



Concept of Hypertension in Unani System of Medicine: A Comprehensive Review

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ABSTRACT :

Background: Hypertension is a major health problem globally, contributing to a significant burden of disease and mortality in India. It is characterized by high blood pressure and can lead to serious health complications. Traditional Unani medicine provides a unique perspective on hypertension, defining it as *Imtila ba Hasbil aw'iyya* and offering treatment based on the concept of *Imtila*. **Research Problem and Aim:** The research aims to explore the potential pathophysiology of hypertension in Unani medicine and to provide a comprehensive plan for its management and prevention. **Methodology:** The research design involves a review of Unani literature to identify dietary recommendations, regimenal therapies, and pharmacological treatments for hypertension. The context is the traditional Unani medical system, which emphasizes the balance of humours and the body's constitution in managing health conditions. **Results:** The Unani system of medicine offers three basic principles for treating and preventing hypertension: *Ilaj-bil-ghiza* (Dietotherapy), *Ilaj-bit-tadbeer* (Regimenal therapy), and *Ilaj-bid-dawa* (Pharmacotherapy). These principles encompass dietary recommendations, regimenal therapies, and pharmacotherapy in the management of hypertension.

Implications: The findings suggest that Unani medicine plays a crucial role in the prevention and management of hypertension. Lifestyle modifications, dietary interventions, and therapeutic techniques described in traditional Unani literature can be effectively utilized to manage hypertension and prevent its adverse consequences. The details will be discussed in full length paper.

Keywords: Unani Medicine, *Imtila ba Hasbil aw'iyya*, Dietotherapy, regimenal therapy, Lifestyle Modifications, Traditional Medicine

Introduction :

Hypertension is one of the leading causes of the global burden of disease & a major risk factor for cardiovascular and cerebrovascular illnesses like Coronary Heart Disease (CHD), Congestive heart failure (CHF), ischemic & hemorrhagic stroke, renal failure & peripheral artery disease (PAD) etc. It affects more than one billion individual and causes an estimated 9.4 million deaths per year.¹ According to health statistics by WHO in 2023, over 1.28 billion persons between the ages of 30 and 79 are thought to have hypertension globally, with the majority (two thirds) residing in low- and middle-income nations. It is estimated that 46% of adult patients with hypertension are not aware they have the illness. Adults with hypertension are identified and treated for less than half of them (42%) cases. Of the adult population with hypertension, almost one in five (21%) have it under control.

WHO defines Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure. It is diagnosed if, when it is measured on two different days, the systolic blood pressure readings on both days is ≥ 140 mmHg and/or the diastolic blood pressure readings on both days is ≥ 90 mmHg.² HTN is classically categorized into two kinds: *primary hypertension* and *secondary hypertension*. In primary hypertension, high blood pressure is thought to be idiopathic³; but the risk factors for primary hypertension have been examined by a WHO Scientific Group-

1. **Non modifiable risk factors:** The variables that are not controllable include age, sex, genetics, and ethnicity.
2. **Modifiable risk factors:** alcohol, salt consumption, saturated fat, and obesity, heart rate, dietary fiber
3. Exercise, environmental stress, and socioeconomic status⁴
whereas secondary hypertension occurs due to secondary causes such as renovascular disease, renal failure, aldosteronism etc.³

Classification of Hypertension–

Table 1. WHO (World Health Organization) classification of Hypertension.⁴

Category	PAS (mm-Hg)	PAD (mm-Hg)
Optimal	<120	<80

Normal	120-129	80-84
Normal High	130-139	85-89
Grade 1 Light	140-159	90-99
Grade 2 Moderate	160-179	100-109
Grade 3 Severe	≥180	≥110
Systolic Hypertension	≥140	<90

Unani Concept of Hypertension -

Zaghta-e-damwi, or blood pressure, was known to ancient physicians. They were regarded Systole as 'Zaghta-e-Inqabazi' and Diastole as 'Zaghta-e-Inbesati'.⁵

'Zaghtuddam Qawi' is the term used by contemporary Unani physicians and writers to refer to hypertension. The current understanding of Zaghtudam Qawi cannot be fully traced back to the Unani classics. On the other hand, throughout history, every Unani Hakeem has talked extensively on the ailment known as "Imtila." After careful examination, the clinical characteristics of Imtila in the canonical Unani medical literature matched the clinical characteristics seen in hypertensive patients. As a result, we may associate the terms "Hypertension" and "Imtila" with one another. Eventually, Unani physicians translate Hypertension as "Zaghtuddam Qawi".⁶

Since the four humors (blood, bile, black bile, and phlegm) are central to the Unani philosophy, it is stated in Unani literature that an imbalance between these humors is the cause of nearly all ailments. Their quantity or quality might be disturbed. Similar to this, altered humoral quantity & quality is the cause of Imtila.⁷

Definition of Imtila-

"Imtila" literally means "fullness of the body with fluids." In technical terms, Imtila refers to the build-up of either normal or pathological bodily fluids.⁸ In the past, physicians referred, Imtila or 'congestion' as a disease, in which fluids are collected in the body and produce certain symptoms.⁹ According to Rhazes, Avicenna, and Haly Abbas, Imtila states that an excess of food, alcohol, and rest combined with inactivity would cause the body to accumulate waste products, either beneficial (Mahmooda) or non-beneficial (Ghair-mahmooda), both of which would be harmful to the body. Increase in blood volume, vessel wall tension, and vascular pressure may result due to the buildup of these waste products.⁸ One of the factors responsible for stagnation of abnormal humors at any place is weakness of arteries.⁶

Types of Imtila-

Scholars had mentioned the types of Imtila as:

1. "Imtila bi hasbil auiya" (fullness of body channels) and
2. "Imtila b'hasb-ul-quva" (inadequacy of natural body force to digest)⁸

In '*Imtila-ba-Hasb-ul-Auiya*', vascular pressure rises as a result of an increase in blood volume. Imtila ba-Hasb-ul-Auiya, or vessel replenishment, is a condition in which there is an increase in blood volume. This raises intra-arterial pressure, causes a hypervolemic pulse, and makes the pulse hard to feel. These individuals may experience recurrent episodes of epistaxis, headaches, and visual problems. In rare instances, vascular rupture may occur, leading to potentially deadly consequences. Obese individuals frequently experience this sort of congestion, which is brought on by an excessive buildup of metabolic products, either mahmooda (useful) or ghair-mahmooda (destructive).¹⁰

In the state of '*Imtila bahasb-ul quwa*' (repletion for power), also called as 'Imtila-bahasbul Kaifiat', there is disruption of '*quwwat-e nafsaniya*', '*quwwat-e tabia*' & '*quwwat-e mudabbira badan*' of the body. This is because the disruption of *quwwat-e tabia* causes altered digestion, which produces harmful metabolites. Similarly, modified *quwwat-e-mudabbira badan* and *quwwat-e-nafsaniya* also produce minute systemic system deterioration, meaning that even trace amounts of toxic byproducts might result in symptoms of Imtila.^{6,11,12}

In simple words, Imtila bi hisbil aw'iyya consists of an excessive amount of humors or *ruh*, but their quality is sound and they are just overabundant in quantity, causing the channels to become dilated and congested⁵ whereas, In Imtila-ba-hasbul quwa the trouble is not only because of the overall surplus of humors but their quality is also aberrant. Therefore, person suffering from Imtila-ba-hasbul quwa are more prone to infectious disease.^{13,14,15,16,17}

In Unani and modern medicine, the increase venous return (increase cardiac output) is the mirror image of Imtila-ba-hasbul aw'iyya.¹⁸

Pathophysiology -

The Unani medical system explains the potential pathophysiology of hypertension as a buildup of diseased matter (mawad-e-fasida) in many bodily organs, particularly the blood vessels, due to a number of morbid conditions, including excessive consumption of food, alcohol consumption, physical inactivity, and prolonged use of Hammams (Turkish steam baths).

This anomalous buildup increases tension and pressure within the vessel wall.¹⁹ Besides this,

According to Majusi's documentation, Sauda Muharraq causes *Yuabusat* and rigidity in the vessels, which prevents the blood vessels from constricting and relaxing. Yabis temperament predominates, which can also cause the bodily vessels to stiffen, and thus plays a role in the narrowing process.

Two significant categories of hypertension have been identified etiologically by recent investigations using the correlation approach:

Dominance of both the cold and dry (*Saudavi*) and hot and wet (*Damvi*) temperaments.

The most typical characteristic of the Damvi type is, increased blood volume. As a result, those with Damvi Mizaj are more likely to experience hypertension. The Saudavi type is characterized by abnormalities in the vessel's qualities (kaifiyat), such as constriction and stiffness due to excessive dryness. One of the predisposing factors is consumption of dry & cold edible items which lead to extra production of black bile in the body.

Now, it is implied that the predominance of dryness in the arteries may contribute to vasoconstriction, which is a significant factor in the development of hypertension.

Thus, the pathologic alterations of the vessels in hypertension are closely related to the Unani principle's correlative approach, which is based on excessive vessel dryness and increased blood volume, both of which may raise blood pressure.²⁰

Asbab (Causes) of Hypertension-

According to Ibne Sina, all illnesses have four asbabs or causes: Asbab-e-maddi, Asbab-e-souriya, Asbab-e-fayeliya, and Asbab-e-tamamia.¹³

Asbab-e-souriya – these are related to Mizaj, Quwa & Tarkeeb.

1. **Mizaj** – Yaboosat-e-mizaj

According to reports, hypertension is more common among the elderly (over 60 years old, with over 60% of cases), and at this age, temperament (mizaj) turns dry (yabis). This suggests that hypertension is a manifestation of dry temperament (mizaj-e-yabis). Al Razi identified three factors as the cause of a rapid pulse: hararat (heat), khalqi tazaiyuq-e-sharyani (congenital artery narrowing), and yaboosat (dryness).

Dryness, according to Ibn-e-Rushd, contributes to blood vessel constriction.^{16,17}

2. **Quwa** - Hypertension is primarily caused by the strong retentive faculties (quwwat-e-masika) or weak expulsive faculties (quwwat-e-dafia) that induce Imtila, specifically Imtila ba hasbil quwa (repletion with respect to vitality), also known as imtila ba hasbil kaifiyat. The primary reason of Imtila, according to Majosi, is the weakening of *Quwwat-e-Ghaziya* because under these circumstances, food is not properly digested and waste products are produced in excess, which results in heaviness and causes weakness, exhaustion, soreness, and lack of appetite.^{14,18}

3. **Tarakeeb** - Arteriosclerosis (Salabat-E-Sharain)

Because of arteriosclerosis (Salaabat E Sharaeen) in elderly individuals, arterial compliance is decreased which produces imtila and its associated features, or hypertension. Although not a diagnostic sign, in Tibb-e-Unani, Salabat-e-Sharain (Arteriosclerosis) is a necessary condition for hypertension.^{21,22,23}

Asbab-e-maddia- including Arkan, Akhlat, Aaza, Arwah.

1. **Arkan** – It is clear from the discussion above that hypertension might be a sign of Yaboosat-e-mizaj and Hararat. Therefore, it is possible to explain hypertension as the outcome of humans' har-yabis temperament, which is characterized by an amplification of Rukn-e-nar.

2. **Arwah** –

According to Al-Razi, there exists a collection of pneuma (ruh) that often cause tamaddud wa tanaaw (tension), which leads to an increase in vascular tension as a result of elevated blood volume exceeding the vessels' capacity.¹⁷

3. **Akhlat** – *Imtela ba hasbil auiya*, or vessel replenishment, is the process of increasing blood volume, which raises vascular pressure owing to collection of akhlat or humors in blood vessels.

4. **Aza** – Though the neurological and excretory systems play a major role, hypertension is predominantly a disorder of the heart and blood arteries. Hypertension can also indicate problems with the kidneys and brain.

Asbab-e-Fayeliya – these causes are divided into two groups:

1. **Asbab E Sitta Zarooriya**- include six essential prerequisites which are as follows-^{15,18,24}

- **Hawa-e-Muheet (Atmospheric air)** - Through the exchange of air, air fulfills the role of Ta'deel-e-Rooh during inspiration. It also functions for the Tanqiya-e-Rooh at the moment of expiration.^{25,26} Changes in the characteristics of the air we breathe have an impact on our bodies. Humors undergo putrefaction due to air pollution. In order to sustain health and carry out physiological processes, human life need clean, fresh air. By bolstering rooh, fresh and pure air, we can control and prevent the majority of chronic lifestyle disorders like hypertension.
- **Makool wa Mashroob (Food and drinks)** - Unani physicians had prescribed a particular diet for a certain ailment.¹⁸ In his book *Al Qanoon Fit Tib*, Gruner goes on to emphasize the significance of diet, saying that "the stomach is the house of disease and the diet is the head of healing". Hippocrates, Galen, and Ibn Sina—three of the first Tibb pioneers—made this renowned. Hypertension, obesity, inflammatory diseases, and cancer can trace their origin back to poor or unwise consumption of food – too much salt or fat; too little fibre; not enough fruit and vegetables; bad eating habits, etc.
- **Harkat wa Sukoon-e-Badani (Physical activity and repose)** - Unani physicians said that exercise is necessary to release the body's waste products and to activate hararat ghariziya, or innate heat. Riyazat or Exercise, matures the dense morbid materials and promotes internal heat before eliminating it through the appropriate exit.
- **Harkat wa Sukoon-e-Nafsani (Mental activity and repose)** - Numerous lifestyle problems, such as diabetes, hypertension, etc., are linked to mental stress. Human life is protected by mental relaxation in several ways.
- **Naum wa Yaqza (Sleep and wakefulness)** - According to Ismail Jurjani, getting enough sleep is beneficial for everyone, while sleeplessness causes the brain's temperament to deteriorate. Inadequate sleep is considered a major risk factor for obesity, diabetes, cardiovascular disorders like hypertension, and other health issues. Getting enough good-quality sleep may be just as crucial to overall health and wellness.¹⁵
- **Ehtibas wa Istifragh (Retention and elimination)** - An accumulation of Balgham (atherosclerosis) blocks the organs' ability to transmit oxygen, or Nufuz of Rooh. To preserve health and wellness, effective ehtibas wa istifragh (retention and removal) through appropriate

pathways is crucial.

2. ASBAB E GHAIR ZAROORIYA – these include –

- **Mulk wa balad (Cities & Countries)** – Worldwide, hypertension is a possibility; demographic studies have repeatedly shown that black cultures have higher blood pressure than other ethnic groups. Between the two groups, the average difference in blood pressure ranges from little less than 5 mm Hg during the first two decades of life to about 20 mm Hg during the sixth. Research has indicated that African Americans of black ancestry had greater blood pressure than white people.
- **Jins (Gender)** - In the early stages of life, there is minimal variation in blood pressure between male and female individuals. Men, however, have a greater average level during adolescence. The most pronounced difference is seen in young and middle-aged people. The tendency may be reversed and the difference is narrow in later age.
- **Asnaan (Age)** - Blood pressure rises with aging in both male and female sexes.
- **Adaat (Habits)** - Long-term smoking damages arteries by causing atherosclerosis. Drinking alcohol has been linked to a higher risk of hypertension. Systolic blood pressure rises higher with alcohol consumption than diastolic blood pressure.
- **Umoor-e-ghariba** – Obesity is one of the risk factors for the onset of hypertension. Higher weight gain increases the chance of developing high blood pressure. Umoor-e-ghariba also include bronchodilators, OCPs, steroids, and mood enhancers, which might cause hypertension.
- **Asbab-e-tamamiya** –
 - An exaggeration of the body's retentive functions.
 - A reduction in the expulsive capacities.
 - Impaired blood vessel extensibility capacity.
 - An excess of heart pumping motion.
 - An exaggeration of the nervous system's and brain's sensory abilities.²⁸

Signs and Symptoms–

Following table reveals a correlation approach between the clinical aspects of *Imtilā* and *Ḍagħṭ al-Dam Qawī* (hypertension) –^{10,29}

S NO.	Clinical Features	<i>Ḍagħṭ al-Dam Qawī</i>	<i>Imtilā</i> -bi Hasbil Auiya	<i>Imtilā</i> -bi Hasbil Quwa
1.	Headache	+	+	+
2.	Palpitation	+	+	-
3.	Dizziness	+	+	-
4.	Breathlessness	+	+	-
5.	Blurring of vision	+	+	-
6.	Hot touch of skin	+	+	-
7.	Redness of face	+	+	-
8.	Confusion	+	+	+
9.	Lethargy	+	+	+
10.	Epistaxis	+	+	-
11.	Prominent & distended veins	+	+	-

It became clear that the symptoms of "hypertension" as it is currently defined today are more similar to *Imtilā*-bi-Hasbi Auiya than *Imtilā*-bi-Hasbi Quwa after comparing the clinical characteristics of *Ḍagħṭ al-Dam Qawī* with the two varieties of *Imtilā*.

Unani comprehensive plan for the prevention & management of Hypertension-

As Hypertension is a lifestyle issue & Avicenna has advised lifestyle modifications (Husn-e-tadbeer) as ideal way to manage, control, and prevent it.³⁰ Changes in lifestyle include-

1. **Low Sodium consumption** - Elevated sodium intake (>2 grams/day, which is comparable to 5 grams of salt per day) and insufficient potassium intake (less than 3.5 grams/day) can exacerbate hypertension and increase the risk of stroke, cardiovascular disease, and renal diseases. Salt & condiments are the main sources of sodium in diet. It has been shown consuming less salt in the diet—less than 5 grams daily—lowers blood pressure.³¹
2. **Maintaining body weight** as overweight and obesity have a substantial correlation with arterial hypertension. Numerous studies have shown that lowering body weight may reduce blood pressure independently.³²
3. **Reducing Smoking & alcohol consumption** - Both blood pressure (BP) and heart rate can spike sharply as a result of smoking tobacco it is crucial that, people with raised BP are advised to quit smoking. The recommended daily limit for alcohol intake is one drink for women and two drinks for most men (24 ounces of beer, 10 ounces of wine, or 3 ounces of 80 proof whiskey) as excess of alcohol in blood induces hypertension.³¹

4. **Regular Exercise** – Moderate exercise has been shown in several studies to have positive benefits on hypertension, with a reduction in blood pressure as much as 5-7 mmHg in both the systolic and diastolic readings. Frequent exercise may help to lower and regulate high blood pressure more effectively and sustainably.³¹

One may cure and avoid the delayed effects of hypertension, the silent killer, by adhering to the three guiding principles of the Unani medical system -

- a) *Ilaj bil ghiza* (dietotherapy),
- b) *Ilaj bit tadbeer* (regimenal treatments), and
- c) *Ilaj bil dawa* (pharmacological treatments) are these.⁵

Ilaj Bil Ghiza (Dietotherapy) –

Ilaj bil ghiza has a significant role not just in managing hypertension but also in preventing it. Comprehensive dietary advices are part of the Unani medical system and are particularly helpful in preventing hypertension.²⁰

For Preventive intent – Following the six essentials of life (*Asbabe sitta Darurriya*) which include Food & drinks as second essential factor, one can be protected from a variety of diseases if they follow their proper dietary habits and consume food in the right quantity and quality, including timing, energy consumption per day, proper sequence (first *ghiza ghaleez*, then *ghiza lateef*).⁵

For therapeutic intent –

1. *Taqleele ghiza*, which means eating foods less in terms of quantity or more in bulk, but not of high quality like fruits and vegetables.
2. *Ghiza Mufarrigh*, dietary products having a diuretic effect, which aids in the excretion of excess humors that cause *imtila*. e.g. Corriander, cumin, almonds, carrots, gram etc.
3. *Ghiza Mulattif*- This kind of diet aids in blood thinning (producing *lateef khoon*) as the thick and viscous material adheres to the walls of the vessels and causes elevated blood pressure e.g. honey, anjeer, pistachio etc.⁵

Other dietary recommendations include-

Dietary fat and calorie consumption must be reduced. 50–60 grams of protein can be ingested daily for mild hypertension, and no more than 40 grams should be consumed daily for severe hypertension. Fruit and vegetable-rich diets might be taken into consideration. Due to the positive antihypertensive effects of potassium and calcium, a diet high in fruits, vegetables, and low-fat dairy products is a recommended choice. Fruits and vegetables are high in potassium, while dairy products are high in calcium.¹⁹

Ilaj bil tadbeer (Regimenal therapies) –

In the Unani medical system, *Ilaj-bit-Tadbeer* is a common therapeutic approach. It entails the use of a few unique methods together with certain physical exercises that strengthen the immune system and remove harmful substances from the body (*Istefragh-e-madda*) to enhance its constitution. Most *Ilaj-bit-tadbeer* regimenal therapies are nonpharmacological and include changing the patient's lifestyle. The fundamental principle of Regimenal therapy is the alteration and adjustment of *Asbab-e-Sitta Daruriyya* (The Six Essential Causes).

Frequently used *tadbeer* for Hypertension are -

1. ***Ishal (Purgation)*** – Purgative activity of many *advia* causes harmful material from vessels and the body's deep and distant organs to be excreted (*Istifiragh-e-khilt*).³³
2. ***Fasd (Venesection)*** - This therapy is a kind of *Isifragh* (Evacuation), in which the vein is gently punctured or cut in order to execute bloodletting. In *imtila-e-Damvi* (blood congestion), it is quite helpful. It has been discovered that venesection of the basilic vein (*Varid-e-Basaleeq*) is helpful in hypertension (*Zightuddam Qawi*).¹⁹
3. ***Hijama Bil Shart (Wet cupping)*** - A further method of relieving *imtila*, involve cutting of superficial small blood vessels found in muscles, to induce bleeding.⁵ For hypertension, it is advised to perform *Hijama* on *Al-Kahil* (the intrascapular region excluding the vertebral column), bilaterally at the level of L2 to L3, triangle-shaped region created by the boundary of the ilium, spine, and sacrum, and above the head of the 12th rib on the back.¹⁹
4. ***Dalak (Massage)*** – In this therapy, hands are used to massage the body's surface throughout. It improves blood flow and eventually gets rid of waste, which helps the body become more detoxified. Tension and stress are two of the many variables that increase the risk of hypertension. Massage lowers stress-related hormone levels, according to several research. In addition to dissolving waste, massage using oils having cold temperament, such as *roghane banafsha* or *roghane gul*, opens the skin pores to allow *madda* or matter to go out the body. A study has shown back massage is effective in decreasing hypertension.¹⁹
5. ***Riyazat (Exercise)***- It is described as a series of deliberate, continuous bodily motions requiring fast, deep breathing. This therapy helps in diversion & evacuation of morbid matters from body thereby helps in reducing *imtila*. It is recommended that individuals with hypertension should do mild exercise rather than engaging in vigorous exercise. Regular exercise is seen to be a curative therapy for hypertension individuals because it increases arterial dilatation, which lowers blood pressure.¹⁹
6. ***Hamman (Steam bath/ Turkish bath/ Sauna)***- *Hamman* is only a sort of hot bath that cleanses the body and helps in the treatment and prevention of humoral diseases. It is a blend of steam, heat, and aromatherapy that promotes circulation, helps relax muscles, and relieves tension.¹⁹ It opens up the skin's pores, *tahleel* or gives *nuzj* to the body's *fuzlat* (waste), which is then expelled from the body through perspiration. Hippocrates recommended taking a cold water bath because it draws the innate heat, which aids in the breakdown and elimination of excess *akhlat* (humors)¹¹ which eventually will minimize *imtila*. Conversely, taking a hot water bath will lower vascular resistance, which will lower blood pressure in the end.
7. ***Nutul (Irrigation)*** - used to treat headache and heaviness associated with hypertension.³³
8. ***Taleeq (Leech therapy) & Tareeq (Diaphoresis)*** etc are also found to be helpful in reducing blood pressures to some extent.³³

Ilaj-bil-Dawa (Pharmacotherapy) –

Exploring several facets of elevated blood pressure, numerous single drugs and compound Unani formulations have been documented, which have been utilized for millennia to effectively treat hypertension. These drugs following properties: *latafat* (thinning of blood); *tahallul* (resolving thick & viscous humour); and *istiferagh* (eliminating extra matter by micturition) e.g. adrak, hulba, zafran, badiyan, darchini, asrol, asgandh, zarishk, badranjboya, lehsun, rehan, asaroon, badruj, bisfaij, daroonje aqrabi, zarnabad, sumbuluttib, sandal, qarnfal etc.

The following drugs are frequently used in the management of Hypertension, by managing imtila-

1. Mufattihat (Vasodilators/deobstruent)

Arjun chaal (*Terminalia Arjuna* Linn.), Lahsun (*Alium sativum* Linn.)

2. Musakkinat (Sedatives)

Sankhahuli (*Convolvulus pluricaulis* Choisy), Asrol (*Rauwolfia serpentina*), Tukhm-e-Kahu (*Lactuca sativa* Linn), Gul-e-Neelofar (*Nymphaea lotus* Hook F. & Thunb)

3. Mufarrehat (Exhilarants)

Sandal Safaid (*Santalum album*), Parsiyoshan (*Adiantum capillus veneris* Linn), Abresham (Silk cocoon), Khas (*Andropogon muricatus* Linn)

4. Mudirrat (Diuretics)

Tukhm-e-Kharpaza (*Cucumis melo* Linn.), Tukhm-e-Khayaren (*Cucumis sativus* L.), Sharbat Bazoori Motadil, Habb-e-Mudir.

5. Munawwimat (Hypnotics): Roghan-e-Laboob Sab'a, Roughn-e-Khashkhash, Roghan-e-kahu.

Numerous studies on the anti-hypertensive qualities of Unani drug formulations, whether single or compound, have previously been conducted, and many more are presently ongoing. Since the hunt never ends. Thus, the following are a few of the scientific reports in this regard³⁴⁻

- Zafran (*Crocus sativus*):** showed anti-hypertensive effect in rats.
- Heel khurd (*Elettaria cardamomum*):** In human beings, the powder of it lowers blood pressure, increases fibrinolysis, and boosts antioxidant activity.
- Kishneez (*Coriandrum sativum*):** In guinea pigs, the crude extract had a hypotensive effect via a cholinergic Ca²⁺ antagonist. Furthermore, displays a diuretic effect.
- Lehsun (*Allium sativum*):** In adult humans, butanol extract from a dried garlic bulb showed antioxidant and antihypertensive properties.
- Zaitoon (*Olea europaea*):** reduced both the diastolic and systolic blood pressure and raised NO, indicating that it has antioxidant properties in human subjects.
- Asgand (*Withania somnifera*):** shown to have anti-platelet, anti-inflammatory, antioxidant, antihypertensive, hypoglycemic, hypolipidemic, and adaptogenic properties in human subjects.
- Zarishk (*Berberis vulgaris*):** In Sprague-Dawley rats, an extract of B.V. works as a vasodilator and considerably lowers arterial blood pressure.
- Saad koofi (*Cyperus rotundus*):** shown a relaxing effect on smooth muscle of blood vessels, lowering the rats' mean arterial blood pressure.

Conclusion:

Worldwide, hypertension affects more than a billion people and is a major contributor to stroke and cardiovascular disease. The ancient healing system of Unani medicine provides a distinct viewpoint on this ailment, considering it to be an imbalance in the humoral system of the body, or "Imtila." This notion includes both an overabundance of humors in the circulatory system and a deficit in the body's capacity to process or excrete waste products.

A comprehensive combination of dietary advice, medications, regimenal therapies, and lifestyle changes is the Unani approach to treat hypertension. A key component of the Unani approach to preventing and treating hypertension is modifying one's lifestyle which includes cutting back on salt, keeping a healthy weight, exercising often, and controlling stress. Regimenal therapies, including purgation, venesection, wet cupping, and massage, provide non-pharmacological means to alleviate pressure and restore balance within the body. Additionally, the Unani system offers a variety of herbal and compound medications that have shown antihypertensive properties.

To sum up, the Unani system offers a comprehensive framework for addressing hypertension. Its multifaceted approach, combining traditional wisdom with modern validation, provides a robust strategy for managing this complex condition. By integrating these principles, individuals can effectively control hypertension and mitigate its associated risks, ultimately promoting better cardiovascular health and longevity.

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