

## *Reduction of Blood Pressure by Using Apricot Seeds and Vitamin C*

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### **Abstract:**

The kernel of apricot seeds were used in the treatment of many diseases .The patients were outpatients from Ur Clinic in Baghdad .Seventy two patients were included in this study (42 male, 30 female). Their ages were between 40-65 years.

The first group was supplemented with six kernel apricot seeds three times daily for 21 days. The second group was supplemented with six kernel apricot seeds and 500mg of vitamin c three times daily for 21 days .Every week, the blood pressure of the patients were measured. The results showed that the blood pressure of the first

Group of both Systolic and diastolic was reduced while the reduction of blood pressure of the Second group was more than that in the first group.

**Aim:**The aim of this study is to investigate the effect of kernel apricot seeds on blood pressure and its relation with vitamin c .

### **انخفاض ضغط الدم باستعمال بذور حبة المشمش وفيتامين c**

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### **المستخلص:**

لب بذرة المشمش استعملت في علاج عدة أمراض، أخذت القياسات لضغط الدم لمرضى يرتادون عيادة أور في بغداد - اثنان وسبعون مريضاً على شكل مجموعتين ٤٢ من الرجال و ٣٠ من النساء تتراوح أعمارهم بين ٤٠-٦٥ سنة المجموعة الأولى تناولت ستة حبات من لب بذرة المشمش ثلاث مرات يومياً لمدة ٢١ يوم.

المجموعة الثانية تناولت ست حبات من لب بذرة المشمش ثلاث مرات يومياً مع تناول ٥٠٠ ملغم من فيتامين c ثلاث مرات يومياً لمدة ٢١ يوماً وكل أسبوع تم قياس ضغط الدم (الانقباضي والانبساطي)

النتائج أظهرت أن ضغط الدم عند المجموعة الأولى قل بنسبة ٢٩% الانقباضي و ٢٦% الانبساطي عند الرجال وبنسبة ٢٨% الانقباضي و ٢٤% الانبساطي عند النساء بينما في المجموعة الثانية قل ضغط الدم بنسبة ٣٤% الانقباضي و ٢٩% الانبساطي عند الرجال و ٣٧% الانقباضي و ٢٩% الانبساطي عند النساء .  
الهدف: يهدف البحث إلى إيجاد تأثير لب بذرة المشمش على ضغط الدم وعلاقته بفيتامين c

## Introduction:

The use of alternative medicine has increased recently and attracted the attention of many researchers all over the world. Apricot kernel are the seeds found inside the pits of fresh apricot. The kernel of apricot is commonly known for containing amygdale which is sometimes called vitamin B17. Apricot kernels are strong Tasting and bitter, and are known in culinary contexts as bitter almonds or apricot almonds .Apricot kernels contain the cyanogenic glycoside amygdalin .Amygdalin can be hydrolyzed to form glucose, benzaldehyde and hydro cyanic acid .Kernel of apricot seeds were used in treatment of many diseases, malignant or degeneration diseases [1,2], (Rheumatism, prevent scurvy, promote healing of wounds, maints solid bones and teeth[2,3,4]). The main constituent of apricot seeds is Amygdalin (laetrile, vitamin B17). Amygdalin decreases hypertension and helps in building immunity to cancer. Amygdalin is a compound found in whole raw food supply and it is abundant in the seed of non citrus fruits [5,6,7]. Pancreatic enzyme vitamin c, antioxidant, vitamin E &A these substances aid in amygdalin absorpction and protect the person from toxic reaction which may occur if apricot seeds are used alone in a big amount or for long time[8].

Therefore, in this study vitamin c [500mg] was supplemented, vitamin c is an Antioxidant which help neutralize cell-damaging free radicals. Research has shown that Antioxidant can helps to reduce high blood pressure possibly by protecting your body supply on nitric oxide, amolecule that relaxes blood vessels,[9] . Blood pressure measures the force of blood against the walls of the blood vessels. When this pressure is abnormally high is said to have high blood pressure. High blood pressure has adverse effects on the heart, kidney and brain and can contribute to the development of heart attacks and stroke. [10]

## Material and Method:

Seventy two patients with hypertension were included in this study [42 males and 30 females], Their ages ranged from 40-65 years.

Daily oral administration of kernel apricot seeds was carried out for 21 days.

The patients were divided into two groups.

The first group was supplemented with (6) kernel of apricot seeds three times daily for 21 days (21 male patient, 15 female patient)

The second group was supplemented with 500mg of vitamin c (three times daily) and 6 kernels of apricot seed three times daily the patients were outpatients from Ur clinic in Baghdad. Every week, the blood pressure of the patients was measured for

21 days. Blood pressure was measured by sphygmomanometer with cuff [11]. Blood pressure measurements are graded into a number of categories by the British Hypertension society: optimal blood pressure < 120/80, normal blood pressure <130/85

High-normal blood pressure 130-139/85-89, Grade 1 hypertension(mild) 140-159/90-99

Grade 2 hypertension (moderate) 160-179/100-109, Grade 3 hypertension (severe) > 180/111, [12] statistical analysis were performed with SAS software [13]

## Results:

Table 1 shows that the blood pressure was reduced in male and female after using kernel of apricot seeds for 21 days. Table 2 shows that blood pressure is more reduced when the patients were supplemented with kernel of apricot seeds and vitamin c.

**Table 1 measurement of blood pressure after using kernel apricot seed**

Weeks of treatment	Male		Female	
	B-P		B-P	
	systolic	Diastolic	Systolic	Diastolic
Before treatment	19.5 ±1	11.2±1	19±1	11±1
After treatment First week	18±2	10±1	17.8 ±0.5	9±1
After treatment Second week	16±1	9±2	15±2	8.5±1
After treatment Third week	14.5±1	8±1	13.8±1	8.5±1
% reduction	29	26	28	24

Data are means  $\pm$  SD, BP: Blood pressure Male (21 patient) .Female (15 patients) were supplemented with 6 kernel Apricot seeds three times for 21 days.

**Table 2 measurement of blood pressure after using kernel of apricot seeds and vitamin c**

Weeks Of treatment	Male		Female	
	B-P		B-P	
	Systolic	Diastolic	Systolic	Diastolic
Before treatments	19.5±1	11.2±1	19±1	11±1
After treatment First week	17.8±1	10.5±1	15.8±1	8.5±0.2
After treatment Second week	15±1	8±0.2	12+0.5	8.5±0.2
After treatment Third week	13±1	8±0.1	12±0.3	8±0.1
% reduction	34	29	37	29

Data are means  $\pm$  SD, BP: Blood pressure Male (21 patient), female (15 patient) were supplemented with 6 kernel of apricot Seed and 500mg of vitamin c three times dialy for 21 days.

## Discussion and Conclusion:

Table 1 shows that the percent of the reduction of blood pressure was 29% systolic and 26% diastolic in the male group and 28% systolic, 24% diastolic in the female group.

Table 2 shows that the percent reduction in blood pressure both systolic and diastolic were increased by using vitamin c and kernel of apricot seeds (34% systolic, 29%

Diastolic in the male group and 37% systolic, 29% diastolic in the female group)

This effect of kernel apricot seeds is probably due to its content of vitamin B17 which destroys or lessens particles present in blood [14, 15]. It was reported that kernel apricot seeds reduce the size of tumors and reduce hypertension and cholesterol levels [16].

It was mentioned that vitamin c, antioxidant and digestive enzyme are used to increase the absorption of vitamin B17 and protect the person from toxic reaction and help in digestion of apricot seeds .[17]Therefore, vitamin c was used in this study as is shown in table 2. The presence of vitamin c causes reduction in the blood pressure which appears in the second week of treatment (in male and female).These results are in agreement with what was reported by [9] previous research has also confirmed that adding vitamin c to the diet can help to reverse the degenerative process caused by free radical resulting in lower blood pressure level [9]. Hypertension is known as the silent killer because in many cases, there are no symptoms until serious complications develop. High blood pressure may be prevented by living a healthy lifestyle, including some of the following:

- \* eating anutritious, low fat diet
- \* decreasing salt intake
- \* Drinking alcohol moderatly
- \* limit caffeine
- \* get routine health assessment and blood pressure screening, and
- \* reduce stress and practice relaxation techniques, physical activity will help this [18]
- \* exercising regularly
- \* maintaining a healthy weight
- \* stop smoking
- \* visiting your doctor regularly

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