They may increase your risk of bleeding
- They may cause serious changes in your heart rate or blood pressure
- Some health care providers will ask patients to discontinue all herbal supplements several weeks before having elective surgery (surgery that can be scheduled in advance).

Tips on Reading Supplement Labels

- Sometimes it isn't obvious what's in the bottle of a dietary supplement.
- To find out what's in a supplement, look for the Supplement Facts panel on the product label. The manufacturer is required to list all the supplement's ingredients on this panel, either in the Supplement Facts chart or in the list of other ingredients below it.
- It's important to know the U.S. Food and Drug Administration has the authority to act against any adulterated, mislabeled dietary supplement product after it reaches the market. In addition, products with labels indicating they have been tested by independent, third-party groups such as nonprofit U.S. Pharmacopoeia (USP) Dietary Supplement Verification Program or ConsumerLab.com is a good way to ensure that a dietary supplement contains what's on the label, is of high quality, and is not contaminated or adulterated with other materials.

Diabetes and Dietary Supplements:

What do we know about the effectiveness of dietary supplements for diabetes?

For a few dietary supplements, there is weak evidence of a possible benefit. For example, some studies suggest that chromium, cinnamon, or berberine might help with blood sugar control and that alpha-lipoic acid might be helpful for reducing pain associated with diabetic neuropathy (nerve problems). But most of these studies have limitations in size and differ from each other in participant characteristics, supplement formulations and dosing, length of study, and results, leading to no clear conclusions. For most supplements, there isn't evidence to support a beneficial effect on diabetes or its complications.

https://www.nccih.nih.gov/health/diabetes-and-dietary-supplements-what-you-need-to-know

What do we know about the safety of dietary supplements for diabetes?

- Some dietary supplements may have side effects, and some of these side effects, such as kidney damage, can be serious.
- The U.S. Food and Drug Administration (FDA) is warning consumers about products for diabetes that seem too good to be true, such as those that claim to be a “natural diabetes cure” or to “replace your diabetes medicine.” These products are marketed illegally. Some are harmful in themselves, and all are harmful if people use them in place of effective diabetes treatment.
- It’s very important **not** to replace medical treatment for diabetes with an unproven health product or practice.

You can check your supplement in FDA

- Dietary Supplement Ingredient Directory
- https://www.fda.gov/food/dietary-supplements/dietary-supplement-ingredient-directory

- In 2023, the FDA launched the Dietary Supplement Ingredient Directory, a webpage where the public can look up ingredients used in products marketed as dietary supplements and find what the FDA has said about that ingredient, as well as whether the agency has taken any action with regard to the ingredient.

Search PubMed for safety of dietary supplements

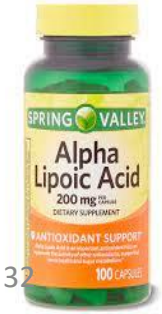
- ((((dietary supplements[MeSH Major Topic]) OR (herbal medicine[MeSH Major Topic])) OR (vitamins[MeSH Major Topic])) OR (minerals[MeSH Major Topic])) AND (safety[MeSH Terms])

- Also check your dietary supplements safety in NCCIH:
- https://www.nccih.nih.gov/health/how-safe-is-this-product-or-practice
- Check the Alerts and Advisories
- https://www.nccih.nih.gov/news/alerts

Supplements that were assessed by NCCIH

Alpha-Lipoic Acid

- In terms of **managing type 2 diabetes,** a 2019 review of 10 studies (553 participants) showed that alpha-lipoic acid was no better than placebo at reducing levels of blood sugar, cholesterol, or triglycerides.
- In a 2011 study of 467 people with type 2 diabetes, participants received either alpha-lipoic acid (600 mg/day for 2 years) or placebo. There was no statistically significant difference between the treatment or placebo group in the outcome of developing clinically significant **diabetic macular edema.**
- A 2022 review that evaluated 8 studies (1,500 participants) indicated inconsistent findings of alpha-lipoic acid's effectiveness in treating **diabetic neuropathy:** 3 studies found improvements in symptoms, and 5 studies did not. All 8 studies found alpha-lipoic acid to be safe, with no reported adverse effects.
- Another 2022 review of 9 studies (2,062 participants) found that alpha-lipoic acid might help reduce pain in people with diabetic neuropathy.
- A 2022 review of 12 studies (653 participants) found that alpha-lipoic acid supplementation did not improve kidney dysfunction in people with diabetes **(diabetic nephropathy).** Some of the studies evaluated alpha-lipoic acid on its own, and the other studies looked at alpha-lipoic acid combined with pharmaceuticals or vitamin supplementation. The authors indicated that the evidence was limited because of the small number of studies and participants.
- **Safety**
- A 2020 review of 71 studies (4,749 participants) found alpha-lipoic acid supplementation was safe in healthy individuals and in patients affected by certain diseases, including cardiovascular disease, neurological disorders, and diabetes.
- The most common side effects of alpha-lipoic acid supplementation are headache, heartburn, nausea, and vomiting



Berberine

- Berberine is found in certain plants such as barberry, goldenseal, goldthread, Oregon grape, and tree turmeric. Plants with berberine have been used medicinally in Ayurvedic medicine and traditional Chinese medicine for thousands of years.
- A 2021 review of 46 studies (4,158 participants) showed that berberine may have beneficial effects on lowering blood glucose levels, reducing insulin resistance, and improving lipid metabolism in people with type 2 diabetes.
- The authors of the review indicated that there is some evidence that berberine might be helpful for diabetes, especially as an adjunctive therapy. However, the review was limited to mostly studies conducted among Chinese patients, there was wide variability in berberine's effect on some of the outcomes, and some of the studies were of poor quality.
- **Safety**
- Berberine is considered safe at doses used in clinical situations (200 to 1,000 mg two to three times daily).
- Common side effects reported with use of berberine supplements include mild-to-moderate nausea, diarrhea, bloating, and constipation.
- Berberine may interact with some medicines, possibly causing unwanted side effects.
- Berberine should not be used during pregnancy or while breastfeeding, and it should not be given to infants. Exposure to berberine has been linked to a harmful buildup of bilirubin in infants, which can cause brain damage.

Chromium

- Found in many foods, chromium is an essential trace mineral. If you have too little chromium in your diet, your body can’t use glucose efficiently.

- A 2022 review of 16 studies (868 participants) suggested that chromium supplementation may help improve glycosylated hemoglobin (HbA1c), fasting blood glucose, and insulin resistance in people with type 2 diabetes.
- **Safety**
- Chromium supplements may cause stomach pain and bloating, and there have been a few reports of kidney damage, liver damage, muscular problems, and skin reactions following large doses. The effects of taking chromium long term haven’t been well investigated.

Herbal Supplements

- We don’t have reliable evidence that any herbal supplements

can help to control diabetes or its complications.

- **Cinnamon:**
- According to a 2019 review of 16 studies (1,098 participants), cinnamon supplementation helped reduce fasting blood glucose and insulin resistance in people with prediabetes D2M. However, the studies differed in strength of dose, length of treatment, and type of participants included. The review authors said that more research with standard cinnamon formulations is needed to understand cinnamon’s effect.
- A 2020 review of 9 studies (623 participants) found that cinnamon supplementation helped to decrease blood pressure in people with D2M, but it did not affect body mass index, body weight, or waist circumference.

Herbal Supplements, Continue..

- A second 2020 review, which looked at 16 studies involving 1,025, found that cinnamon supplementation decreased levels of triglycerides, total cholesterol, and low-density lipoprotein (LDL) cholesterol in people with type 2 diabetes. These reductions were not as prominent in studies conducted in Western countries, as well as in studies of higher quality and those lasting longer than 2 months.
- **Other Herbal Supplements:**
- Other herbal supplements studied for diabetes include **bitter melon,** various **Chinese herbal medicines, fenugreek, ginseng,** and **milk thistle.** Overall, research has been limited in the number, size, and quality of studies and hasn't proven that any of these herbal supplements are effective.

Herbal Supplements, Continue..

- **Safety**
- We have little conclusive information on the safety of herbal supplements for people with diabetes, and some herbal supplements may have side effects.
- Cinnamon supplementation at doses below 6 grams per day does not appear to pose a health risk. Most common side effects at higher doses are allergic skin reactions and digestive problems.

- Cassia cinnamon, the most common type of cinnamon sold in the United States and Canada, contains varying amounts of a chemical called coumarin, which might cause or worsen liver disease. In most cases, cassia cinnamon doesn't have enough coumarin to make you sick. However, for some people, such as those with liver disease, taking a large amount of cassia cinnamon might worsen their condition.

- Using herbal supplements such as cinnamon, St. John's wort, or aloe with conventional diabetes drugs can cause unwanted side effects.

Magnesium

- **Main food sources:** legumes, seeds, nuts, whole grains, and spinach, magnesium is essential to the body's ability to process glucose.
- People with higher intake of magnesium tend to have a lower risk of developing diabetes.
- A 2021 review looked at 13 studies of 957 participants who were at high risk of diabetes and found that magnesium supplementation may improve insulin sensitivity.
- A 2022 review of 18 studies and 1,097 participants with diabetes indicated that magnesium supplementation might have an effect on blood sugar control, but the authors said that the research so far is insufficient for providing any clinical guidelines.
- **Safety**
- Magnesium in dietary supplements should not be consumed in amounts above the upper limit, unless recommended by a health care provider. (The daily upper limit for magnesium intake from supplements and medications for adults is 350 mg.)
- Large doses of magnesium in supplements can cause diarrhea and abdominal cramping. Very large doses—more than 5,000 mg per day—can be deadly.

Omega-3s

- In a 2022 review of 30 studies with 2,459 participants, 70 percent of the studies showed at least one significant positive effect of omega-3 supplementation on measures related to diabetes. Omega-3 supplementation had no significant effect on HbA1c but had a significant effect on reducing fasting blood glucose and insulin resistance.

- A 2022 review of 46 studies (4,991 participants) found that omega-3 interventions (primarily supplements) significantly improved total cholesterol, triglycerides, HDL cholesterol, HbA1c, and C-reactive protein. In contrast to the prior review, this one found no significant effect of omega-3s on fasting blood glucose or insulin resistance. The authors said that limitations included differences in omega-3 type, treatment duration, and dose among the studies.
- **Safety**
- Any side effects from taking omega-3 supplements are usually mild. They include an unpleasant taste in the mouth, bad breath, heartburn, nausea, stomach discomfort, headache, and smelly sweat.
- Omega-3 supplements may interact with drugs that affect blood clotting.

selenium

- A 2019 review of 4 studies with 241 participants showed no evidence that selenium helps with diabetes.
- **Safety**
- Long-term intake of too much selenium can have harmful effects, including nausea, diarrhea, skin rashes, hair and nail loss, and nervous system abnormalities. Extremely high intakes of selenium can cause severe problems, including difficulty breathing, tremors, kidney failure, heart attacks, and heart failure.
- Selenium may interact with some medications, including the chemotherapy drug cisplatin.

Vitamins

- A 2022 review analyzed 178 studies of different supplements, including vitamins C, D, and E, and their effect on adults with diabetes. An initial analysis showed that vitamins C, D, and E reduced HbA1c, but with low certainty, and none of the vitamins were effective in reducing insulin or insulin resistance. After excluding the poor-quality studies, only vitamin D was significantly effective in helpful reductions. When the analysis was restricted to studies lasting at least 12 weeks, vitamin D reduced HbA1c, fasting blood glucose, and insulin resistance. However, the authors said that the improvements seen with vitamin D were small and less than the minimal amount needed for a clinical difference and also came with a low certainty of evidence. The authors concluded that the available evidence supports current recommendations that nutritional supplements may not be helpful for blood glucose control.

- Having low levels of vitamin D is associated with an increased risk of developing type 2 diabetes. A 2020 review of 9 studies (43,559 participants) found that vitamin D supplementation at moderate-to-high doses (at least 1,000 IU/day) significantly reduced the risk of D2M in people with prediabetes.

- However, the review found that studies of lower doses of vitamin D among the general population showed no reduction in diabetes risk. Another 2020 review, which included 8 studies with 4,896 participants, also indicated that vitamin D supplementation reduces the risk of type 2 diabetes in people with prediabetes but suggested that the benefit may be limited to people who do not have obesity.
- **Safety**
- Getting too much vitamin D can be harmful. Very high levels of vitamin D in your blood (greater than 375 nmol/L or 150 ng/mL) can cause nausea, vomiting, muscle weakness, confusion, pain, loss of appetite, dehydration, excessive urination and thirst, and kidney stones. Extremely high levels of vitamin D can cause kidney failure, irregular heartbeat, and even death. (High levels of vitamin D are almost always caused by consuming excessive amounts of vitamin D from dietary supplements.)

Recent Clinical Interventions for Management of Diabetes: Evidence from Original and Review Literatures (2020-2024)

- What do we know before?

- We recognized stevioside, cinnamon, bitter melon, garlic and onion, ginseng, Gymnema Sylvestre, and fenugreek as functional foods for the management of diabetes.

- Diabetic patients can routinely take Vitamin E (100 mg/day) and Vitamin B6 (40 mg/day) supplementation.

Single RCTs 2020-2024

Novel strategies for the management of adulthood diabetes mellitus from randomized controlled clinical trials conducted between 2020-2024				
ID	Study design	FF/supplement	Effects	Mechanisms
Jafarirad 2023 10.3389/fcdhc.2023.1288786	RCT (8-weeks)	Apple cider vinegar (30 ml/d)	Decrease in FBS (-22.86 mg/dl) and HbA1C (-1.42) Increase in insulin levels (2.93 IU/dl)	• Lipogenesis reduction • The reduction of energy intake by lowering the glycemic index of foods • Inhibition of disaccharidase activity • Inhibition of a-amylase • Reducing the rate of gastric emptying • Increasing glucose uptake by the liver and muscle, inhibiting glycolysis through glucose 6-phosphate accumulation, and increasing glycogen synthase
Tajaddini, 2023 10.1002/ptr.7600	RCT (8-weeks)	Saffron (100 mg/day)	Decrease in FBS (7.31 mg/dl), insulin (0.69 uU/ml), HOMA-IR (0.36), TG (20.3 mg/dl), TC (5.02 mg/dl), LDL (7.31 mg/dl), AST (0.98 IU/L), ALT (2.83 IU/L)	• Stimulation of glucose uptake and increasing insulin sensitivity in skeletal muscle cells by activation of AMP-activated protein kinase (AMPK) and mitogen-activated protein kinases (MAPKs) pathways. • anti-inflammatory effects • Saffron significantly improved depression, sleep quality, and overall quality of life in diabetic patients

Single RCTs 2020-2024

Novel strategies for the management of adulthood diabetes mellitus from randomized controlled clinical trials conducted between 2020-2024

ID	Study design	FF/supplement	Effects	Mechanisms
Tavakolizadeh, 2023 10.1007/s00592-023-02149-1	RCT (12-weeks)	Okra (1000 mg of powdered okra fruit three times a day) بامیه	Decrease in FBS (37 mg/dl), insulin (0.02 uU/ml), HbA1C (0.94), HOMA-IR (1.5) TG (25 mg/dl), TC (5.02 mg/dl), AST (0.98 IU/L), ALT (2.83 IU/L)	• Increasing glycogen synthesis, • Delaying glucose absorption in the Intestines • Enhancing glucose adsorption capacity, Supporting the regeneration of pancreatic islets
Osama, 2023 10.1080/19390211.2022.2107138	RCT (12-weeks)	Hesperidin (1g/day)	Decrease in FBS (11.5 mg/dl), TG (26.2 mg/dl), LDL-C (16.3 mg/dl)	• Activation of glucokinase enzyme and consequently glycolysis elevation • Down-regulating the release of free radicals, inflammatory cytokines; interleukin-1β (IL 1β), and tumor necrosis factor-α (TNF-α)
		Diosmin (1g/day)	Decrease in FBS (12.1 mg/dl), TG (12.3 mg/dl), LDL-C (9.2 mg/dl)	
		Hesperidin and Diosmin (1g/day)	Decrease in FBS (16.5 mg/dl), TG (49.6 mg/dl), LDL-C (24.8 mg/dl)	
Khalili-Moghadam, 2023 10.3389/fnut.2023.1241844	RCT (10-weeks)	Green coffee aqueous extract (400 mg /BD)	Decrease in FBS (1.70 mg/dl), TG (4.40 mg/dl), CRP (0.18 mg/l)	• Activating AMPK, and increased glucose uptake in the cells by glucose transporter 4 (GLU4) • Inhibit the key enzymes linked to the absorption of glucose (including pancreatic amylase isoenzymes I and II, α-glucosidase, and α-amylase) • Decrease glucose production (glycogenolysis and gluconeogenesis) bActivation of IRS-1 consequently GLUT4 translocation to the adipocyte membrane • Activating PPAR-α

Single RCTs 2020-2024

Novel strategies for the management of adulthood diabetes mellitus from randomized controlled clinical trials conducted between 2020-2024				
ID	Study design	FF/supplement	Effects	Mechanisms
Karizi, 2023 10.1002/ptr.7674	RCT (12-weeks)	Spirulina platensis (2 g/day)	Decrease in FBS (25 mg/dl), HbA1C (1.43), TC (49 mg/dl), LDL-C (38 mg/dl)	• Stimulation of insulin secretion from pancreatic β-cells • Stimulates insulin release either through the adenylate cyclase/cAMP pathway or through the phosphatidylinositol pathway or may directly impact exocytosis • Inhibit pancreatic lipase • Activate PPAR-γ coactivator-1α (PGC-1α), 5' AMP-activated protein kinase (AMPK), and sirtuin 1 (SIRT1)
Ghafouri, 2023 10.1186/s12906-023-03878-0	RCT (6-weeks)	Rheum ribes (450 mg extract/TDI) ریواس	Decrease in insulin (1.46 uU/ml), HOMA-IR (0.32) and HOMA-B (0.33)	• Increased insulin-stimulated glucose uptake • Peroxisome proliferator-activated receptor-γ (PPAR-γ) activation • Inhibitory effect on glucose uptake in the small intestine and glucose reabsorption in the renal tubular
Hashemia, 2021 10.1159/000510986	RCT (8-weeks)	Pomegranate seed powder (5g/d/BD)	Decrease in FBS (6.13 mg/dl), HbA1C (0.32), TG (12.03 mg/dl), TC (8.82 mg/dl)	• Upregulated and activated the glucose transporter type 4 expression • Increase the peroxisome proliferator-activated receptors γ and α response genes
Ghadimi, 2020 10.1002/ptr.6867	RCT (8-weeks)	Ellagic acid (180 mg/d)	Decrease in FBS (37.33 mg/dl), insulin (3.67 uU/ml) HbA1C (1.3), HOMA-IR (2.58) TG (18.33 mg/dl), TC (16.91 mg/dl), LDL-C (16 mg/dl)	• Activation of peroxisome proliferator-activated receptor gamma (PPAR-γ) transcription factors • Reducing absorption and increasing cholesterol excretion through the feces

Meta-analysis 2020-2024

ID	Study design	FF/Supplements Effects
Xia, 2023 10.1016/j.phrs.2023.106647	Network meta-analysis (170 RCTs) on supplements	• Chromium as the most effective in reducing FBS and HOMA-IR (Low to very low certainty) • Vitamin K best in reducing HbA1C and fasting insulin levels (Moderate to very low certainty) • Vanadium ranked best in lowering total cholesterol (Very low evidence certainty) • Niacin ranked best in triglyceride reductions and increasing HDL-c (Low to very low evidence certainty) • Vitamin E ranked best in reducing LDL-c (Very low evidence certainty)
Xi, 2023 10.1016/j.nutres.2022.12.008	Meta-analysis (13 RCTs)	Flaxseed (high content of alpha-linolenic acid, lignans, and dietary fiber) Decrease in HbA1c (-0.19)
Moridpour, 2023 10.1002/ptr.8026	Meta-analysis (24 RCTs)	Cinnamon decrease in FBS (1.32 mg/dl), HbA1C (0.67), HOMA-IR (1.32) Complications: Cinnamon is generally safe and no serious side effects have been reported . only one study reported mild, short-lived gastric upset, and headache

Meta-analysis 2020-2024

ID	Study design	FF/Supplements Effects
Mokgalaboni, 2023 10.3389/fphar.2023.1132650	Meta-analysis (8 RCTs)	Okra decreases in FBS (14.63 mg/dl)
Mao, 2023 10.3389/fnut.2023.1199815	Meta-analysis (13 RCTs)	320 mg/day anthocyanins, either from fruit extracts or pure supplements, for 8Wk intervention Decrease in FBS (0.63 mmol/l), HbA1C (0.31), TG (0.45 mmol/l), LDL-C (0.26 mmol/l)
Lu, 2023 10.3389/fnut.2023.1253312	Meta-analysis (17 RCTs)	Viscous soluble dietary fiber decreases FBS (0.93 mmol/l), HbA1C (0.47), TC (0.33 mmol/l), LDL-C (0.24 mmol/l)
Li, 2023 10.1186/s12967-023-04306-0	Meta-analysis (30 RCTs)	Probiotics decrease FBS (0.33 mmol/l), insulin (0.18), HbA1C (0.42), HOMA-IR (0.22) This result was more significant in obese, bifidobacterium, and food-type probiotics
Jayedi, 2023	Meta-analysis (68 RCTs) on supplementrations	Probiotics (MD: -0.25 %, GRADE = moderate) and synbiotics (MD: -0.31 %, GRADE = very low) decrease in HbA1c. Probiotics (MD: -0.69 mmol/L, GRADE = very low) and synbiotics (MD: -0.82 mmol/L, GRADE = very low) decrease in FBS. Probiotics decrease in LDL (MD: -0.19 mmol/L, GRADE = very low) and had moderate effects on serum triglyceride (GRADE = low). **Existing evidence is uncertain and does not support supplementation with probiotics, prebiotics, and synbiotics for T2D management**

Meta-analysis 2020-2024

ID	Study design	FF/Supplements Effects
Zhang, 2022	Meta-analysis (34 RCTs)	Zingiberaceae family (زنجبیل) (Curcumin, ginger, turmeric, cardamom), moderate to high quality of evidence: Decrease in FBS (14.29 mg/dl), Insulin (2.03), HbA1C (0.43), HOMA-IR (0.88), TG (17.63 mg/dl)
Saadati, 2022 10.3389/fnut.2022.977756	Meta-analysis (11 RCTs)	Nigella sativa (سیاه‌دانه، یا «سُنیز») decreased FBS (24.18 mg/dl, low certainty), HbA1C (0.54, very low certainty), HOMA-IR (0.2, low certainty), TC (23.84 mg/dl, low certainty), LDL-C (20.12 mg/dl, low certainty)
Zeraattalab-Motlagh, 2021	umbrella review (11 meta-analysis)	Resveratrol decreases FBS (0.33 mmol/l, moderate certainty), insulin (4.55, low certainty), HOMA-IR (0.46, moderate certainty), TC (23.84 mg/dl, low certainty), LDL-C (20.12 mg/dl, low certainty)
Khalili, 2021 10.3390/metabo11110742	Meta-analysis (30 RCTs)	Omega-3 decrease FBS (0.36 mmol/l), HbA1C (0.74), HOMA-IR (0.58), TG (0.27 mmol/l), TC (0.60 mmol/l), LDL-C (0.54 mmol/l), HDL-C (0.60 mmol/l)
Ziaei, 2020 10.1002/ptr.6535	Meta-analysis (8 RCTs)	Nettle (گزنه) decrease in FBS (18 mg/dl)

Meta-analysis 2020-2024 – Supplementation for GDM

ID	Study design	FF/Supplements	Effects	Note
Mu, 2023 10.3390/nu15061375	Meta-analysis (11 RCTs)	Probiotics/synbiotics	Decrease in FBS (2.23 mg/dl), insulin (2.47 uU/ml), HOMA-IR (0.4), TC (6.59 mg/dl)	• The use of specific probiotic supplementation may be a promising prevention and therapeutic strategy for GDM • Main probiotics (**Lactobacillus acidophilus**, **Bifidobacterium bifidum**, Lactobacillus casei, Lactobacillus fermentum)
Luo, 2023 10.1016/j.ejogrb.2023.12.014	Meta-analysis (5 RCTs)	Magnesium	Decrease in FBS (7.33 mg/dl), HOMA-IR (0.99)	• Magnesium supplementation may be effective for the treatment of gestational diabetes without taking insulin treatment.
Liu, 2023 10.1016/j.jdiacomp.2023.108451	Meta-analysis (6 RCTs)	Omega-3	Decrease FBS (0.25 mmol/l), insulin (17.13 pmol/l), HOMA-IR (0.51)	
Li, 2023 10.1007/s00404-023-07100-x	Meta-analysis (7 RCTs)	Inositol	Decrease FBS (3.20 mg/dl) Lower risk for developing GDM (OR: 0.40)	• Myoinositol supplementation taken from the beginning of pregnancy reduces 4 g per day during early pregnancy and may reduce GDM incidence and severity, therefore may be a practical and safe approach for the prevention of GDM.

مکمل های تجاری در ایران

دیابشور

Supplement Facts

Serving Size 1 Tablet

	Amount Per Serving	% Daily Value
Vitamin A (as Beta-Carotene)	5000 IU	100%
Ascorbic Acid (Vitamin C)	150 mg	250%
Vitamin D (as D3 Cholecalciferol)	400 IU	100%
Vitamin E (as dl-Alpha Tocopheryl Acetate)	20 IU	66.67%
Vitamin B1 (as Thiamine Mononitrate)	2 mg	133.33%
Riboflavin (Vitamin B2)	2 mg	117.65%
Nicotinamide	30 mg	150%
Vitamin B6 (as Pyridoxine Hydrochloride)	10 mg	500%
Folic Acid	400 mcg	100%
Vitamin B12 (Cyanocobalamin)	10 mcg	166.67%
Biotin	150 mcg	50%
Pantothenic Acid (as Calcium Pantothenate)	10 mg	100%
Iron (as Ferrous Fumarate)	10 mg	55.56%
Iodine (as Potassium Iodide)	150 mcg	100%
Magnesium (as Magnesium Oxide Heavy)	50 mg	12.5%
Zinc (as Zinc Sulfate Monohydrate)	15 mg	100%
Selenium (as Lynside® Forte Selenium)	70 mcg	100%
Copper (as Copper Sulfate)	0.9 mg	45%
Manganese (as Manganese Sulfate Monohydrate)	2 mg	100%
Chromium (as Lynside® Forte Chromium)	35 mcg	29.17%
Boron (as Sodium Borate Decahydrate)	0.7 mg	*
Citrus Bioflavonoids *(Citrus limon)* (fruit)	25 mg	*
Alpha Lipoic Acid	60 mg	*
L-Carnitine Tartrate	30 mg	*

* Daily value not established

Other Ingredients:
Microcrystalline Cellulose, Croscarmellose Sodium, Crospovidone, Mannitol, Silicon Dioxide, Dibasic Calcium Phosphate, Hypromellose, Ethyl Cellulose, Magnesium Stearate, Talc, Maltodextrin, Medium Chain Triglycerides, Stearic Acid, Polyethylene Glycol, Oleic Acid, Potato Starch, Titanium Dioxide, Propylene Glycol, Butylated Hydroxyanisole, FD&C Yellow # 6, FD&C Red # 40 and FD&C Blue # 2.

Directions:
For adults, take one (1) tablet daily, preferably with a meal, as a dietary supplement or as directed by a Healthcare Professional.

Warning:
If you are pregnant, nursing or taking any medications consult your doctor before use. Discontinue use and consult your doctor if any adverse reactions occur. Avoid [illegible] if you are allergic to yeast.

DIABESURE® is a balanced nutritional formula to maintain overall health in diabetics, it also supports key areas such as

Eye Health: Premium ingredients such as Vitamin A and Zinc contribute to help maintain normal vision.†

Heart Health: Vitamin A, C, E & D help in maintaining good heart health.†

Nerve Health: B Vitamins and Alpha Lipoic Acid help support nerve health.†

†These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

WARNING: Accidental overdose of iron-containing products is a leading cause of fatal poisoning in children under six. KEEP THIS PRODUCT OUT OF REACH OF CHILDREN. In case of accidental overdose, call a doctor or Poison Control Center immediately.

Storage:
- Store in a cool and dry place below 25° C.
- Keep out of sight and reach of children.

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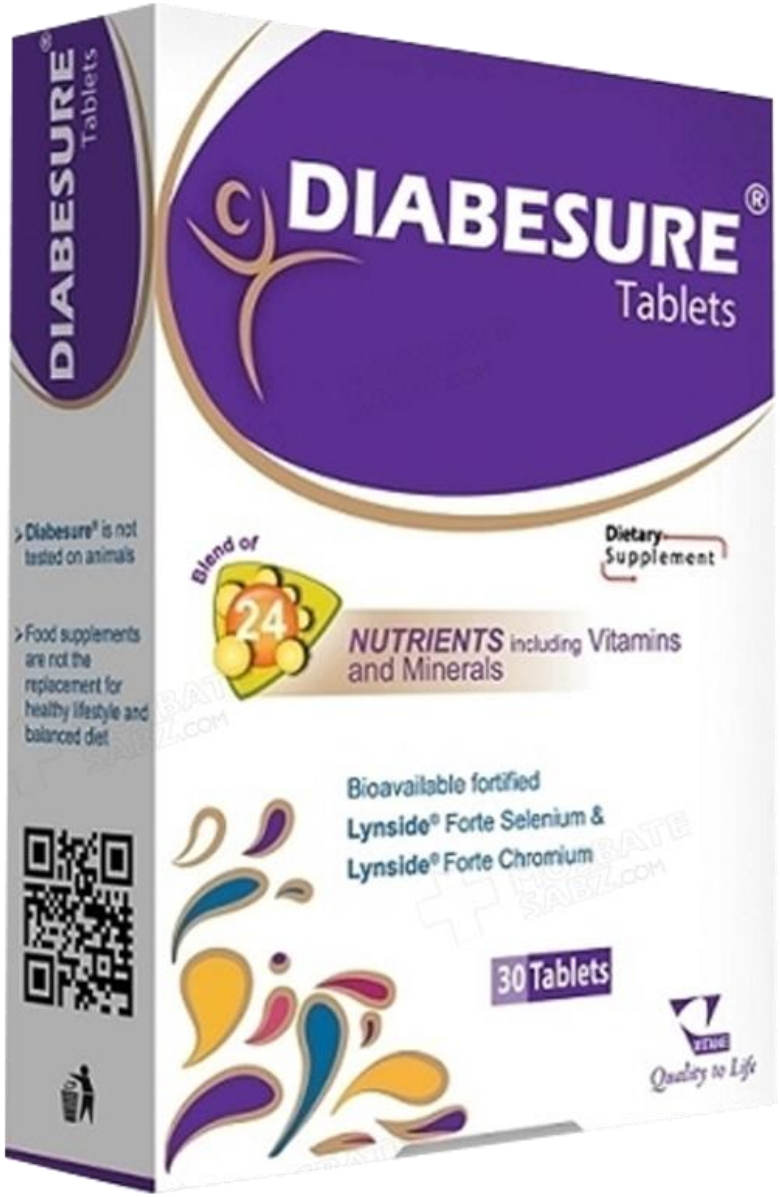


دیابشور

- مکمل جهت کمک به کنترل قند خون، سلامت بینایی، سیستم قلبی عروقی و سیستم عصبی در افراد دیابتی
- فاقد گلوتن، نمک و لاکتوز، ژلاتین و مواد نگهدارنده
- مناسب برای افراد دیابتی

- **روش مصرف:** روزانه یک عدد همراه با آب کافی

- **منع مصرف:** بارداری، شیردهی

دیابتون

دیابتون اورجینال

مکمل / ۳۰ عدد قرص

این فرآورده فاقد رنگ مصنوعی، مواد نگهدارنده، گلوتن، لاکتوز، شکر افزوده، نمک و مخمر می باشد.

موارد مصرف: کمک به حفظ سلامت عمومی و تامین مواد مغذی مورد نیاز بدن در افراد سالم و دیابتی

دستور مصرف: روزانه ۱ عدد قرص همراه با وعده غذایی اصلی با ۱ لیوان آب مصرف شود.

موارد هشدار و احتیاط: در صورت ابتلا به صرع، اختلالات تیروئید، هموکروماتوز، آلرژی به مواد غذایی و یا اجزای تشکیل دهنده فرآورده و در صورت استفاده از سایر داروها و در دوران بارداری و شیردهی، قبل از مصرف با پزشک یا داروساز مشورت نمایید. مصرف این فرآورده در کودکان توصیه نمی شود. از جویدن قرص خودداری نمایید. بیشتر از مقدار توصیه شده مصرف نشود. این فرآورده مکمل است و جهت پیشگیری، تشخیص و درمان بیماری نمی باشد.

شرایط نگهداری: در دمای زیر ۲۵ درجه سانتی گراد، در جای خشک و دور از دید و دسترس اطفال نگهداری شود.

Nutritional Information	Average per Tablet	% EC NRV*
L-Carnitine	50 mg	—
Vitamin A (2333 IU)	700 µg RE	88
Vitamin D (as D3 600 IU)	15 µg	300
Vitamin E (Natural Source)	20 mg α-TE	167
Vitamin C	120 mg	150
Thiamin (Vitamin B1)	30 mg	2727
Riboflavin (Vitamin B2)	5 mg	357
Niacin (Vitamin B3)	45 mg NE	281
Vitamin B6	10 mg	714
Folic Acid	400 µg	200
Vitamin B12	9 µg	360
Biotin	200 µg	400
Pantothenic Acid	10 mg	167
Magnesium	100 mg	27
Iron	8 mg	57
Zinc	15 mg	150
Copper	1000 µg	100
Manganese	2 mg	100
Selenium	100 µg	182
Chromium	160 µg	400
Iodine	100 µg	67

*NRV - Nutrient Reference Value
mg - milligram, µg - microgram, IU - International Units

www.diabetone.com

DIRECTIONS

ONE TABLET PER DAY WITH YOUR MAIN MEAL.
Swallow with water or a cold drink. Not to be chewed.
Do not exceed the recommended intake. Diabetone® should not be taken on an empty stomach.

This comprehensive formula replaces other Diabetone® multivitamins.

User Information

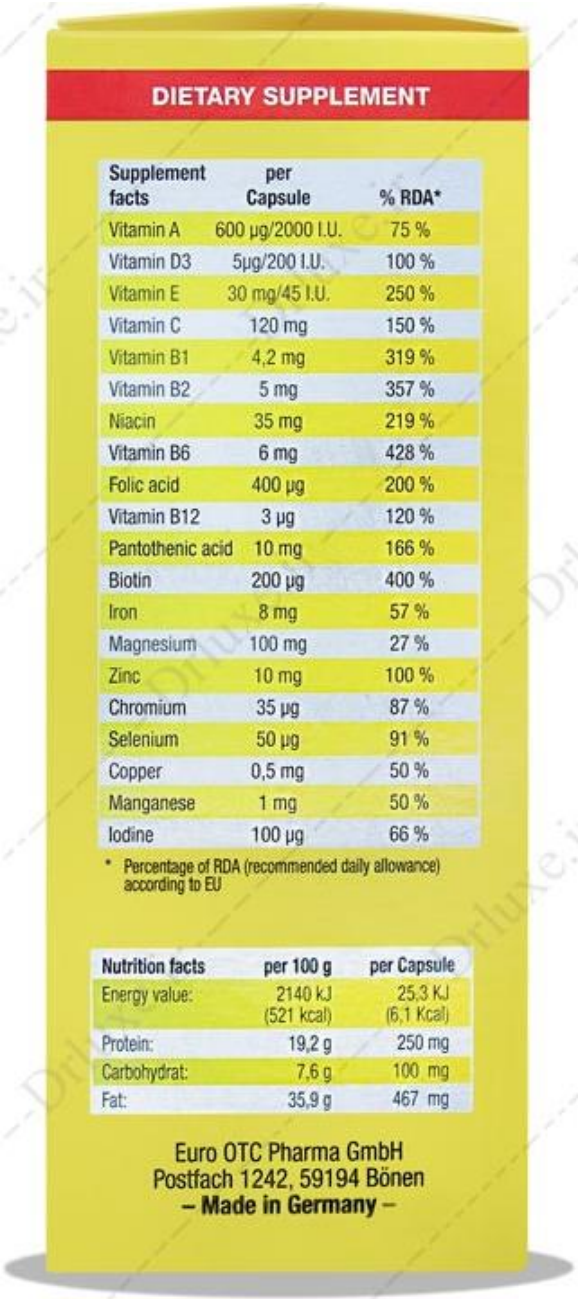
Diabetone® is a vitamin and mineral supplement for those who wish to safeguard their daily diet with key vitamins and minerals. It is not a treatment for diabetes or metabolic control, but intended to help maintain overall health and wellbeing. Diabetone® does not contain any drugs or hormones but should be used under the guidance of your pharmacist, physician or healthcare professional.

تحت لیسانس شرکت VITABIOTICS انگلستان / دارنده پروانه ساخت: شرکت ویتابیوتیکس قارمد / محل ساخت: کارخانه داروسازی مدلوا
مرکز مشاوره و پاسخگویی: ۰۲۱-۴۱۷۸۲ / صندوق پستی: ۱۵۸۷۵-۸۵۹۱

دیابتون

- حاوی ویتامین A، ویتامین D، ویتامین E، ویتامین Cو ویتامین‌های گروه B، منیزیم، آهن، زینک، منگنز، سلنیوم، کروم و ید
- کمک به تامین ویتامین‌ها و مواد معدنی مورد نیاز روزانه در افراد سالم و دیابتی
- کمک به حفظ قند خون در سطح نرمال به واسطه دارا بودن کروم
- مفید در افزایش سطح انرژی و کاهش احساس خستگی به دلیل دارا بودن ریزمغذی‌های مورد نیاز بدن
- مفید در حفظ سلامت و عملکرد طبیعی دستگاه عصبی و تقویت سیستم ایمنی
- نحوه و بهترین زمان مصرف قرص دیابتون اورجینال: روزانه ۱ عدد قرص همراه با وعده غذایی اصلی
- فاقد گلوتن، فاقد لاکتوز، بدون شکر افزوده، فاقد نمک، فاقد مخمر، بدون رنگ مصنوعی و مواد نگهدارنده است.
- **منع مصرف:** بارداری، شیردهی

دیافیت


DIETARY SUPPLEMENT
Supplement facts | per Capsule | % RDA*
Vitamin A | 600 µg/2000 I.U. | 75 %
Vitamin D3 | 5µg/200 I.U. | 100 %
Vitamin E | 30 mg/45 I.U. | 250 %
Vitamin C | 120 mg | 150 %
Vitamin B1 | 4,2 mg | 319 %
Vitamin B2 | 5 mg | 357 %
Niacin | 35 mg | 219 %
Vitamin B6 | 6 mg | 428 %
Folic acid | 400 µg | 200 %
Vitamin B12 | 3 µg | 120 %
Pantothenic acid | 10 mg | 166 %
Biotin | 200 µg | 400 %
Iron | 8 mg | 57 %
Magnesium | 100 mg | 27 %
Zinc | 10 mg | 100 %
Chromium | 35 µg | 87 %
Selenium | 50 µg | 91 %
Copper | 0,5 mg | 50 %
Manganese | 1 mg | 50 %
Iodine | 100 µg | 66 %
* Percentage of RDA (recommended daily allowance) according to EU
Nutrition facts | per 100 g | per Capsule
Energy value: | 2140 kJ (521 kcal) | 25,3 KJ (6,1 Kcal)
Protein: | 19,2 g | 250 mg
Carbohydrat: | 7,6 g | 100 mg
Fat: | 35,9 g | 467 mg
Euro OTC Pharma GmbH
Postfach 1242, 59194 Bönen
– Made in Germany –


DIETARY SUPPLEMENT
FOOD SUPPLEMENT
Average amount per 1 capsule | % NRV*
Vitamin A (2000 I.U.) 600 µg 75
Vitamin D3 (200 I.U.) 5µg 100
Vitamin E (45 I.U.) 30 mg 250
Vitamin C 120 mg 150
Vitamin B1 4,2 mg 319
Vitamin B2 5 mg 357
Niacin 35 mg 219
Vitamin B6 6 mg 428
Folic acid 400 µg 200
Vitamin B12 3 µg 120
Pantothenic acid 10 mg 166
Biotin 200 µg 400
Iron 8 mg 57
Magnesium 100 mg 27
Zinc 10 mg 100
Chromium 35 µg 87
Selenium 50 µg 91
Copper 0,5 mg 50
Manganese 1 mg 50
Iodine 100 µg 66 %
* Nutrient Reference Value according to Regulation (EU) 1169/2011
Euro OTC Pharma GmbH
Postfach 1242, D-59194 Bönen
Germany
EuRho® VITAL
30 Capsules
DiaFit®
With essential vitamins, minerals and trace elements

دیافیت

- تامین کننده ویتامین ها و مواد معدنی مورد نیاز افراد دیابتی
- کمک به تقویت سیستم ایمنی به دلیل دارا بودن زینک
- حاوی ویتامین های گروه B برای کمک به تامین انرژی روزانه
- کمک به محافظت از سلول ها با دارا بودن ویتامین C و ویتامین E
- کمک کننده در متابولیسم کربوهیدرات به دلیل دارا بودن کروم
- کمک به حفظ سلامت سیستم بینایی به دلیل دارا بودن ویتامین A
- نحوه مصرف: روزانه ۱ عدد کپسول ژلاتینی نرم همراه با غذا

- **منع مصرف:** از مصرف همزمان Diafit با مکمل های حاوی مقادیر بالای ویتامین A بپرهیزید.

سینامون پلاس

ویژگی ها

کمک درمان بیماری های سندرم متابولیک، هایپر لیپیدمی، کبد چرب (الکلی و غیرالکلی) و سندرم تخمدان پلی کیستیک، زخم های دیابتی، نوروپاتی و سایر عوارض دیابت، آلزایمر

ترکیبات: کرومیوم (کروم)، زینک (روی)، تیامین، ریبوفلاوین، پیریدوکسین، کوبالامین

میزان مصرف:

- مصرف یک قرص روزانه: شروع اثر طی ۴ ماه
- مصرف دو قرص روزانه: شروع اثر طی ۲ ماه

منع مصرف: بارداری و شیردهی، حساسیت به دارچین

✓ تداخل با وارفارین و کومارین

سنسولاین

ویژگی‌ها:

کمک به پیشگیری و کند شدن روند ابتلا به دیابت نوع ۲، فاقد شکر، نمک، رنگ مصنوعی و طعم دهنده ها، کمک به تنظیم متابولیسم قند و چربی، کاهش قند خون

ترکیبات: بربرین HCL، پودر پوست دارچین، کروم

میزان مصرف: ۱ تا ۳ قرص در روز همراه با وعده ی غذایی

منع مصرف: بارداری و شیردهی، حساسیت به دارچین

✓ تداخل با وارفارین و کومارین


THANK YOU
FOR YOUR
ATTENTION