



Lecture 72:

Ergogenic Adaptogens

Part 3

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Muira Puama:

- Muira Puama is a plant native to the Amazon basin.
- Being famous as a **libido booster**, muira puama has mild adaptogenic and anti – inflammatory activities.
- The active ingredients in muira pauma are long chain fatty acids, phytosterols (especially campesterol and stigmasterol), triterpenoids (especially lupeol), coumarin, ptycholides, and the alkaloid muirapuamine.

Athletic Benefits of Muira Puama:

- **Helps recover quickly from overtraining syndrome.**
- **May have a protective effect against overtraining syndrome.**
- **May help boost testosterone level.**
- **Aids increase lean mass.**
- **Delays exhaustion time.**

Non – Athletic Benefits of Muira Puama:

Muira puama may be beneficial in the following conditions:

- **Low energy and stamina.**
- **Low libido and sexual desire.**
- **Erectile dysfunction.**
- **Alzheimer's disease.**
- **Menstrual irregularities.**
- **Stomach upset.**
- **Dementias.**

Dosage and Side Effects:

- **Muira puama is generally taken 500 – 1500 mg a day.**
- **The potential side effects are irritability and sleep disturbances.**

Rhodiola Rosea:

- **Rhodiola rosea is a plant native to Russia and Scandinavia.**
- **It has been used for many years for a variety of conditions.**



Rhodiola Rosea Plant. Image: Copyright©Depositphotos.com/Sergey Koval

- Known also as **golden root**, **roseroot**, **king`s crown**, **rosewort**, and **arctic root**, rhodiola rosea has anti – stress, anti – depressant, and anti – inflammatory activities.



Dried Root of Rhodiola Rosea.

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- **Rhodiola rosea contains many active phytochemicals.**
- **They include phenylpropanoids (rosavin, rosin, and rosarin), flavonoids (proanthocyanidins, quercetin, rodiolin, rodionin, rodiosin, and tricin), phenylethanols (rhodioloside, salidroside and tyrosol), monoterpenes (rosiridol and rosaridin), triterpenes (daucosterol and beta-sitosterol), and phenols (gallic acid and chlorogenic acid).**

Athletic Benefits of Rhodiola Rosea:

- **Improves athletic performance.**
- **Increases athletic endurance.**
- **Delays physical and mental fatigue.**
- **May help recover from overtraining syndrome.**
- **Has an antioxidant activity.**
- **Improves mental alertness and acuity.**
- **May improve oxygenation.**
- **Reduces recovery time from intense exercise.**
- **Shortens reaction time.**

Non – Athletic Benefits of Rhodiola Rosea:

- **Chronic fatigue syndrome.**
- **Adrenal exhaustion.**
- **Aging.**
- **Cardiopulmonary health.**
- **Depression.**
- **Anxiety.**
- **Stress and mental fatigue.**
- **Infertility.**
- **Weight management.**
- **Cancers.**

Dosage and Side Effects:

- *Rhodiola rosea* is used **100 – 600 mg daily** on an empty stomach as an adaptogen, and **500 – 1500 mg daily** as a sport – performance enhancer.
- To improve athletic performance, it should be taken about 30 – 60 minutes before exercise or competition.
- *Rhodiola rosea* has a mild stimulatory activity, and high doses could cause nervousness and sleep disturbances.

Schizandra:

- Being native to northern China, Korea, and Russia, *schizandra chinensis* is a woody vine with fruits similar to berries.
- The berries have a combination of different flavours: sour, sweet, salty, hot, and bitter.



Schizandra Berries.

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- This is why its Chinese name is **wu-wei-zi**, meaning five flavour berries.
- The sun dried fruits are used for medicinal purposes.



Schizandra Berries, Dried.

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- The **active ingredients** in Schizandra are schizandrin, deoxyschizandrin, gomisin, and pregomisin. They are lignans mainly found in the seeds.
- Schizandra has been traditionally used as stimulant, tonic, and adaptogen.

Athletic Benefits of Schizandra:

- **Delays physical and mental fatigue.**
- **May help recover from overtraining syndrome.**
- **Improves athletic endurance.**
- **May prolong exhaustion time.**
- **May speed up recovery from sports injuries.**
- **Improves mental acuity and alertness.**
- **Reduces damages from oxidative stress.**

Non – Athletic Benefits of Schizandra:

- **Chronic fatigue syndrome.**
- **Chronic viral hepatitis.**
- **Irritable bowel syndrome (IBS).**
- **Stress.**
- **Inflammation.**
- **Hyperhidrosis (excessive sweating).**
- **Poor concentration.**
- **Diarrhea.**
- **Chronic cough.**
- **Asthma.**
- **Hay fever.**
- **Menopausal symptoms.**

Dosage and Side Effects:

- **Schizandra extract can be used as tablet or capsule **500 – 1500 mg a day**, tincture 6 – 12 ml a day, or Schizandra fruit 2 – 15 grams a day.**
- **High doses of Schizandra might lead to stomach upset, skin eruptions, and loss of appetite.**

Homework:

- **1) Describe the athletic benefits of schizandra.**
- **2) Describe the athletic benefits of rhodiola rosea.**

