Mushrooms, strong possibilities in TCM and everyday nutrition KdG, Antwerpen, September 26th, 2014

www.otcg.be www.mycotherapie.nl www.natuurapotheek.com



Mushrooms, strong possibilities in TCM and everyday nutrition // Table of contents

- 1. Introduction
 - a) General usage of mushroom nutrition (MN)
 - b) General contraindications of MN
 - c) Three well-known mushrooms (ganoderma, cordyceps, shiitak
- 2. The Role of Enzymes in MN
- 3. The Benefits of MN in Specific Syndromes in TCM
 - a) The role of MN in backing acupuncture for immune support (var.mushr.)
 b) The role of MN in nourishing the Earth (Spleen & Stomach)
 - i. tool for TCM constitutional support (poria,hericium,maitake,shiitake,blazei)
 - ii. tool for TCM pathologies (various mushrooms)
 - c) The role of MN in Diabetes II (various mushrooms)
 - d) The role of MN in Viral Conditions (coriolus, ganoderma)
 - e) The role of MN in Chronic Fatigue (various mushrooms)
- 4. A TCM perspective on the Challenges to Women's Health & MN
- 5. Strong Safety Data for MN
 - a) Background of efficacy of MN
 - b) History
- 6. Conclusion, Evaluation

© 2007-2014 Vančuříková Zurana Šimonovský Karel • KdG Anto

General usage of mushroom nutrition

For health care practitioners mushroom nutrition can serve as:
• stand-alone nutritional strategy

- adjunct strategy for
- standard/other nutritional therapy, including herbal therapy
- · Western medicine treatment
- acupuncture therapy

For utilization of mushroom nutrition's full potential holistic approaches such as TCM are of unquestionable value for individual assessment and selection of most suitable mushroom

"Let food be thy medicine and medicine be thy food."

General contraindications of mushroom nutrition

- usage of broad-spectrum antibiotics (according to some authors)
- usage of immunosuppressives
- · states after transplantations (of organs, bone marrow)
- usage of antiplatelet and anticoagulant drugs (Warfarin, aspirin)
 concurrently with mushrooms possessing strong anticoagulant effect

(e.g. Ganoderma, Auricularia, Shiitake, Chaga)

 + not recommended to use these mushrooms in pregnant women during few last weeks before (expected) delivery

In pregnancy & in women willing to conceive)

usage of Auricularia (Jew's ear, wood ear, jelly ear, heimuer)
 ...avoid also Asia-style dishes & cuisine where it is often included

With alcohol

· don't mix Coprinus comatus (shaggy mane) with alcohol (for +/- 40 hours)

2007-2014 Vančutiková Zuzana. Šimonovský Karel ● KdG Antwernen Sentember 28º 2014 ● www.otco.be.www.mvcotberanie.ol. www.natuura

Generally: mushroom nutrition is safe

- · all given mushrooms are non-toxic
- majority of them can be used long-term & in higher doses as they have hundreds of years history of such use in Asia.

Nevertheless, the following arising from the nature of the effects of medicinal mushrooms should be observed:

With caution

- in people on multiple and <u>combined treatment</u> with Western medicines
- individual sensitivity: in 2 5 % of users might occur stomach discomfort (mostly mild & short-term, related to detoxification effect). If longer than 5 days, please discontinue supplementation.
- incidental <u>allergic reaction</u> for given mushroom (relationship could be tested by repeated discontinuation of supplementation)

MUSHROOM NUTRITION
USAGE according to Western medicine

- symptomatic (i.e., "oyster mushroom for cholesterol", "cordyceps for fatigue")
- for constituents (i.e., micro- a macroelements, enzyme activity)
- possibly also by the effect on functional circuits (but WM either doesn't have its own data/research or is not regarding it as generally credible)
 Usage in WM is limited:
 - * by approaching truly natural and whole food representatives through its single constituents
 - * by only "partial" knowledge of a role(s) of such constituents in living organism,

not even mentioning individualized living human being

2007-2014 Vančutiková Zuzana. Šimonovský Karel ● KdG Antwerpen September 26th 2014 ● www.otco.be www.mvcotherapie.nl www.natuurapotheek

© 2014 CzechoSlovak SinoBiology Society School of TCM, Prague, Czech Republic www.tcm.cz

1

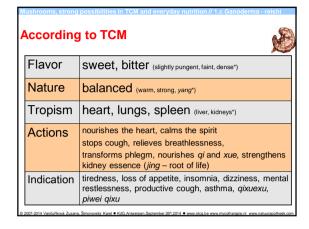
MUSHROOM NUTRITION USAGE according to Chinese medicine

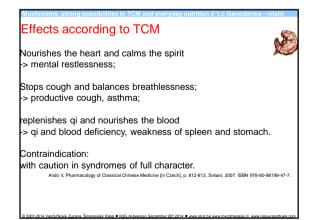
- Symptomatic (i.e. "cordyceps for fatigue", BUT always simultaneously checking its consistency with syndromology models of cordyceps)
- by TCM syndromology

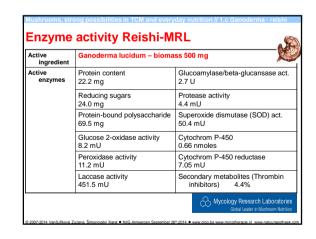
 (i.e. "poria for resolving dampness and strengthening the Spleen")
- by TCM characteristics (especially by nature: i.e. balanced vs. warm)
- possibly by functional circuits
 (i.e. fluids circuit we can affect e.g. through Spleen or Kidneys)

Usage is based on complex approach of TCM covering aggregated effect of whole natural substances in the context of the health condition of an individual, i.e. it is an intersection of known characteristics of the substance (mushroom) and their behavior known within seen TCM syndromes (of the person)









Application I

Prevention of aging - antioxidative, detoxication effects

• natural antioxidant which works against free radicals, applicable in old and young persons

• contains specific triterpencides which protect veins from atherosclerosis and help decrease adhesion of blood platelets

Tonification in old age for health maintenance (anti-aging, aging prevention), against deafness brought about by old age

Immunity suport - immunostimulating and adaptogenic effects

• contains specific beta-glucans: immunostimulating, antibacterial and antiviral effects;

• widely used in convalescence after operations or great exhaustion, both physical and mental

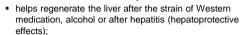
• in repated chronic infectious inflammations (chronic bronchitis, hepatatis...);

Traditionally used for strengthening of joints, tendons and bones, for increasing vital energy and "lifting" the body.

www.otcg.be www.mycotherapie.nl www.natuurapotheek.com

Application II

Protection and detoxification of the liver + detoxification of the whole body



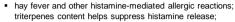
- removes heavy metals from the body, might be used also after exposition, e.g. to mercury: treatment of amalgam fillings, vaccination, etc.);
- in cases of chronic hepatitis;
- owing to specific triterpenes

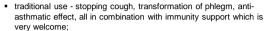
Insomnia neuroses, mental disturbances

 traditionally used by Daoist monks for calming the spirit and mind and to improve mental capacity.

Application III

Asthma, bronchitis, allergies





Cardiovascular effects

 improvement of blood circulation both in coronary veins and capillaries of the heart muscle (eg. angina pectoris,...)

Hypertension

 ganoderic acid and triterpene content help regulate blood pressure (both high and low)

Slight anticoagulation effect

 with caution or not at all in persons under anticoagulation medication (laboratory control necessary!)

Application IIIb

Tumors, carcinomas

- supporting means using of anti-tumor activity of the beta-glucans and germanium contained in the fungus;
- decreases toxic and side-effects of chemotherapy or radiotherapy, decreases pain, applicable both before and after chemotherapy;
- supports macrophages and regulates T and B lymphocytes, suppresses spreading of tumor cells.

Support for chemotherapy patients

 Zhao S., Ye G., Fu G., Cheng JX, Yang BB, Peng C. Ganoderma lucidum exerts anti-tumor effects on ovarian cancer cells and enhances their sensitivity to cisplatin. Int J Oncol. 2011 March 8th

2 2007-2014 Vančutiková Zuzana Šimonovský Karel ● KdG Antwernen Sentember 292 2014 ● www.otco.be www.mucotheranie.pl. www.natuuranoth

Application IV

Chronic fatigue syndrome

immunity system support (even with HIV), with loss of appetite;

Lowering of high cholesterol levels

- in the USA one of the most popular products for hypercholesterolemia;
- contained triterpenes and sterols act against atherosclerosis by decreasing the levels of cholesterol;

Contains complex polysaccharides

with anti-tumor effects, supporting immunity, increasing stress resistance, regulating the level of blood sugar and fat, blood pressure:

Diabetes, gout (supportive treatment)

 ganodermic acid lowers lipoproteins (LDL) and the values of triglycerides.

Application V - Gout I

Gout = metabolic disorder with increased blood level of uric acid, with subsequent deposition of sodium urate microcrystals in joints where they cause inflammation and joint malformations, also possibility of kidney stones formation:

Uric acid - present in blood as a result of cell disintegration and of presence of uric acid precursors in food:

- a) is not sufficiently eliminated by the kidneys;
- b) enzyme anomalies (overproduction is given genetically);
- c) diseases leukemia, ...

Application VI - Gout II



John Tindall (GB)

- Dosage: 3 grams per day, with diet adjustment
- after 4 weeks amelioration of symptoms pain, swelling
- Results prove positive, mainly antiinflammatory effects of the fungus in cases of gout

© 2014



Application VII - histamine mediated alergic reactions

Monitored by M. Powell (GB) - in hay fever patients

- besides general health-supporting effect, monitoring of antiinflammatory effects of the fungus (effects ascribed to ganoderic and triterpenic acids);
- emphasized safety and effectivity of ganoderma as an alternative treatment of such allergic states (in contrast to corticoids - many adverse effects, including affecting of the function of pituitary gland, suprarenal glands, interference with liquids and electrolytes balance; preparations with salicylic acid - adverse effects on stomach mucosa....
- Dosage: 3 grams per day 1,5 grams/ day as the symptoms subside.

Powell M. The Use of Ganoderma lucidum (Reishi) in the management of histamine-mediated allergic responses. Nutrition Practitioner October 2004 & Mycology News, vol 1, Edition 8, February 2004

D 2007-2014 Vančuříková Zuzana, Šimonovský Karel ● KdG, Antwerpen, September 26°, 2014 ● www.otcg.be www.mycotherapie.nl www.na

Application VIII - according to TCM

Qi deficiency (qixu)

- with symptoms of fatigue, physical and mental exhaustion, soft stools, lack of appetite, weak digestion, cold limbs, short breath - improvement of cold resistance;
- in combinations with liver and kidney deficiency: see the following slide
- => replenishes gi and nourishes blood (bugi yangxue)

Heart-Qi and Heart-blood deficiency (xin gixue buzu)

- with symptoms: palpitations, insomnia forgetfulness, dizziness, mental restlessness...
- => nourishes the Heart and calms the Spirit (yangxin anshen)

Application VIIIa - according to TCM



Lung qi deficiency, possibly with phlegm (feiqixu, tan), with cough

- productive cough, phlegm of mainly of the cold type (thin, copious: makes breathing difficult when lying down);
- breathlessness, asthmatic breathlessness...
- => stops cough and balances breathlessness (zhike pingchuan);

Liver and Kidney deficiency (ganshen buzu)

- with symptoms of lower back and knee weakness, dizziness, black outs, cold limbs, flatulence;
- => replenishes Qi and nourishes Blood (buqi yangxue)

Application VIIIb - according to TCM + acu

Support Kidneys, nourish the Essence and Blood

 Fatigue, lower back pain, knee pain, difficult urination, menstruation disorders, fertility disorders, morning diarrhea, dizziness, ... pre-operation conditioning, parturition, states after operation, after childbirth, insufficient lactation...

Ganoderma administered with:

BL 17, 20, 21, 23, GV 4, KI 3, KI 8, CV 4, 6, SP 6

Moxibustion in cases of *shenyangxu*: CV 4, 8, ST 36, back *shu*points of kidneys, GV 4:

BL 20, ST 36, ST 8, CV 11, SI 1 - in case of insufficient lactation + ST 25 in case of diarrhea

Moxibustion on CV between symphysis and umbilicus in case of bed-wetting due to Kidney-Yang deficiency...

Application VIIIc - according to TCM + acu

Replenish Blood (esp. Heart-Blood)

 in states e.g. of palpitations, insomnia, weak memory, dizziness... Pale tongue, thin, weak pulse;

Ganoderma administered with:

BL 15, 17, 20 PC 6, HT 7, GV 20 ST 36

7-2014 Vančulštová Zuzana. Šimonovský Karel ● KdG Antwernen September 26º 2014 ● www.oton be www.mucotheranie.ol. www.natuuranothee

Application VIIId - according to TCM + acu

Replenish emptiness and support Qi

- Physical and mental fatigue, soft stools, lack of appetite, weak digestion, paleness, cold limbs, short breath...
- + replenish the spleen, stomach...

Ganoderma administered with:

- Acupuncture and moxibustion (in condition of NO tan):
 CV 6, 8, 12, 17
 ST 36, SP 6
- BL 20, 21, LR 13 in case of deficiency of the Middle Burner
- LU 1, LU 9, BL 13, CV 17 in case of feigixu with cough,
- ST 40 when there is Phlegm

2007-2014 Vančutiková Zuzana. Šimonovský Karel ● KdG.Antwerpen.September 26th 2014 ● www.otco.be www.mvcotherapie.nl www.natuurapotheek.

© 2014

Application VIIIe - according to TCM + acu

Lung-Qi deficiency (feiqixu) with Phlegm (tan)

 Cough, phlegm mainly of the cold type (thin, copious...), breathlessness.

Ganoderma administred with:

LU 1, LU 9, BL 13, 43, CV 6, 17 ST 36,

ST 40, SP 9 when there is Phlegm, LU 5 - chronic cough...

D 2007-2014 Vančuříková Zuzana, Šimonovský Karel ● KdG Antwernen Sentember 26° 2014 ● www.otco.be www.mvcoberanie.nl. www.natuuran

Application VIIIf - according to TCM + acu

Liver and Kidney deficiency

 with symptoms of weakness in the area of lower back, knees, dizziness, black-outs, cold limbs, flatulence,...

Ganoderma administered with:

often in **combination** with other replenishing *yao* (*renshen, gouqizi*), or *yaofang* (*qiju dihuang wan, renshen yangying tang*)

BL 17, 20, 23, GV 4, LR 14, GB 25 KI 3, SP 6, ST 36

....

Application VIIIg - according to TCM + acu



Calms the Spirit and supports sleep

Ganoderma administered with:

GV 20, "the crown", PC 6, 8 (*xin-shen*) HT 7, BL 15, 17, 18, 23 SP 6, 10, HT 7, BL 17 (blood)

LR 2, 3, BL 18, 19, PC 6, TE 5 (gan-dan)...

© 2007-2014 Vančuříková Zuzana, Šimonovský Karel • KdG.Antwerpen, September 26°-2014 • www.otcq.be www.mycotherapie.nl. www.natuurapother

Selected citations I

Anti-allergic and Anti-histamine Effect

Kohda, H et al. The biologically active constituents of Ganoderma lucidum, Histam release inhibitory tripertens. Chem.Pharm.Bull.33:1367-1374, 1985.

Kang KH; Youn HM. Study on Anti-Allergic Effects of Ganoderma lucidum Herbal Acupuncture and Ganoderma lucidum Extract. Journal of Korean pharmacopuncture institute. Volume 10, Issue 3, December 2007, pp.37-46. DOI: 10.3831/KPI.2007.10.3.037 Powell M. The Use of Ganoderma lucidum (Reishi) in the management of histamine-mediate:

allergic responses. Nutrition Practitioner October 2004 & Mycology News, vol 1, Edition 8, Tasaka K, Mio M, Izushi K, Akagi M, Makino T. Anti-allergic constituents in the culture medium of Ganoderma lucidum. (II). The inhibitory effect of cyclooctasulfur on histamine release Anents Actions. 1988;23:157–60.

© 2007-2014 Vančuříková Zuzana. Šimonovský Karel ● KdG.Antwerpen.September 26th 2014 ● www.otco.be www.mycotherapie.nl www.natuurapothee

Selected citation II

Antiviral effect

Eo SK, Kim YS, Lee CK, Han SS. Antiviral activities of various water and methanol solutions substances isolated from Ganoderma flucidum. Journal of Ethnopharmacology 68 (1-3): 129–36, 1999. doi:10.1016/S0378-8741(99)00067-7. PMID 10624872.

Eo SK, Kim YS, Lee CK, Han SS. Possible mode of antiviral activity of acidic protein bound polysaccharide isolated from Ganoderma lucidum on herpes simplex viruses. Journal of Ethnopharmacology 72 (3): 475–81, 2000. doi:10.1016/S0378-8741(00)00266-X. PMID 10996289.

2014 Vančutliková Zuzana Šimonovský Karel ● KrlG Antwernen September 2014 ● www.otro.be www.marotheranie.pl. www.natuuranotheek.o

Selected citation III

Immunomodulatory, Immunostimulant and Adaptogenic Effe

Chen HS, Tsai YF, Lin S, et al. Studies on the immuno-modulating and anti-tumor activities of Ganoderma lucidum (Reishi) polysaccharides. Bioorg Med Chem. Nov 1 2004;12(21):5595-5601.

Kuo MC, Weng CY, Ha CL, Wu MJ. Ganoderma lucidum mycelia enhance innate immunity by activating NF-κB. J. ethnopharmacol., 2006, vol. 103, no 2, pp. 217 - 222

Lin ZB. Cellular and molecular mechanisms of immuno-modulation by Ganoderma lucidum. J. pharmacol. sci., 2005, vol. 99, no 2, pp. 144 - 153

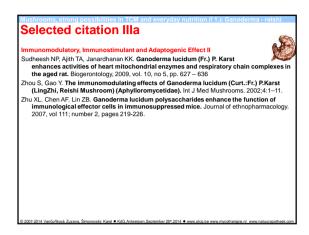
Lin YL, Liang YC, Lee SS, Chiang BL. Polysaccharide purified from Ganoderma lucidum induced activation and maturation of human monocyte-derived dendritic cells by the NF kappaB and p38 mitogen-activated protein kinase pathways. J Leukoc Biol. 2005;78:533–543. doi: 10.1189/jib.0804481

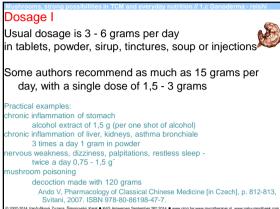
Lin YL, Lee SS, Hou SM, Chiang BL. Polysaccharide purified from Ganoderma lucidum induces gene expression changes in human dendritic cells and promotes T helper 1 immune response in BALB/c mice. Mol Pharmacol. 2006;70:637–644. doi: 10.1124/mol.106.022337.

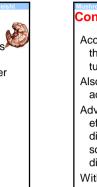
Rubel RI, Dalla Santa HS, Bonatto SJ, Bello Sr, Fernandes LC, Di Bernardi R, Gern J. Santos CA. Medicinal Mushroom Ganoderma lucidum (Leyss: Fr) Karst. Triggers Immunomodulator Effects and Reduces Nitric Oxide Synthesis in Mice. Journal Of Medicinal Food. 2010, Vol 13; Number 1, Pages 142-148

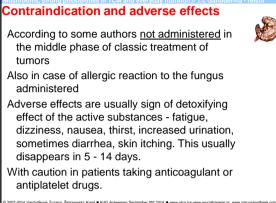
i 2007-2014 Vančutiková Zuzana. Šimonovský Karel ● KrtG Antwernen Sentember 26° 2014 ● www.otco.be www.mucoberanie.pl. www.natuuranotbeek.

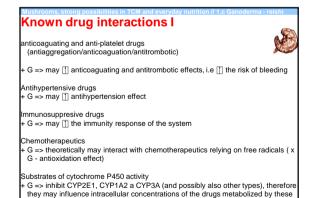














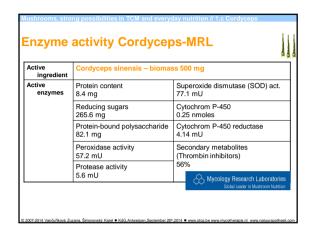
Mushrooms, strong possibilities in TCM and everyday nutrition // 1.c Ganoderma - reishi According to TCM	
Flavor	sweet
Nature	warm
Tropism	lungs, kidneys
Actions	nourish lung <i>yin</i> (heat atop), tonify kidney <i>yang</i> (cold alow), tonify <i>qi</i> , tonify kidney essence (<i>jing</i> – root of life), tonify <i>weiqi</i> , transform phlegm
Indications	impotence, back pain, chronic cough, breathlessness, compromised immunity
© 2007-2014 Vančufiková Zuzana. Šimonovský Karel ● KdG Antwerpen. Seotember 26 th 2014 ● www.otoc.be www.mvcotherapie.nl www.natuurapotheek.com	

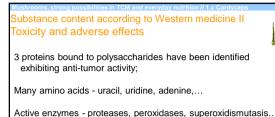
© 2014 CzechoSlovak SinoBiology Society School of TCM, Prague, Czech Republic www.tcm.cz

enzymes.

Mushrooms, strong possibilities in TCM and everyday nutrition KdG, Antwerpen, September 26th, 2014

www.otcg.be www.mycotherapie.nl www.natuurapotheek.com



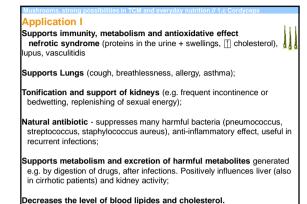


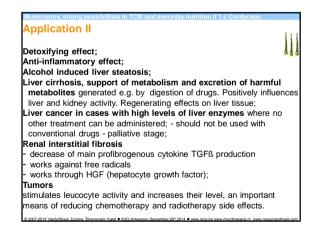
No toxic effects of Cordyceps have been proved;

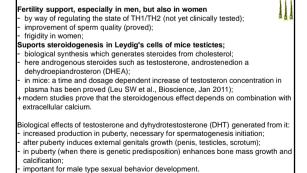
Application IIa - fertility, especially in men

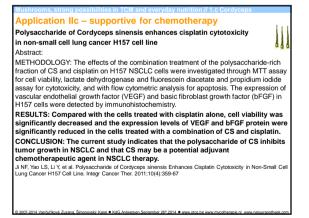
Not even long-time administration changes blood tests or functions of liver and kidneys.

2007-2014 Vančuříková Zuzana. Šimopovský Karel ● KdG Antwerpen September 26th 2014 ● www.otco.be www.mvcoberanie.ol. www.natuurar









www.otcg.be www.mycotherapie.nl www.natuurapotheek.com

Application IId - liver support

Inhibitory effect of Cordyceps sinensis on experimental hepatic metastasis of melanoma by suppressing tumor cell invasion

Abstrac

We investigated the anti-metastatic activity of a water extract of Cordyceps sinensis (WECS) using a model of mice injected with B16-F0 mouse melanoma cells into the spleen. WECS administered intraperitioneally reduced the number of metastatic surface nodules of B16-F0 cells in the liver of C57BL/Gr mice in a dose-dependent manner, and significantly prolonged their survival. To identify the mechanism of the anti-metastatic effect of WECS, we examined its effects on hepatocyte growth factor (HGF)-accelerated invasion of B16-F0 cells using a chemo-invasion assay in viro. As a result, WECS reduced HGF-accelerated B16-F0 cell invasion in a concentration-dependent manner. These findings suggest that WECS exerts an anti-metastatic action, in part by inhibiting the HGF-accelerated tumor invasiveness of mouse melanoma cells.

Kubo E, Yoshikawa N, Kunitomo M, et al. Inhibitory effect of Cordyceps sinensis on experimental hepatic metastasis of melanoma by suppressing tumor cell invasion. Anticancer Res. 2010 Sec:30(9):3429-33.

© 2007-2014 Vančuříková Zuzana, Šimonovský Karel ● KdG, Antwerpen, September 26*, 2014 ● www.otcg.be www.mycotherapie.nl www.natuur.

Application III

Rejuvenating and renewing effects - anti-senesce effects (extending life span), traditionally for maintaining the freshness of youth, renovates the complexion without lustre;

Helps replenish energy to an exhausted body (esp. after great physical exertion, after illness, etc.) => "battery charging"

Application IV

Antistress effect

Depresion due to lack of energy

e.g. of the senile morose pessimistic type

Regulative effect on the hormone level (similar to corticoids) Allergic illnesses, asthma, eczemas;

Helps regulate and solve thrombi (myocardial infarction and apoplexy prevention), i.e. anticoagulating effect, with caution or not at all in persons under long-time anticoagualting medication (laboratory control necessary!)

Hypoglycemic effect combined with increased sensitivity to insulin:

possible application in cases with decreased insulin sensitivity or insulin resistance (Lo, 2004; Li 2006, Zhao 2004)

Prevention of diseases in healthy persons, sportsmen

Application IV - according to TCM "Lungs - Kidneys"

Jing essence exhaustion (shenjingxu)

- after a long disease, administration of drugs, physical or mental
- excessive sexual activity depletes the essence in men, pregnancy and abortions in women;

Kidney-Yang deficiency (shenyangxu);

 with symptoms of frequent urination of a large quantity of clear urine, lower back pain, weak knees, impotence, sensitivity to cold, cold limbs, lower limbs oedema;

Emptiness below (Kidney-Cold)

+ excess above (Lung-Heat)

9 2007-2014 Vančuškruri Zurana Šimonovski Karal & KriG Anhuarnan Santambar 280 2014 & usou otro ba usou moretharania ni usuar natuur

Application IVa - according to TCM "Lungs-Kidneys"

Emptiness below (Kidney-Cold)

+ excess above (Lung-Heat)

Lung-Qi deficiency (feiqixu)

- "Lungs govern the movements of water (fei zhu xingshui)"
- "Lungs govern the voice (fei zhu sheng)"
- including the situation when Kidneys do not grasp Qi (shen bu naqi)

Lung-Yin deficiency (feiyinxu)

with the symptoms of dry cough, chronic cough, breathlessness, pale face and red cheeks;

Defensive Qi deficiency (weigixu)

- repeated illnesses, allergy, asthma, prevention of illnesses

77.2014 Vanhuliková Zurana Šimonovský Karal 🗷 KAG Antwernen Sentember 280 2014 🕭 www.ntrn.he www.moretheranie.nl. www.natuura

Mushrooms, strong possibilities in TCM and everyday nutrition // 1.c Cord

Application V - according to TCM, symptomatically

atigue due to different reasons

tumors in states of cold, with symptoms of cold

Ilness prevention in healthy persons

young, old, sportsmen, etc

after long illness, exhaustion by sport, "battery recharging"

with frequent illnesses (support of fei/weigi)

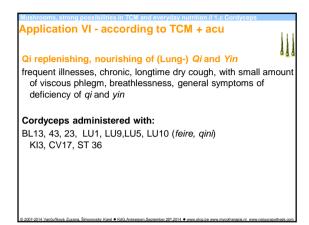
ejuvenating and renewing effects - traditionally for maintaining the freshness of youth, renews complexion without lustre

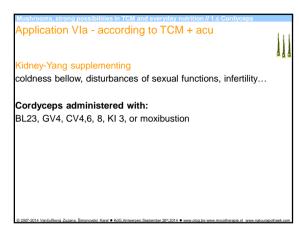
procrastination (marked and chronic tendency to postpone fulfillment of tasks and duties) – through support of kidneys, the seat of will (zhi)

depression – mainly depression with fatigue, with lack of willpower (zhi) sorrow and grief injure the lungs"

Mushrooms, strong possibilities in TCM and everyday nutrition KdG, Antwerpen, September 26th, 2014

www.otcg.be www.mycotherapie.nl www.natuurapotheek.com





Application VIb - according to TCM + acu

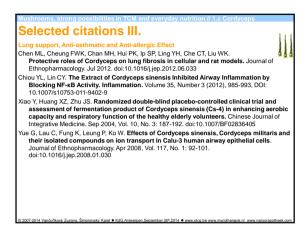
Supplementing defensive Qi (weiqi),
promoting phlegm transformation

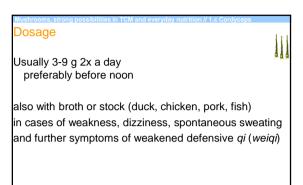
Cordyceps administered with:
ST36, SP6, BL 13,20, CV 6, 17, Ll4, ST40, SP9

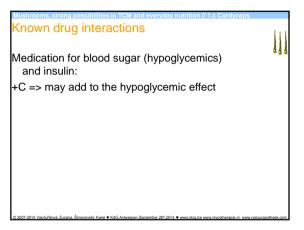


Selected citations I. Chen D et al. Effects of natural Cordyceps and the cultured mycelia of Cordyceps sine on murine immune organs and functions of mononuclear phagocyte system. chinese Journal of Integrated Traditional and Western Medicine 5:42-44, 50, From Abstracts of Chinese Medicine, 1:371. 1985. hen JL. Chen YC. Yang SH, Ko YF, Chen SY, Immunological alterations in Jupus-prone autoimmune (NZB/NZW) F1 mice by mycelia Chinese medicinal fungus Cordyceps sinensis-induced redistributions of peripheral mononuclear T lymphocytes. Clinical And Experimental Medicine. 2009, vol 9; number 4, pages 277-284. heung JKH, Li J. Cheung AWH, Zhu Y, Zheng KY, Bi CW, Duan R, Choi RC, Lau DT, Dong TT, Cordysinocan, a polysaccharide isolated from cultured Cordyceps, activates immune responses in cultured T-lymphocytes and macrophages: Signaling cascade and induction of cytokines. Journal Of Ethnopharmacology. 2009, vol 124; number 1, pages 61-68 DB, Ye JL, Wang CL, Zhao YH, Cai J. Antiaging effect of Cordyceps sinensis extract. Phytotherapy research. 2009, vol 23, issue 1, pages 116-22 Koh JH, Yu KW, Suh HJ, Choi YM, Ahn TS. Activation of macrophages and the intestinal immune system by an orally administered decoction from cultured mycelia of Cordyc sinensis. Biosci. Biotechnol Biochem. 66: 407-411. 2002. Kumar R. Negi PS, Singh B, Ilavazhagan G, Bhargaya K, Sethy NK, Cordyceps sinensis promotes exercise endurance capacity of rats by activating skeletal muscle metabolic regulators. Journal of Ethnopharmacology. Jun 2011, Vol. 136, No. 1: 260-266. doi:10.1016/j.jep.2011.04.040

Selected citations II. Hsu CC, Huang YL, Tsai SJ, Sheu CC, Huang BM, In vivo and in vitro stimulatory effects of Cordyceps sinensis on testosterone production in mouse Leydig cells. Life Sci. 2003 Sep. uang B, et al. Cordyceps sinensis and its fractions stimulate MA-10 mouse Leydig tumor cell steroidogenesis. J Androl 2001;22:831-7 uang BM, Hsu CC, Tsai SJ, Sheu CC, Leu SF. Effects of Cordyceps sinensis on testoste production in normal mouse Leydig cells. Life Sci. 2001, Oct 19; 69(22):2593-602. uang YL, Leu SF, Liu BC, Sheu C, Huang B. In vivo stimulatory effect of Cordyceps sinensis mycelium and its fractions on reproductive functions in male mouse. Life Sciences, Jul 2004 Vol. 75, No. 9: 1051-1062. doi:10.1016/j.lfs.2004.01.029 hen YC, Huang BM. Regulatory Mechanisms of Cordyceps sinensis on Steroidogenesis in MA-10 Mouse Leydig Tumor Cells. Bioscience, Biotechnology, and Biochemistry. Jan 2010, Vol. 74, No. 9: 1855-1859. doi:10.1271/bbb.100262. eu SF. Poon SL. Pao HY. Huang BM. The in Vivo and in Vitro Stimulatory Effects of Cordycepin on Mouse Levdig Cell Steroidogenesis, Bioscience, Biotechnology, and Biochemistry, Jan 2011, Vol. 75, No. 4: 723-731. doi:10.1271/bbb.100853 eu SF, Chien CH, Tseng CY, Kuo YM, Huang BM. The in Vivo Effect of Cordyceps sinensis Mycelium on Plasma Corticosterone Level in Male Mouse. Biological & Pharmaceutical Bulletin. Jan 2005, Vol. 28, No. 9: 1722-1725. doi:10.1248/bpb.28.1722 ang HY, Leu SF, Wang YK, Wu CS, Huang BM. Cordyceps sinensis mycelium induces MA-10 mous Levdig tumor cell apoptosis by activating the caspase-8 pathway and suppressing the NFkappaB pathway. Arch Androl. 2006 Mar-Apr; 52(2):103-10.









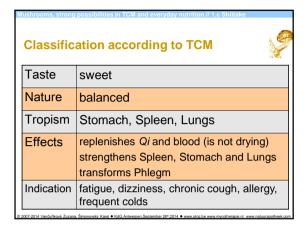
- immunosuppressives
- in men androgen dependent tumors of prostatic gland
- better NOT to use as support in patients with tumors (except cases of yang deficiency, even then not for a long time)
- do not use in women with yin deficiency
 (= heavy periods), do not use in 1st and 2nd phase of
 the cycle.

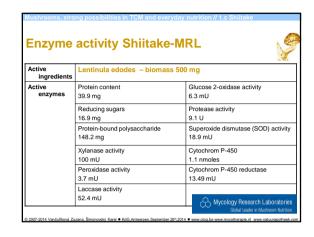
Cordyceps sinensis procurement

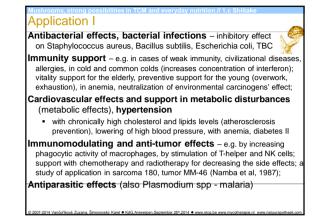
- excessive gathering presents an environmental threat
- falsification
- contamination with moulds, other species of fungi
- mycellium obtained by cultivation as an environmentally sustainable substitute
- Cordyceps sinensis x C. millitaris
- acquisition and maintenance of fungal strain



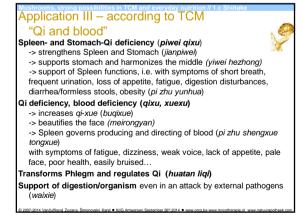


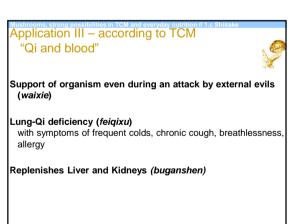






Application II Hepatoprotective effects, gall bladder stones, Stomach problems and ulcers - especially prevention Skin diseases (eczemas, acne) - external application Antiviral effect, viral infections herpes viruses, hepatitis (B) viruses, flu viruses, or even HIV Urinary incontinence - only supportive use Protective effect for physically and mentally active persons Harmonization of the axis hypothalamus-hypophysis-adrenal glands only supportive application, this effect is being studied by WM Effect on CNS and peripheral NS influences production of serotonin, histamine, catecholamine Allergic reactions - possibility of influencing; Teeth and joint support - auxiliary means, or in combination with gelatin preparations, studies also recommend Shiitake, rheumatoid arthritis; Anticoagulation effect with caution or not at all in persons under anticoagulation medication (laboratory control necessary!)





Application IV – according to TCM

Eliminates poisonous substances (jiedu),

draws [supports manifestation of] rashes (tuo douzhen)

Sharpens wits [intellect] and calms the Spirit (yizhi anshen)

Anti-tumor properties (kang zhongliu)

boils, ulcers, tumors

lower anti-tumor effects indicated compared to YUNZHI and more adverse effects.

© 2007-2014 Vančuříková Zuzana, Šimonovský Karel ● KdG, Antwerpen, September 26°, 2014 ● www.otcg.be www.mycotherapie.nl www.na

Application V – according to TCM + acu



Qi and blood deficiency (possibly of Stomach)

fatigue, dizziness, weak voice, lack of appetite, pale face,... defense support, immunity support

Shiitake administered together with:

- for replenishing chiefly Spleen-, Lung- and Kidney-Qi selection of points, possibly moxibustion
 BL 13,17, 20,21,23, LU1, LR13, GB25,
 LU9, CV4,6,12, 17, ST 36, SP3,6, KI3 (shu, yuan points)
- for simultaneous strengthening of Stomach and Spleen BL 21,CV12, ST 36

Application Va – according to TCM + acu



Lung-Qi deficiency

frequent colds, chronic cough, allergy

Shiitake administered with:

- **BL 13**, 43, LU1,**LU 5**, **LU9** (LU8 descent of *qi*), CV6, 17, ST 36, GV 14,
- LR13, SP 3 for adjustment of spleen function, phlegm (damp *tan* attacks lungs + ST40)

© 2007-2014 Vančuříková Zuzana, Šimonovský Karel ● KdG, Antwerpen, September 265, 2014 ● www.otcq, be www.mycotherapie.nl. www.natuura

Application Vb – according to TCM + acupuncture

Lung-Qi deficiency

(possibly transformation of phlegm needed)

frequent colds, chronic cough, allergy

Shiitake administered with:

BL 13, 43, LU1,**LU 5**, **LU9** (LU8 descent of *qi*), CV6, 17, ST 36, GV 14,

LR13, SP 3 – for adjustment of Spleen function, phlegm (damp *tan* attacks the Lungs + ST40)

phlegm transformation (e.g. as support with anti-tumor therapy) + ST 40, SP9

Dosage

Traditional dosage of **dried** matured **fruiting bodies** in the form of tea or with food indicated **as 6 – 16 g daily**Fresh fruiting body about 90 g

In form of biomass 0,5-3 g a day.

In case of usual dosage **nontoxi**c, only rare and unimportant side effects or allergic reaction indicated - dermatitis

It is known, that it therapeutically decreases aggregation of blood platelets - with caution in patients under anticoagulation medication - laboratory control necessary! Ideas for memory support in TRITON-MRL

Heart stores Mind (shen)



Kidneys store Will (zhi) memory for fresh events



© 2014