

<b>CHAPTER</b>	<b>CONTENTS</b>	<b>PAGE No</b>
<b>1.0</b>	<b>INTRODUCTION</b>	<b>3</b>
<b>1.1</b>	<b>DIABETES - DEFINITION AND EPIDEMIOLOGY</b>	<b>3</b>
<b>1.2</b>	<b>DIABETES AND <i>PRAMEHA</i> ACCORDING TO <i>ĀYURVEDA</i></b>	<b>16</b>
<b>1.3</b>	<b>DIABETES AND YOGA</b>	<b>17</b>
<b>1.4</b>	<b>A NEW MODERN APPROACH</b>	<b>23</b>
<b>1.5</b>	<b>SELECTION OF FOOD</b>	<b>24</b>
<b>1.6</b>	<b>IMPORTANCE OF <i>RASĀHĀRA</i> AND SPROUTS</b>	<b>35</b>
<b>1.7</b>	<b>IMPORTANCE OF THIS STUDY IN PRISON</b>	<b>35</b>
<b>2.0</b>	<b>LITERARY RESEARCH</b>	<b>37</b>
<b>2.1</b>	<b>AIM</b>	<b>37</b>
<b>2.2</b>	<b>OBJECTIVES</b>	<b>37</b>
<b>2.3</b>	<b>INCLUSION CRITERIA</b>	<b>37</b>
<b>2.4</b>	<b>EXCLUSION CRITERIA</b>	<b>38</b>
<b>2.5</b>	<b>PREVIOUS WORK IN THE FIELD</b>	<b>38</b>
<b>2.6</b>	<b>S-VYASA WORKS DONE EARLIER IN THE FIELD</b>	<b>41</b>
<b>2.7</b>	<b>PRESENTATION OF VERSES FROM VARIOUS TEXTS AND THEORETICAL FRAMEWORK</b>	<b>46</b>
<b>2.8</b>	<b>CONCLUSIONS</b>	<b>66</b>
<b>3.0</b>	<b>SCIENTIFIC LITERATURE REVIEW</b>	<b>68</b>
<b>3.1</b>	<b>PRISONERS' LIFE STRESS AND DISEASES</b>	<b>68</b>
<b>3.2</b>	<b>CAUSE OF DIABETES</b>	<b>68</b>
<b>3.3</b>	<b><i>ĀYURVEDA</i> APPROACH ON PRE-DIABETES OR <i>PRAMEHE</i></b>	<b>76</b>

3.4	<b>PRAMEHA AS A METABOLIC DISORDER AND ITS RELATIONSHIP TO MENTAL STRESS</b>	76
3.5	<b>IMPORTANCE OF MEAL TIME MODIFICATION IN REDUCING ĀMA</b>	77
3.6	<b>HERBAL PLANTS: A POTENTIAL SOURCE OF TREATMENT</b>	77
3.7	<b>FUNCTION OF CONVENTIONAL DIABETES DRUGS</b>	78
3.8	<b>MECHANISM OF RASĀHĀRA</b>	80
3.9	<b>PHYSIOLOGICAL BENEFIT OF YOGA</b>	81
3.10	<b>MODERN SCIENTIFIC INVESTIGATION OF YOGA'S BENEFITS</b>	90
<b>4.0</b>	<b>AIM AND OBJECTIVES OF THE STUDY</b>	<b>93</b>
4.1	<b>AIMS</b>	<b>93</b>
4.2	<b>OBJECTIVES</b>	<b>93</b>
4.3	<b>RESEARCH QUESTION</b>	<b>93</b>
4.4	<b>HYPOTHESIS</b>	<b>93</b>
4.5	<b>NUL HYPOTHESIS</b>	<b>93</b>
4.6	<b>IMPLICATION OF THE STUDY</b>	<b>93</b>
4.7	<b>RELEVANCE AND BENEFITS OF THE STUDY</b>	<b>94</b>
<b>5.0</b>	<b>METHODS</b>	<b>97</b>
5.1	<b>METHODS</b>	<b>97</b>
5.2	<b>STUDY DESIGN</b>	<b>97</b>
5.3	<b>ALLOCATION TO GROUPS</b>	<b>98</b>
5.4	<b>INTERVENTIONS</b>	<b>100</b>
5.5	<b>OUTCOME MEASURES</b>	<b>100</b>
<b>6.0</b>	<b>DATA EXTRACTION AND ANALYSIS</b>	<b>107</b>
6.1	<b>DATA COLLECTION</b>	<b>108</b>

<b>6.2</b>	<b>DATA SCORING</b>	<b>108</b>
<b>6.3</b>	<b>DATA ANALYSIS</b>	<b>108</b>
<b>7.0</b>	<b>RESULTS</b>	<b>111</b>
<b>7.1</b>	<b>DIABETES PARAMETERS</b>	<b>115</b>
<b>7.2</b>	<b>CHANGES IN DIABETES MARKERS ON CHANGE OF SEASON</b>	<b>119</b>
<b>7.3</b>	<b>LIPIDS</b>	<b>122</b>
<b>7.4</b>	<b>CREATININE</b>	<b>127</b>
<b>7.5</b>	<b>BLOOD PRESSURE AND PULSE RATE VARIABLES</b>	<b>129</b>
<b>7.6</b>	<b>HAEMOGLOBIN (Hb) AND ACIDITY (pH)</b>	<b>133</b>
<b>7.7</b>	<b>BREATH HOLDING TIME</b>	<b>136</b>
<b>7.8</b>	<b>VĀTA-PITTA-KAPHA BALAS</b>	<b>138</b>
<b>8.0</b>	<b>DISCUSSION</b>	<b>142</b>
<b>8.1</b>	<b>DIABETES MARKERS</b>	<b>143</b>
<b>8.2</b>	<b>CHANGE IN DIABETES MARKERS ON CHANGE OF SEASON</b>	<b>145</b>
<b>8.3</b>	<b>LIPIDS</b>	<b>147</b>
<b>8.4</b>	<b>CREATININE</b>	<b>147</b>
<b>8.5</b>	<b>BLOOD PRESSURE PARAMETERS</b>	<b>148</b>
<b>8.6</b>	<b>HAEMOGLOBIN AND ACIDITY (pH)</b>	<b>149</b>
<b>8.7</b>	<b>BREATH HOLDING TIME</b>	<b>149</b>
<b>8.8</b>	<b>VĀTA-PITTA-KAPHA BALAS</b>	<b>150</b>
<b>9.0</b>	<b>APPRAISAL</b>	<b>153</b>
<b>9.1</b>	<b>SUMMARY</b>	<b>153</b>
<b>9.2</b>	<b>CONCLUSIONS</b>	<b>153</b>

9.3	STRENGTH OF STUDY	158
9.4	LIMITATION OF STUDY	159
9.5	APPLICATION OF STUDY	159
9.6	RECOMMENDATIONS FOR FUTURE STUDIES	160
	REFERENCES	164
	APPENDICES	
	DEMOGRAPHIC SHEETS & CONCENT FORMS	179
	ABRAVATIONS USED IN APPENDICS	182
	RAW DATA	183
	PUBLICATION	210
	LIST OF FIGURES	
Fig. 1.1	Wheat Grass Growing	6
Fig. 1.2	<i>Rasāhāra</i> Employees Taking Care of Wheat Grass	6
Fig. 1.3	Team <i>Rasāhāra</i>	7
Fig. 1.4	Different Stages of Wheat Grass	7
Fig. 1.5	Fresh leaves Collection of <i>Vāsā</i> for treatment.	8
Fig. 1.6	Fresh <i>Guḍuci</i> Stems Used for Treatment	8
Fig. 1.7	Qualities of <i>Tridoṣas</i>	15
Fig. 1.8	<i>Āmlāki (Emblica officinalis)</i>	30
Fig. 1.9	<i>Guḍuci (Tinospora cordifolia)</i>	30
Fig. 1.10	<i>Vāsā (Adhatoda Vasica Nees)</i>	30
Fig. 1.11	Wheatgrass ( <i>Triticum aestivum Linn.</i> )	31
Fig. 1.12	Process Of Understanding <i>Rasāhāra</i> Feeling	33

<b>Fig. 1.13</b>	<b>Central Jail Bhopal</b>	<b>35</b>
<b>Fig. 5.5.01</b>	<b>Participants practicing Cyclic Meditation</b>	<b>101</b>
<b>Fig. 5.5.02</b>	<b>Participants practicing <i>Nāḍī Śuddhī</i></b>	<b>101</b>
<b>Fig. 5.5.03</b>	<b>Participants practicing <i>Bhrāmari Prāṇāyāma</i></b>	<b>102</b>
<b>Fig. 5.5.04</b>	<b>Participants practicing <i>Nādānusandhāna</i></b>	<b>102</b>
<b>Fig. 7.0.1</b>	<b>Recruitment of Participants</b>	<b>112</b>
<b>Fig. 7.1.1</b>	<b>Pre-Post Changes in FBS for the Three Groups</b>	<b>116</b>
<b>Fig. 7.1.2</b>	<b>Pre-Post Changes in PPBS for the Three Groups</b>	<b>117</b>
<b>Fig. 7.1.3</b>	<b>Pre-Post Changes in HbA1c for the Three Groups</b>	<b>117</b>
<b>Fig. 7.2.1</b>	<b>Changes in FBS Every 15 Days During the Intervention</b>	<b>121</b>
<b>Fig. 7.2.2</b>	<b>Changes in PPBS Every 15 Days During the Intervention</b>	<b>121</b>
<b>Fig. 7.3.1</b>	<b>Pre-Post Changes in VLDL for the Three Groups</b>	<b>123</b>
<b>Fig. 7.3.2</b>	<b>Pre-Post Changes in LDL for the Three Groups</b>	<b>124</b>
<b>Fig. 7.3.3</b>	<b>Pre-Post Changes in HDL for the Three Groups</b>	<b>124</b>
<b>Fig. 7.3.4</b>	<b>Pre-Post Changes in Triglycerides for the Three Groups</b>	<b>125</b>
<b>Fig. 7.3.5</b>	<b>Changes in Total Cholesterol for the Three Groups</b>	<b>125</b>
<b>Fig. 7.4.1</b>	<b>Changes in Creatinine for the Three Groups</b>	<b>128</b>
<b>Fig. 7.5.1</b>	<b>Pre-Post Changes in SBP for the Three Groups</b>	<b>130</b>
<b>Fig. 7.5.2</b>	<b>Pre-Post Changes in DBP for the Three Groups</b>	<b>130</b>
<b>Fig. 7.5.3</b>	<b>Changes in SBP Every 15 Days During the Intervention</b>	<b>131</b>
<b>Fig. 7.5.4</b>	<b>Changes in DBP Every 15 Days During the Intervention</b>	<b>131</b>
<b>Fig. 7.5.5</b>	<b>Pre-Post Changes in Pulse Rate for the Three Groups</b>	<b>132</b>
<b>Fig. 7.6.1</b>	<b>Changes in Haemoglobin for the Three Groups</b>	<b>133</b>

<b>Fig. 7.6.2</b>	<b>Changes in Acidity (pH) for the Three Groups</b>	<b>135</b>
<b>Fig. 7.7.1</b>	<b>Changes in Breath Holding Time for the Three Groups</b>	<b>137</b>
	<b>LIST OF TABLES</b>	
<b>Table 1.1</b>	<b>New Patients Attending <i>Rasāhāra Kendra</i> (Herbal Juice Clinics) in Bhopal</b>	<b>5</b>
<b>Table 1.2</b>	<b>Location of <i>Tridoṣas</i></b>	<b>16</b>
<b>Table 1.3</b>	<b>Phytochemicals in four herbs</b>	<b>26</b>
<b>Table 1.4</b>	<b>Names of four herbs in different languages</b>	<b>27</b>
<b>Table 1.5</b>	<b>Pharmacological importance of herbs</b>	<b>28</b>
<b>Table 1.6</b>	<b>Descriptions of four herbs</b>	<b>29</b>
<b>Table 1.7</b>	<b><i>Pramehaghna</i> combinations listed in <i>Caraka Samhitā</i></b>	<b>32</b>
<b>Table 2.1</b>	<b>SVYASA work on yoga and <i>āyurveda</i> and diabetes: A summary</b>	<b>41</b>
<b>Table 3.1</b>	<b>Clinical Studies of Breakfast Modification and other Interventions</b>	<b>72</b>
<b>Table 3.2</b>	<b>Clinical Studies of Herbal Juices Treatments and Sprouts as Interventions</b>	<b>74</b>
<b>Table 3.3</b>	<b>Clinical Studies of IAYT and Other Yoga Interventions</b>	<b>75</b>
<b>Table 5.5.1</b>	<b><i>Sukṣma Vyāyāma</i> (warming up exercises)</b>	<b>103</b>
<b>Table 5.5.2</b>	<b><i>Yoga Practices</i> Given to Participants</b>	<b>103</b>
<b>Table 5.5.3</b>	<b>Cyclic Meditation (CM)</b>	<b>105</b>
<b>Table 7.0.1</b>	<b>Participants Demographic Data</b>	<b>111</b>
<b>Table 7.0.2</b>	<b>Pre-Post Means and SDs for the Three Groups</b>	<b>113</b>
<b>Table 7.0.3</b>	<b>Significances of Within-Group Changes on all Variables</b>	<b>112</b>
<b>Table 7.1.1</b>	<b>Pre and Post Blood Sugar Values</b>	<b>113</b>
<b>Table 7.1.4</b>	<b>Group-Time Interactions for the 3 Diabetes Parameters</b>	<b>118</b>

<b>Table 7.2.1</b>	<b>Values of Diabetes Parameters, FBS &amp; PPBS, Every 15 Days</b>	<b>120</b>
<b>Table 7.3.1</b>	<b>Pre-Post Changes in 5 Lipid Variables for the 3 Groups</b>	<b>122</b>
<b>Table 7.3.2</b>	<b>Group-Time Interactions for the 5 Lipid Variables</b>	<b>123</b>
<b>Table 7.4.1</b>	<b>Changes in Creatinine Levels for the 3 Groups</b>	<b>127</b>
<b>Table 7.4.2</b>	<b>Group-Time Interactions for Creatinine Significances of Between Group Differences</b>	<b>127</b>
<b>Table 7.5.1</b>	<b>Pre- &amp; Post- Values of Blood Physiology Parameters</b>	<b>129</b>
<b>Table 7.5.2</b>	<b>Group-Time Interactions for the 3 Blood Parameters</b>	<b>132</b>
<b>Table 7.6.1</b>	<b>Changes in Haemoglobin for the Three Groups</b>	<b>133</b>
<b>Table 7.6.2</b>	<b>Group-Time Interactions for Haemoglobin Significances of Between Group Differences</b>	<b>134</b>
<b>Table 7.6.3</b>	<b>Changes in Acidity (pH) for the Three Groups</b>	<b>135</b>
<b>Table 7.6.4</b>	<b>Group-Time Interactions for Acidity (pH) Significances of Between Group Differences</b>	<b>136</b>
<b>Table 7.7.1</b>	<b>Changes in Breath Holding Time for the Three Groups</b>	<b>136</b>
<b>Table 7.7.2</b>	<b>Group-Time Interactions for Breath Holding Time Significances of Between Group Differences</b>	<b>137</b>
<b>Table 7.8.1</b>	<b>Initial and Final <i>Vāta Bala</i> Scores</b>	<b>139</b>
<b>Table 7.8.2</b>	<b>Initial and Final <i>Pitta Bala</i> Scores</b>	<b>139</b>
<b>Table 7.8.3</b>	<b>Initial and Final <i>Kapha Bala</i> Scores</b>	<b>140</b>
<b>Table 8.1</b>	<b>Comparison of Initial and Final HbA1c level</b>	<b>144</b>