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MENTAL HEALTH & HERBAL MEDICINE

ST. JOHN'S WORT

(Hypericum perforatum)

With traces of Prozac[®] now being found in our drinking water, there is no question that depression is a widespread problem in our society. Proponents of natural remedies and practitioners of mental health care will be familiar with St. John's Wort as a popular and natural alternative to conventional antidepressants. It is often dubbed 'Nature's Prozac'. Though extremely popular as an OTC herbal remedy here in the UK, it is actively prescribed by doctors in Germany in favour of conventional drugs (such as TCAs, SSRIs and MAOIs) for mild to moderate depression.

Named after John the Baptist, St. John's Wort contains at least 10 active constituents (AC) that may contribute to its pharmacological effects. Of these, hypericin, hyperforin and pseudohypericin are thought to be the key players, although herbalists believe that it is the synergy of these AC that confers the true therapeutic efficacy to the herb. Experimental studies have shown hypericin to potentiate neurotransmitter binding especially the GABA-A, benzodiazepine and serotonin receptors. Moreover, hyperforin has been shown to contain significant antidepressant activity but this is not entirely clear or detailed since it is such an unstable compound that renders it difficult to study. Much interest has been shown in the anti-tumour activity of pseudohypericin which is thought to influence the brain. This is because it is able to cross the blood-brain barrier since it exhibits significant lipophilic properties. *Hypericum* is thought to work via a combination of SSRI and MAOI activity since both have been demonstrated in studies using isolated AC. It is effective only in mild to moderate depression, not in severe depression. Moreover, it is contraindicated in manic states and those with suicidal tendencies.

Its other notable actions are often overlooked since media coverage has largely focused on its antidepressant properties probably because so many people seem to be afflicted with this condition. Importantly, St. John's Wort is an effective anxiolytic and therefore particularly useful in presentations where anxiety is a feature of the depression. It also possesses powerful antiviral properties and is often prescribed for a range of viral infections such as cold sores (*herpes simplex*) and the common cold (the adenovirus). It is thought to do this by inhibiting viral replication and by modulating immune responses. Topically, it is an excellent vulnerary and anodyne, prescribed for conditions such as wounds, burns, shingles and musculo-skeletal injury.

Medical experts remain undecided as to the clinical utility of St. John's Wort despite a BMJ review of 23 short-term clinical studies which support claims of efficacy in mild to moderate depression (Linde et al., 1996). Its therapeutic efficacy has been reported in many peer-reviewed journals. However, this has been challenged by a recent study conducted at the South London and Maudsley NHS Trust and at Homerton University Hospital which analysed all previously published reports on *Hypericum* (Werneke et al., 2004). By treating individual trials as one, the study shows that St. John's Wort is only marginally more effective than placebo overall. Moreover, the authors conclude that it may be less effective in the treatment of depression than originally assumed, particularly when its effects lessen over time as bigger and better studies are conducted.

The list of drug interactions is quite long and varied but includes oral contraceptives, digoxin, anticonvulsants and cyclosporin, amongst others. A recent report published in the British Journal of General Practice warns that St. John's Wort reacts dangerously with warfarin, a commonly prescribed drug within clinical medicine (Smith et al., 2004). The prescription of *Hypericum* is strictly contraindicated in patients on drugs that induce the cytochrome P₄₅₀ enzyme system in the liver, particularly those prescribed for HIV infection such as the protease inhibitors and the non-nucleoside reverse transcriptase inhibitors. Additionally, it is contraindicated in patients with serious depression accompanied by psychosis and in those at risk of self-harm. It is occasionally considered in adjunct therapy although a certain caution is applied. Equally caution is advised in patients on SSRIs as it may cause 'serotonin syndrome', an adverse herb-drug interaction characterised by an altered mental state and accompanied by autonomic dysfunction and neuromuscular abnormality as a result of increased serotonin availability in the CNS. Symptoms include confusion, fever, shivering, sweating, diarrhoea and muscle spasms. Interestingly, this has also been reported with concomitant use with some MAOIs.

Side effects may include mild nausea, GIT upset, photosensitivity and fatigue but unlike conventional antidepressants, it does not affect libido or impair the ability to experience orgasm. The recommended daily dose for depression is 900mg of the extract split into 3 doses of 300mg. Herbalists often prescribe *Hypericum* in combination with other herbal nervines as part of an overall treatment plan. The maximum weekly dose of fluid extract is stipulated as 50ml. Effects can be seen as early as 2 weeks from commencing treatment but it is advisable that a consultation with a qualified and registered practitioner of herbal medicine is sought prior to any self-medication.

Empirical science may not value the synergy of AC that lies at the heart of herbal medicine and may cast doubt on its usefulness in clinical practice. What is clear is the enormous benefit that it brings to numerous sufferers who simply cannot do without this wonderful herb in a society where depression is such a widespread mental health problem.

References

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VALERIAN – NATURE’S SLEEP REMEDY

What is it?

Valeriana officinalis (valerian) is a plant that is found almost world wide and its root has been used medicinally since medieval times. The origins of its name may be derived from the Latin word *valere* meaning ‘to be well’. The tincture was widely used in World War I to treat shell shock, including loss of memory and other functions due to prolonged psychological strain.

The herb has a pronounced, distinctive odour that is only acquired after harvesting and drying.

What is it for?

Valerian’s primary traditional use has been as a sedative, namely for the relief of insomnia, anxiety and conditions associated with pain due to muscular cramps. It counteracts nervous tension, excitability, restlessness, stress, panic attacks and irritability. It is therefore given for patients with high blood pressure where there is an underlying stress and anxiety element to its causes.

Does it work?

Various clinical trials involving both normal, healthy individuals and patients experiencing poor sleep patterns strongly support the sedative properties of the herb. Studies show that valerian improves quality of sleep without producing the undesirable feelings of ‘drowsiness’ the following morning that is often associated with conventional sleeping tablets. The herb is more effective in those experiencing poor or irregular sleep than in individuals with normal sleep patterns.

How does it work?

The main active constituents (AC) are a mixture of compounds, most notably the iridoids, collectively known as the valepotriates. The main mode of action relating to the herb’s sedating effects is rather unclear and experiments on isolated AC reveal conflicting and often contradictory data. This is compounded by the fact that there are important yet crucial differences in the effects exhibited by the alcoholic and aqueous (water-based) extracts.

Studies have demonstrated a clear interaction with neurochemical receptors in the brain. Direct and specific binding to barbiturate receptors in addition to the inhibition of binding of other key neurotransmitters to their receptors, all indicate a sedating effect.

Other experiments show that valerian extract prolongs the action of an inhibitory neurotransmitter thus exerting an overall suppression of CNS (central nervous system) activity. In this respect, valerian is considered to exert a more calming, anti-stress effect rather than a directly sedating one.

How much is taken?

Standardised extracts should provide a dosage ranging from 150-300mg. This is a single dose that should be taken about half an hour to 45 minutes before bedtime.

The dried herb equivalent taken as a tea should provide 1-3g per dose taken at bedtime for insomnia or three times a day for other conditions. A medical herbalist will advise accordingly if liquid preparations and tinctures are preferred or for advice in general about dosage.

Watch out.....

Valerian is in general a safe herb even in pregnancy. However, it may cause drowsiness and fatigue in some and it should be avoided altogether if already taking sleeping tablets as it would multiply its

effect. Symptoms of overdosing such as headache, nausea, restlessness or visual disturbances can be avoided by following dosage recommendations. It should never be taken with alcohol and in those rare instances where valerian may be stimulating, it should be avoided entirely in those conditions specified above.

Consult a GP or a medical herbalist for specific advice on dosage and safety in any self-medication.

Gelsemium sempervirens (Yellow Jasmine)

No self-respecting herbalist can be seen without yellow jasmine in their dispensary, simply because amongst its plethora of medicinal applications, it exhibits 2 key modes of action that alleviate pain, a crucial part of clinical management. The herb is a powerful antispasmodic and a CNS sedative. Its analgesic and anodyne properties make it highly suitable for any clinical presentations involving pain or the sensation of it.

The roots of this North American plant contain an astonishing array of an important group of drugs known as alkaloids (the ergot type), which are attributed to its medicinal properties. Of these, it is the gelsemine and gelsemine alkaloids that are considered to be the most potent. The pharmacological study of alkaloids, demonstrate their potential benefits within conventional medicine, but equally, the potential toxicity and damage that can arise from exceeding recommended doses. For this reason, it is restricted to practitioner's use only and not on sale to the general public. Moreover, there are important contraindications associated with this herb, such as heart disease, hypotension, pregnancy and myasthenia gravis.

Gelsemium is a powerful spinal depressant with its therapeutic uses ranging from neuralgia (particularly facial pain), migraine, dysmenorrhoea and rheumatic pain, to pertussis and asthma. As a motor nerve depressant, it is particularly effective in conditions involving muscular spasms, muscular irritability and nervous excitement.

Clinical benefits have also been reported for hysteria, chorea and epilepsy though further empirical evidence is needed to support these findings. The psychotropic activity of the tannins is yet to be proved and whilst the herb remains predominantly a CNS depressant, some of the other active constituents paradoxically stimulate it. Lesser known actions are as a hypotensive and a hypoglycaemic with some antioxidant properties.

Lemon balm (*Melissa officinalis*)

We could all do with a little herbal help when it comes to de-stressing. Lemon balm has long been considered a 'calming' herb, used in the Middle Ages to reduce stress and anxiety, promote sleep, improve appetite, and ease the pain and discomfort associated with poor digestive function.

The herb is also an excellent antiviral and often used in conjunction with St John's Wort or Echinacea to combat the *herpes* virus, against which lemon balm is particularly effective. Studies conducted on the effects of topical application of *Melissa* in the treatment of cold sores associated with the *herpes simplex* virus (HSV) further supports the herb's powerful antiviral properties. It is therefore considered in most treatment rationales for shingles and chicken pox. Other notable functions of the herb are in inhibiting thyroid function so is useful in hyperthyroidism and in lifting/

enhancing mood so it is often considered in depressive states. With regard to mental health, there has been growing interest over recent research into the effects of lemon balm in the treatment of Alzheimer's and other dementia-related conditions.

Though many of the studies remain inconclusive, there is strong supportive evidence that would encourage the use of *Melissa* in alleviating many of the common symptoms associated with dementia, particularly memory loss. Clinical studies on adults show effective doses vary from 100-600mg/day. Equivalent doses of liquid preparations or capsules of standardised extracts could also be considered as an administrative preference. There are a number of reputable commercial brands of the topical cream formulated with strong doses of the herb and often in combination with other potent antivirals.

Although no side-effects or symptoms of toxicity have been reported with *Melissa*, it should not be used by pregnant or breastfeeding women. Equally, it should not be taken with conventional sedatives or prescription drugs for an overactive thyroid condition owing to potential herb-drug interactions. It is highly recommended that specialist advice is sought from a qualified medical herbalist prior to any self-medication.
