

## **STUDY THE EFFECT OF ARDRAK WITH SENDHAV LAVAN SEVAN BEFORE MEAL IN HEALTHY INDIVIDUALS W.S.R. TO BHAVPRAKASH**

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### **ABSTRACT**

According to Ayurveda, *Aahar* is one of the main pillars of *Triyoupstambha* for maintaining health. The proper incorporation of diet not only can prevent many preventable disorders but plays major role in the management of the diseases. This type of *Aahar* is called as *Pathya* Ayurveda mentioned that a sick person needs no medicine if he/she follows the *pathyakar Aahar* stipulated for a person suffering from that a particular disease. Drugs and medicine are also of little value, if person follows the rules of *pathya*. According to *Acharya Bhavprakash* eating of *Ardrak* with *Sendhav Lavan* before meal is a always *Pathya*. Total 60 healthy individuals are selected as per *lakshanas* of *swastha* person which mentioned in *Kashyap Samhita Khilasthan*. Randomized open trial was done on 60 healthy individuals who divided into two groups. Group-A-30 healthy individuals was given *Ardrak* with *Sendhav Lavan* before each meal. Group-B-30 healthy individuals was not given *Ardrak* with *Sendhav Lavan* before each meal. After *Ardrak* and *Sendhav lavan sevan*, the pH of oral cavity changed immediately into alkaline stage for few minutes. So it may useful in many ways to protect the health of oral cavity and prevents a many of the diseases of oral cavity like halotosis, dental caries, oral cancer etc.

**Keywords:** *Aahar, pathya, Ardrak, Sendhav, Ph*

### **INTRODUCTION**

Ayurveda is an ancient medical science which deals with the “*Swasthya*”. *Matrasitiya adhyaya* of *Charak Samhita* deals with the healthy ways of *Aahar* and its beneficial effects, it also comprise the daily regimens according to maintain-

ing the health. *Aahar* is not needed for the continuity of life but for *bala, varna, upsaya* etc. The proper diet taken in proper manner can lead to better health. Ayurveda describes *Aahar* according to persons *prakruti* for maintaining its own

physical health and maintaining the mental health Ayurveda prescribed the *Satvik Aahar*. The proper incorporation of diet not only can prevent many preventable disorders but plays major role in the management of the diseases. This type of *Aahar* is called as *Pathya*. *Pathya* is good for body & mind for maintaining normal health. Eating of *Ardrak* with *Sendhav Lavan* before meal is always *Pathya*. It gives taste to the food, improves digestive power & get cleanliness of *jivha* & *kanth*. So for, the main purpose of Ayurveda i.e. “*Swasthyarakshan*” is to see the importance of *pathya* which is mentioned in various *granthas* of Ayurveda like in *Bhavprakash*. *Ardrak* and *Sendhav* both *dravyas* are easily available, cheap and regularly used in foodstuffs and used as a simple home remediese for many *vikaras*.

#### AIMS & OBJECTIVES:

- 1] Study the effect of *Ardrak* with *Sendhav Lavan* sevan before meal in healthy individuals.
- 2] Study the effect of *Ardrak* with *Sendhav Lavan* not given in healthy individuals.
- 3] Comparative study between two groups.

#### MATERIALS & METHODS:

**Selection of Individuals**-Selection of 60 Individuals is done randomly –using a table of random numbers and as per inclusion criteria which mentioned below. For present study, Individuals are selected from-1) Volunteers from college & hospital premises. 2) Study was carried out after appropriate counseling of the Individuals and informed written consent from the Individuals.

#### INCLUSION CRITERIA-

- 1] Individuals were selected irrespective of sex & religion.
- 2] Individuals of Age group 20-40 yrs. were selected for study, because this age group is

‘working age group’ and frequent alterations in Diet and life style or routine are observed in this age group.

3] Total 60 healthy individuals are selected as per lakshanas of *swastha* [healthy] person which is mentioned in *Kashyap Samhita Khilasthan*. MüÉ. xÉÇ. ÎZÉsÉxjÉÉIÉÇ 5/ 6,7,8. Who has desire to eat food ,whose digestive power is good, so he digest the food well, whose stool & urine motions are normal without any obstructions ,who feels his body active light and whose mind is fresh, who having good health of body as well as mind ,these persons known as *swastha* or healthy . Who having such characters of healthy individuals selected for the study.

#### EXCLUSION CRITERIA-

Pregnant Woman & lactating mother.

Hypertensive, Peptic ulcer, cirrhosis of liver, Ischemic Heart Disease.

As per *Bhavprakash Nighantu*, *Ardrak* should not be given in following disease conditions.

*Kushtha*, *Pandu*, *Mutrakruchha*, *Raktapitta*, *Varna*, *Jwara*, *Daha* as well as *Sharad* & *Grishma rutu*. Hence all these excluded from study.

#### Preparation of Dravyas

1] *Ardrak*

2] *Sendhav*

Fresh *Ardrak* in the form of *khand* was collected from market. *Sendhav Lavan* was collected from market. Standardization of both *dravya*'s was done. Fresh *Ardrak* was washed with water & made it into *khand* [pieces] of 2 gm of each for distribution to the Individual. Daily fresh *Ardrak* was collected from the market from same distributor [Farmer] which cultivated in the same soil [farm] of the same species. *Sendhav lavan* gets into powder form for use.

**METHODOLOGY: Study Design: Randomized Open Clinical Trial-**

Randomized open trial was done on 60 healthy individuals who divided into two groups.

Group-A-30 healthy individuals were given Ardrak with Sendhav Lavan before each meal.

Group-B-30 healthy individuals were not given Ardrak with Sendhav Lavan before each meal.

Written consent was taken from every individual before starting the study.

**DRAVYA SEVAN-**

For Group A-30 Healthy individuals was given the drug in following quantity and form-

Ardrak in khand [piece] form- 2 gm in quantity.

Sendhav Lavan in powder form -1 gm in quantity.

Both drugs in mentioned quantity and form given together to chew, 15 minutes before each meal.

**DRAVYA SEVAN KAAL-Pragbhakta[pratah & sayam] - before each meal.**

**DURATION-15 days.**

**FOLLOW UP- SUBJECTIVE**

| Sr.no | LAKSHNAS                 | Lunch |     |     |      | Dinner |     |     |      |
|-------|--------------------------|-------|-----|-----|------|--------|-----|-----|------|
|       |                          | BAS   | AAS | JAL | 4HAL | BAS    | AAS | JAD | 4HAD |
| 1     | Agnidipan                |       |     |     |      |        |     |     |      |
| 2     | Ruchyam                  |       |     |     |      |        |     |     |      |
| 3     | Jivhakanthvishodan       |       |     |     |      |        |     |     |      |
| 4     | Udgarshudhi              |       |     |     |      |        |     |     |      |
| 5     | Utsaha                   |       |     |     |      |        |     |     |      |
| 6     | Uchit Mala-mutra Utsarga |       |     |     |      |        |     |     |      |
| 7     | Udarlaghuta              |       |     |     |      |        |     |     |      |
| 8     | Kshudha                  |       |     |     |      |        |     |     |      |
| 9     | Pipasa                   |       |     |     |      |        |     |     |      |

BAS- BEFORE ARDRAK SEVAN

- AAS-AFTER ARDRAK SEVAN
- JAD-JUST AFTER DINNER
- JAL-JUST AFTER LUNCH
- 4 HAL-4HOURS AFTER LUNCH

• 4 HAD-4 HOURS AFTER DINNER

**NOTE-**Same Follow up sheet will be attached as per Day-1 up to 15 days for subjective study.

0-Absent, 1-mild,2-moderate,3-severe

**Objective-**

| Sr.no. | TEST                  | LUNCH |     |     |      | DINNER |     |     |      |
|--------|-----------------------|-------|-----|-----|------|--------|-----|-----|------|
|        |                       | BAS   | AAS | JAL | 4HAL | BAS    | AAS | JAD | 4HAD |
| 1      | Saliva viscosity Test |       |     |     |      |        |     |     |      |
| 2      | SalivapH test         |       |     |     |      |        |     |     |      |

BAS- BEFORE ARDRAK SEVAN

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- 4 HAL-4HOURS AFTER LUNCH

• 4 HAD-4 HOURS AFTER DINNER

• Saliva Viscosity Test-

• 1-Normal, 2-Increased,3-Residues

• Saliva pH test [strip test]: As per colour changes reading noted.

**Special Advise** - Both Group's individuals was advised Guru & slight Heavy diet during the study.

**Grading and scoring –**

1] *Agnidipan*

0-Absent

1-mild appetite

2-moderate appetite wants to eat food

3-severe appetite wants to eat vigorously.

2] *Ruchyam*

0-Absent

1-mild or less desire for food

2-moderately desire for food

3-severe desire for food.

3] *Jivhakanthvishodhan*

0-Absent

1-mild feeling of cleanness of Jivhakanth

2-moderate feeling of cleanliness of Jivhakanth

3-Totally feeling of cleanliness of Jivhakantha

4] *Udgarshudhi*

0-Absent of Udgarveg after meal

1- 1-2 clear Udgarveg occurs after each meal

2- 2-3 clear Udgarveg occurs after each meal

3- 3-4 clear Udgarveg occurs after each meal

5] *Utsaha*

0-Absent

1- Low euthansium for physical or mental work.

2- Moderate euthansium for physical or mental work.

3-Highly euthansium for physical or mental work.

6] *Uchitmalamutrautsarga*

0-Absent of both motions.

1-1-time mala utsarg & 1-2 times mutrautsarg.

2-2- times mala utsarg & 3-4 times mutrautsarg.

3-3 times mala utsarg & 4-5 times mutrautsarg

7] *Udarlaghuta*

0-Absent [felling of udarjadata]

1-feeling of mild udarlaghuta.

2- feeling of moderate udarlaghuta.

3- feeling of severe udarlaghuta.

8] *Kshudha*

0-Absent

1-Mild appetite.

2-Moderate appetite.

3-Severe appetite.

9] *Pipasa*

0-Absent

1-Mild [3-4 times/day]

2-Moderate [5-6 times/day]

3-Severe [7-8 times /day]

**Objective Parameters-**

1. Saliva Viscosity test

2. Saliva pH test

For both saliva tests collection of the sample [unstimulated saliva] were done in following procedure and at specific time period.

-Collection of the saliva performed in well ventilated and in moderate light room.

-Primarily the individual is asked to shut up for about one minute and instruct not to swallow the saliva which is accumulated .Then told to individual pooled out saliva into the sterile transparent glass tube.

-Collection was done up to 0.5 ml at every time.

-Collection of the saliva was done in following time period.

**1. Saliva Viscosity test:**

The unstimulated saliva which was collected in the sterile transparent glass tube was visually assessed and result was noted according to following gradations.

Healthy unstimulated saliva is clear in colour, and watery in consistency. If it looks stringy, frothy or bubbly, or is very sticky then it may mean the content of water is low because the rate of production is low.

**Grading & Scoring-**

- Normal viscosity- 1
- Increased viscosity-2
- Residues viscosity-3

**Saliva pH Test [Strip method]:**

The saliva which was collected for viscosity test same sample was used for this test .Standard pH strip [Himedia pH strip] was taken and placed

one end of it into the sample of resting saliva for 10 seconds and then checked the color of the strip.

The color of the test strip while the paper was still moist, were compared with the color on the reading paper which was provided with it. Noted the pH reading and recorded the results.

Highly acidic saliva were in the red section -2 Moderately acidic saliva were found in the yellow section- 4 and 6

Healthy saliva were in the green section-7 and 8 Alkaline saliva were in dark green section-9 and 10.5

**Observations and Results:**

**Table 1:** Distribution According to type of *Aahar Sevan*:

| Group A |                      |    |            | Group B |                      |    |            |
|---------|----------------------|----|------------|---------|----------------------|----|------------|
| S.N     | Type of <i>Aahar</i> | No | Percentage | S.N     | Type of <i>Aahar</i> | No | Percentage |
| 1       | Veg                  | 07 | 23.33%     | 1       | Veg                  | 06 | 20%        |
| 2       | Non veg              | 00 | 00%        | 2       | Non veg              | 00 | 00%        |
| 3       | Misra                | 23 | 76.66%     | 3       | Misra                | 24 | 80%        |
| Total   |                      | 30 | 100%       | Total   |                      | 30 | 100%       |

**Table 2:** *Agnidipan*

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 58      | 59      |
| After Trial Score  | 86      | 61      |

**Table 3:** *Ruchyam*

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 57      | 56      |
| After Trial Score  | 89      | 58      |

**Table 4:** *Jivhakanthvishodhan*

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 48      | 46      |
| After Trial Score  | 83      | 48      |

**Table 5: Udgarshudhi**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 23      | 40      |
| After Trial Score  | 57      | 43      |

**Table 6: Utsaha**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 41      | 49      |
| After Trial Score  | 61      | 51      |

**Table 7: Uchitmalamutra Utsarga**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 47      | 54      |
| After Trial Score  | 73      | 57      |

**Table 8: Udarlaghuta**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 50      | 53      |
| After Trial Score  | 76      | 55      |

**Table 9: Kshudha**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 58      | 60      |
| After Trial Score  | 87      | 61      |

**Table 10: Pipasa**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 56      | 58      |
| After Trial Score  | 70      | 60      |

**Table 11: Saliva viscosity Test-Before Ardrak Sevan-Before Lunch**

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 12:** Saliva viscosity Test- After *Ardrak Sevan*-Before Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 33      | 31      |
| After Trial Score  | 30      | 30      |

**Table 13:** Saliva viscosity Test - Just After Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 14:** Saliva viscosity Test- 4 Hours After Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 15:** Saliva viscosity Test-Before *Ardrak Sevan*-Before Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 16:** Saliva viscosity Test- After *Ardrak Sevan*-Before Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 17:** Saliva viscosity Test-Just after Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 18:** Saliva viscosity Test- 4 Hours After Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 32      | 31      |
| After Trial Score  | 30      | 30      |

**Table 19:** Saliva pH Test-Before *Ardrak Sevan*-Before Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 214     | 210     |

**Table 20:** Saliva pH Test- After *Ardrak Sevan*-Before Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 214     | 210     |

**Table 21:** Saliva pH Test- Just After Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 213     | 210     |

**Table 22:** Saliva pH Test- 4 Hours After Lunch

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 212     | 210     |

**Table 23:** Saliva pH Test-Before *Ardrak Sevan*-Before Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 212     | 210     |

**Table 24:** Saliva pH Test-After *Ardrak Sevan*-Before Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 284     | 210     |

**Table 25:** Saliva pH Test -Just After Dinner

Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 213     | 210     |



**Table 26:** Saliva pH Test- 4 Hours After Dinner  
Observations as per grading & scoring of symptoms:

|                    | Group A | Group B |
|--------------------|---------|---------|
| Before Trial Score | 209     | 209     |
| After Trial Score  | 214     | 210     |

## DISCUSSION

**Agnidipan:** The statistical analysis Mann – Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in Agni i.e. Agnidipan

**Ruchyam:** The statistical analysis Mann – Whitney statistics shows P value < 0.0001 which was extremely significant. . From the above statistical analysis it is stated that there was significantly increase in Ruchyam i.e. Ruchi for food was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial

**Jivhakanthvishodhan:** The statistical analysis Mann –Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in *Jivhakanthvishodhan* was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial.

**Udgarshudhi:** The statistical analysis Mann – Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increases in *Udgarshudhi* was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial

**Utsaha:** The statistical analysis Mann –Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in Utsaha was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial.

**Uchitmalamutra Utsarga:** The statistical analysis Mann –Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in *Uchitmalamutra Utsarga* was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial.

**Udarlaghuta:** The statistical analysis Mann – Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in *Udarlaghuta* was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial.

**Kshudha:** The statistical analysis Mann – Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in *Kshudha* was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial.

**Pipasa:** The statistical analysis Mann –Whitney statistics shows P value < 0.0001 which is extremely significant. From the above statistical analysis it is stated that there was significantly increase in Pipasa was seen in Group A as compared to Group B on day 15<sup>th</sup> of the trial.

**Saliva viscosity test:** After the above observations and results of Saliva viscosity test it is clear that there is no significantly changes occurs in viscosity of saliva when comparing the results of Group A with Group B. It may be due to the most of the healthy individuals which was

participated in study had normal viscosity in both Groups.

**Saliva pH Test:** After the above observations and results of Saliva pH it is clear that when Ardrak & Sendhav Lavan given together for chewing before lunch in healthy individuals in Group A, there after immediately when getting pH of saliva it was highly significant in Group A as compared to Group B. Thus it proves the Ardrak and Sendhav have alkaline nature which is useful for maintaining a health as Pathya.

## CONCLUSION

Ardrak and Sendhav Lavan, when given together for chewing its immediate effect on oral mucosa seen, Salivation and *jivhaksnthvishodhan* occur immediately. After *Ardrak* and *Sendhav lavan sevan*, the pH of oral cavity changed immediately into alkaline stage for few minutes. So it may useful in many ways to protect the health of oral cavity and prevents a many of the diseases of oral cavity like halotosis, dental caries, oral cancer etc. *Ardrak* and *Sendhav Lavan* both show its clinical efficacy on *Jirna Aahar lakshanas*. So its use in Aruchi, Agnimandya and Ajirna is beneficial.

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