The following examples are provided to help the users become familiar with some of the unique features of this App including:

- Find health foods for <u>Multiple Health Concerns</u> – You may simultaneously search health foods or remedies for more than just one health issue. This is particularly important if you have more than one health concern or want to make sure that the beneficial health food or remedy you choose for your main concern would not hurt you somewhere else.

- Multi-layer presentation - The large amount of information in this App is provided in multiple layers. The first or initial simple layer (a table or matrix of checkmarks) is for those who are just looking for the names of foods or remedies that are either beneficial for or harmful to their selected health concerns. Other layers (like the explanation page) provide access to more detailed information for those who want to dig deeper into and understand the reasons for those benefits and side effects.

- Reverse Search – Instead of selecting multiple health issues and searching for health foods and remedies, you may select multiple foods and compare their benefits and side effects.

The matrices provided in the following examples have been edited for clarity that is many rows have been hidden by using some of the App's features to hide unwanted rows.

The icon legend on the top of the Health Effects Matrix briefly indicates the meanings of the color-coded icons used in the matrix. For more detailed explanation of these icons, please refer to the help page or tap on the "?" symbol on top right of the App pages.
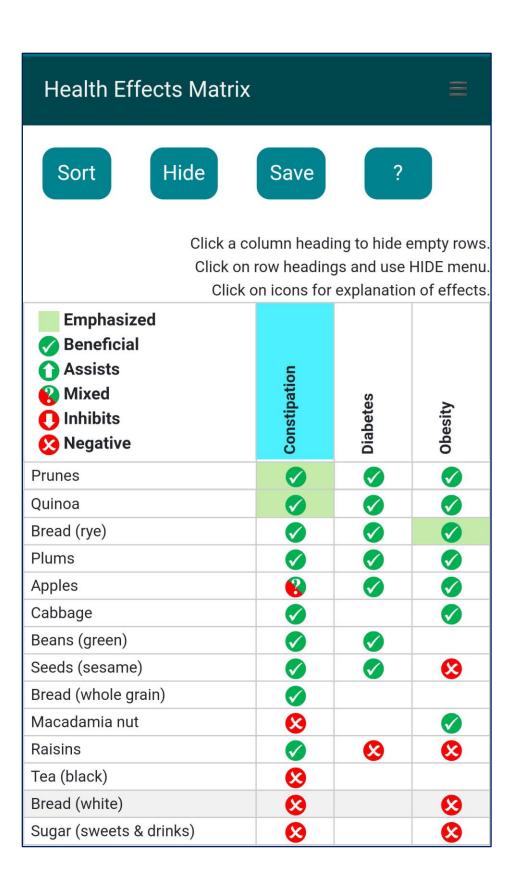
Examples for the APP Usage:

1- **Health Foods for Constipation**
2- **How to shorten the long list of Health Foods (or Health Benefits)**
3- **How to stop your Hair Loss without hurting your Liver or Kidney**
4- **Comparing Impacts of different Vitamins**

Example 1 - Health Foods for Constipation

There are over 80 different health food options that could help prevent or relieve constipation. The matrix below shows about a dozen of those foods after filtering many unwanted rows. However, many of them have side effects that could cause more serious medical conditions. This App can help protect the user from these side effects through two means:

a- User enters his/her other known medical concerns (like diabetes and obesity in the matrix below) and the App will show the impacts of constipation remedies on these medical conditions in the same table (matrix)

b- Additionally, the App provides a list of other medical conditions (not necessarily known by the user) that could be adversely affected by any health food/remedy the user cares to try.

Since constipation is the main health concern and not the other two, user can highlight constipation (click on it on top of the column header to highlight it in cyan color). This will remove the health foods that are not known to have any significant effect on constipation. User may further shorten the matrix length (number of health food options) by arbitrarily hiding the health food rows that are not interesting to the user (see HELP on how to hide rows).

Health Effects Matrix

Sort | Hide | Save | ?

Click a column heading to hide empty rows.
Click on row headings and use HIDE menu.
Click on icons for explanation of effects.

Legend:
- Emphasized
- ✅ Beneficial
- ⬆ Assists
- ☯ Mixed
- ⬇ Inhibits
- ❌ Negative

	Constipation	Diabetes	Obesity
Prunes	✅	✅	✅
Quinoa	✅	✅	✅
Bread (rye)	✅	✅	✅
Plums	✅	✅	✅
Apples	☯	✅	✅
Cabbage	✅		✅
Beans (green)	✅	✅	
Seeds (sesame)	✅	✅	❌
Bread (whole grain)	✅		
Macadamia nut	❌		✅
Raisins	✅	❌	❌
Tea (black)	❌		
Bread (white)	❌		❌
Sugar (sweets & drinks)	❌		❌

The following observations could be made from this Health Effects Matrix:

- There are some health foods that are beneficial to all three health concerns such as prunes, quinoa and rye bread
- There are health foods for constipation that are beneficial for some of the other health concerns like cabbage and green beans
- There are health foods for constipation that would aggravate some of the other health conditions like sesame seeds and raisins
- There are health foods not good for constipation regardless of their impact on other health concerns like macadamia nuts and white bread
- There are health foods that could have a mix of beneficial and harmful impacts on constipation like apples, depending on how they are consumed.

User may click or tap on any icon in this table (inside the app) to see more details and explanations of benefits or side effects. For example, if user taps on the red/green icon on apple row and constipation column, the following Explanation of Effects page appears and provides more details on the mixed effect of apples on constipation.

Effects of Apples on Constipation

✅ **Apple juice contains sorbitol, which helps to extract water from the large intestine into colon thus facilitate easy passes of stool**
Source: http://www.gyanunlimited.com/health/what-are-the-wonder-health-benefits-of-drinking-apple-juice/8999/

✅ **Apples contain sorbitol. When this substance reaches the large intestine, it draws water into the colon. This way, it makes the stool softer and easy to pass.**
Source: http://www.stylecraze.com/articles/best-benefits-of-apple-juice/

❌ **Apple fiber helps constipation but a peeled apple loses about half of its fiber. When the peal is removed, the pectin can counteract the benefits of the fiber, so that eating a pealed apple might contribute to constipation. Apple sauce also causes constipation as it is made from peeled apple. Cooked apple may also cause constipation as it increases pectin, a binding agent. Apple can also cause constipation if body is even mildly dehydrated as the body will pull water from the stool to be used where it is needed more.**
Source: https://homeremediesforlife.com/apple-for-constipation/

Other Considerations

Apples may have an adverse effect on the following medical conditions:

(Click on a condition to add/remove it to your table)

- **Attention deficit (ADHD)**
- **Autism**
- **Diarrhea**
- **Digestive (IBS)**
- **Gas (bloating)**
- **Kidney stones**
- **Migraines**

Images of Apples

Source: Google search

There are three explanation paragraphs on this page identified with green and red bullet points. These are provided from different sources. Two sources indicate that apples are good for constipation but the third reference explains that while whole apple is good for constipation, peeled apple could actually make it worse. Tapping on the source links below each paragraph would provide further details.

To help warn the user more about his/her selected health food (like apples in this case), this page also provides a list of medical conditions that could be adversely impacted by apples. By clicking on any of them, user could add it to the matrix (as a new column) for further information.

For further clarity, a few images of the selected food are also shown at the bottom of this page. This feature may not be needed for apples but would be very helpful for less known fruits or unfamiliar herbs.

Example 2 - How to shorten the long list of Health Foods (or Health Benefits)

A full list or complete table of searched health foods and their benefits or side effects could be very long and comprehensive especially if it is done for multiple health concerns. For example, searching health foods for just two health concerns like immune system and liver could be over 200 lines long. While this may be useful to some people for a more detailed investigation, most people would only care for the top 10-20 health foods that they can use. This App provides a few ways to reduce the length of the table including:

1) Select and "hide" rows of items that are not easily available or user does not care to try,
2) Save the list of individually selected and "hidden" items in a "No Show" file that could be applied to all future searches until cancelled by the user,
3) Hide any row that does not have emphasized benefits or side effects,
4) Set priority of columns (like immune system in the example below) by clicking on and highlighting the appropriate column header. This will hide any row that is blank for (that is it has no known impact on) this highlighted item. Highlighting all columns would limit the matrix to the items that impact all selected medical concerns.

Following is an example of how a long list of over 200 health foods for immune system and liver could be shortened to include less than 30 items.

Original 202 lines

Hide Rows with No Emphasized Benefits or Side Effects (53 lines)

	Emphasized	Immune system	Liver
✅	Beneficial		
⬆	Assists		
🆖	Mixed		
⬇	Inhibits		
❌	Negative		
Vegetable leaves (dark green)		✅	✅
Bitter melon		✅	✅
Burdock		✅	✅
Cloves		✅	✅
Vitamin E (Tocopherol)		✅	✅
Mulberry		✅	✅
Oregano		✅	✅
Beans (soy)		✅	
Beets			✅
Carrots			✅
Chestnuts		✅	
Artichokes			✅
Walnut (black)		✅	
Curd		✅	
Dandelions			✅
Echinacea (coneflower)		✅	
Elderberry		✅	
Eleuthero (Siberian ginseng)		✅	
Barberries			✅
Maca (Peruvian ginseng)		✅	
Milk thistle			✅
Beans (adzuki - chori)			✅
Mustard greens			✅
Olive oil			✅
Beans (black)		✅	
Vitamin B5 (Pantothenic acid)		✅	
Persimmon		✅	
Radishes			✅
Sprouts		✅	
Stinging nettle		✅	
Turmeric			✅
Ajwain (carom seed)		✅	❌
Vitamin A (Retinoids)		✅	❌
Tea (green)			🆖
Lemongrass		✅	❌
Borage		✅	❌
Catnip		✅	❌
Seeds (hemp - cannabis sativa)		🆖	
Peganum (harmala - wild rue)		✅	❌
Corn oil			❌
Pepper (cayenne)			❌
Agave nectar			❌
Juniper (essential oil)			❌
Sun (UV rays)		❌	
Gotu kola			❌
Garcinia cambogia (Malabar tamarind)			❌
Vitamin B3 (Niacin)			❌
Spearmint			❌
Camphor			❌
Calamus (essential oil)			❌
Sugar (sweets & drinks)		❌	
Arnica			❌
Horse chestnut			❌

Highlighted Immune System 29 lines

	Emphasized	Immune system	Liver
✅	Beneficial		
⬆	Assists		
🆖	Mixed		
⬇	Inhibits		
❌	Negative		
Vegetable leaves (dark green)		✅	✅
Bitter melon		✅	✅
Burdock		✅	✅
Cloves		✅	✅
Vitamin E (Tocopherol)		✅	✅
Mulberry		✅	✅
Oregano		✅	✅
Beans (soy)		✅	
Chestnuts		✅	
Walnut (black)		✅	
Curd		✅	
Echinacea (coneflower)		✅	
Elderberry		✅	
Eleuthero (Siberian ginseng)		✅	
Maca (Peruvian ginseng)		✅	
Beans (black)		✅	
Vitamin B5 (Pantothenic acid)		✅	
Persimmon		✅	
Sprouts		✅	
Stinging nettle		✅	
Ajwain (carom seed)		✅	❌
Vitamin A (Retinoids)		✅	❌
Lemongrass		✅	❌
Borage		✅	❌
Catnip		✅	❌
Seeds (hemp - cannabis sativa)		🆖	
Peganum (harmala - wild rue)		✅	❌
Sun (UV rays)		❌	
Sugar (sweets & drinks)		❌	

Example 3 - How to stop your Hair Loss without hurting your Liver or Kidney

Hair loss has many reasons and not all of them are related to our diet or skin treatment. Nevertheless, diet may help slow it down, if not stop it. We need to be cautious, however, in selecting hair loss treatments or diets as some recommendations only focus on the hair loss problem, losing sight of other health issues one may have.

For example, juniper essential oil is good to slow down hair loss as it is astringent (causing contraction of body tissues) and strengthens the grip of muscles that would help keeping your hair. However, it is also known to have adverse effect on kidney, liver and pregnancy. Arnica (in soap or shampoo) is another example. It contains thymol and linoleic acid that may strengthen your hair follicles and prevent hair loss. It can even stimulate the growth of new hair but if used on broken skin (or consumed), it is toxic and could hurt your liver, kidney and other organs.

To get a more holistic view of home remedy options for hair loss before choosing any, this App gives a comparative table of benefits and side effects for different foods and treatments for hair loss, Kidney health and Liver health. As explained in previous examples, the original unabbreviated table shows many treatments and has been condensed for this example. Also, since hair loss is the main concern, it has been highlighted to remove any food or treatment that has no known impact on hair loss.

This shortened table shows that while juniper and arnica are beneficial for hair loss, they could hurt kidney and liver. On the other hand, there are foods or treatments like black seed that benefits all three concerns.

Clicking (tapping) on any icon would display more details about the food. The explanation page below shows some details about the benefits of pineapples for hair loss.

Health Effects Matrix

Sort **Hide** **Save** **?**

Click a column heading to hide empty rows.
Click on row headings and use HIDE menu.
Click on icons for explanation of effects.

Emphasized (legend swatch)
✓ **Beneficial**
⬆ **Assists**
❓ **Mixed**
⬇ **Inhibits**
✗ **Negative**

	Hair loss	Kidney	Liver
Black seed (nigella sativa)	✓	✓	✓
Eclipta alba	✓		✓
Capers	✓		
Cypress essential oil	✓		✓
Vitamin B6 (Pyridoxine)	✓		
Licorice	✓		
Lemon juice	✓		
Peppermint essential oil	✓		
Vitamin B7 (Biotin)	✓		
Ginkgo biloba	✓		
Lavender	✓		
Pineapples	✓		
Primrose (oil)	✓		
Yams	✓		
Juniper (essential oil)	✓	✗	✗
Arnica	✓	✗	✗

Effects of Pineapples on Hair loss

✅ **Along with the antioxidant compounds that protect against oral cancer, pineapples also have astringent properties, which strengthen gums and make sure that your teeth do not become loose. Astringent agents help to tighten up tissues and tone the body so things like tooth loss, hair loss, and muscle weakness or skin loosening does not occur. Pineapples are very powerful astringents and are often prescribed as a natural remedy to fix loosening of teeth or for the retraction of gums**
Source: https://www.organicfacts.net/health-benefits/fruit/pineapples.html

Other Considerations

Pineapples may have an adverse effect on the following medical conditions:

(Click on a condition to add/remove it to your table)

- **Menstrual cycle**
- **Odor (flatulence)**
- **Pregnancy**

Images of Pineapples

Source: Google search

Example 4 - Comparing Impacts of different Vitamins

As indicated before, the App can be used to either search for health foods impacting multiple health concerns or search and compare benefits of multiple health foods. Some good examples could be comparing the benefits of different nuts, seeds, fruits, beans, spices, etc. The matrix (table) below compares the benefits and side effects of some vitamins. The complete matrix is very long and has been shortened here by removing some rows (medical conditions) that would benefit from fewer vitamins.

Health Effects Matrix

Sort | Hide | Save | ?

Click a column heading to hide empty rows.
Click on row headings and use HIDE menu.
Click on icons for explanation of effects.

Legend:
- 🟩 Emphasized
- ✅ Beneficial
- ⬆ Assists
- ☯ Mixed
- ⬇ Inhibits
- ❌ Negative

Effect	Vitamin A (Retinoids)	Vitamin B2 (Riboflavin)	Vitamin B3 (Niacin)	Vitamin B6 (Pyridoxine)	Vitamin B7 (Biotin)	Vitamin B9 (acid folic)	Vitamin C (ascorbic acid)	Vitamin E (Tocopherol)
Skin health	✅	✅		✅ (emph)	✅ (emph)	✅ (emph)		✅
Alzheimer's			✅	✅ (emph)		✅ (emph)		✅ (emph)
Heart health			✅	✅	✅	✅	⬆	✅ (emph)
Skin (dermatitis-inflammation)	✅	✅		✅	✅		✅ (emph)	✅
Immune system	✅ (emph)	✅		✅			✅	✅ (emph)
Fatigue (low energy)	❌	✅			✅	✅ (emph)	✅	☯
Aging (premature)		✅				✅	✅	✅ (emph)
Cancer	✅	✅					✅	✅
Eyes (night blindness)	✅						✅ (emph)	✅ (emph)
Iron deficiency (anemia)		✅		✅	✅		✅	✅
Memory (dementia)				✅ (emph)		✅ (emph)		✅
Depression (mood)		✅		✅	✅	✅		
Headache	❌		☯					❌
Stomach cramp (ache)			❌					❌
Diarrhea	❌							❌
Flushing			❌					
Numb toes & fingers				❌				
Heart rhythms				❌				
Arthritis (gout)			❌					
Pneumonia	❌							
Nerve damage				❌				
Blood (low pressure)				❌				
Nausea	❌			✅				❌
Irritability	❌							

A simple review of the columns in this shortened table reveals that vitamin E appears to impact more health conditions than others and Niacin (vitamin B3) has impact on the fewest of them. However, this quantitative comparison does not mean that niacin is any less effective than vitamin E. Also, vitamins A, B3, B6 and E have the largest number of side effects. This comparative information on the number of benefits and side effects could be helpful in choosing vitamin supplements.

Another observation is that despite its many benefits, vitamin A also has many side effects including feeling tired (fatigue). Clicking or tapping on the fatigue icon under vitamin A (in the App) would bring up the Explanation of Effects page that provides some information on vitamin A side effects. Tapping on the source link below the explanation paragraph would refer the user to the source of the information used here.

Effects of Vitamin A (Retinoids) on Fatigue (low energy)

❌ **Long-term use of large amounts of vitamin A might cause serious side effects including fatigue, irritability, nausea, osteoporosis, headache, peeling skin, increased risk of pneumonia and diarrhea. Too much vitamin A might also make liver disease worse.**
Source: http://www.webmd.com/vitamins-supplements/ingredientmono-964-vitamin%20a.aspx?activeingredientid=964&

Images of Fatigue (low energy)

Source: Google search