

Complementary and alternative medicine (CAM) for diabetes .

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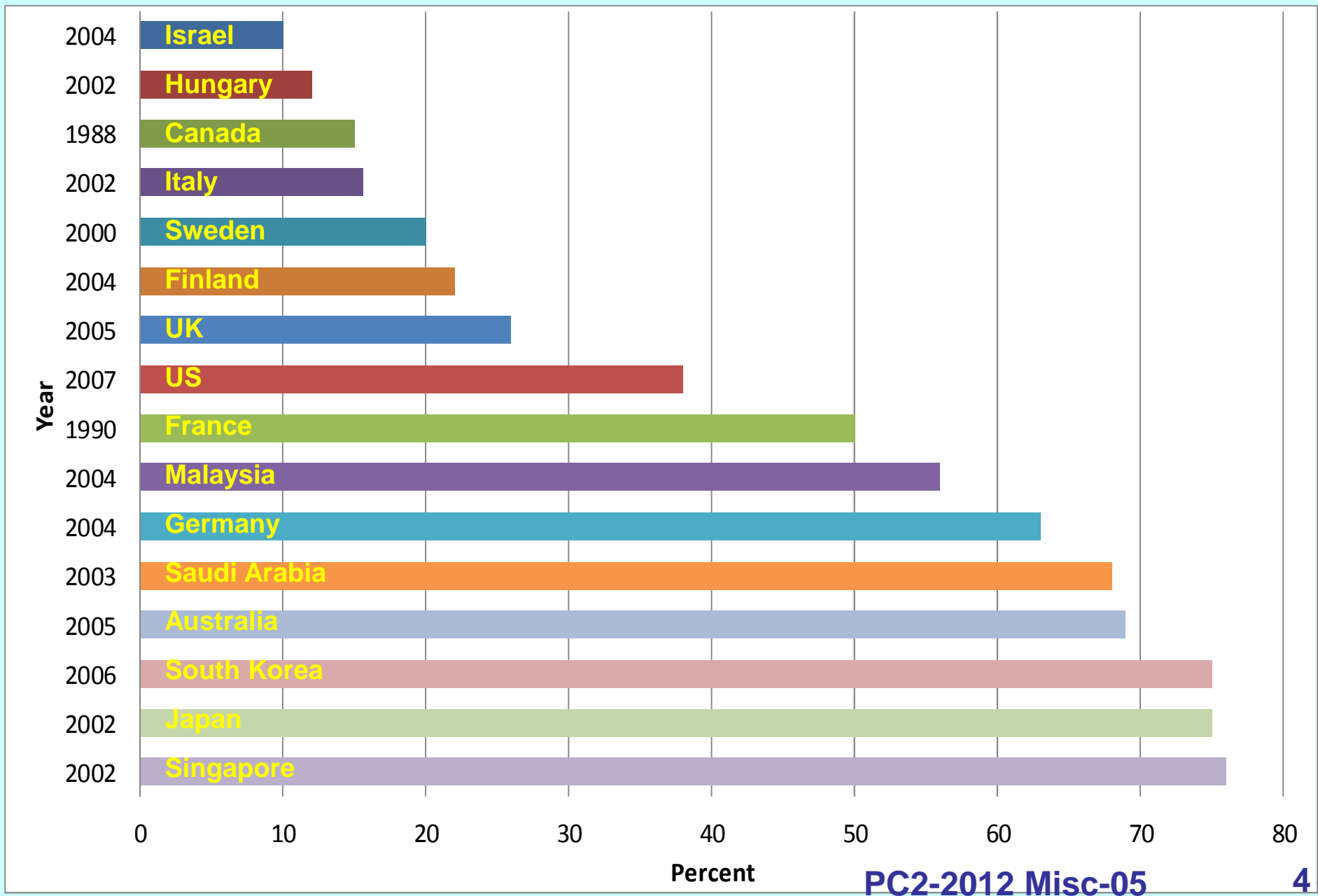
Complementary and alternative medicine (CAM) for diabetes ?

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Background

- Large proportions of the general population use *CAM*
- For patient populations, i.e. diabetics, the figures are even higher
- In the UK, we spend ~ £1.6 billion on *CAM* each year (>90% out of our own pocket)
- Powerful lobby-groups continue to push *CAM*
- Even the most fundamental questions about *CAM* remain unanswered

1-year prevalence of CAM-use/general population



CAM-use by diabetics

- 2002 and 2007 NHIS (n=3.978)
- 31% of type-2 diabetics used CAM
- More severely ill patients had twice the odds of using CAM

CAM - Why?

Design: survey

Setting: 2 hospitals in Germany

Sample: 200 patients

Results:

- 64%: doctor has not enough time
- 75%: no advice on drug-free therapy
- 67%: doctor not enough interest
- 82%: side-effects of drugs

What is CAM?

An umbrella term for a diverse range of therapeutic (and diagnostic) methods which have little in common other than being 'outside' mainstream medicine.

from

acupuncture

to

zone-therapy

The range of CAM

ACUPUNCTURE - diagnosis + therapy
AROMATHERAPY - therapy
CHIROPRACTIC - diagnosis + therapy
HEALING - diagnosis + therapy
HERBALISM - diagnosis + therapy
HOMOEOPATHY - diagnosis + therapy
IRIDOLOGY- diagnosis
KINESIOLOGY- diagnosis + therapy
MASSAGE - diagnosis + therapy
OSTEOPATHY- diagnosis + therapy
REFLEXOLOGY- diagnosis + therapy

Common features

- Emphasis on holism
- 'Natural' treatments
- 'Safe' treatments
- Individualisation
- Self-healing properties of body
- Long tradition of usage
- Private healthcare

Great Expectations

- Less side-effects
- Symptom relief
- Cure
- Cope better
- Improve quality of life
- Boost immune system
- Prevention
- Good therapeutic relationship
- Holistic care
- Emotional support
- Control

CLAIMS

CAM has been 'field tested' for hundreds of years on millions of patients



Wellcome Images

The test of time

Traditional uses of aloe vera (a selection)

Argentina	-	Induction of abortion
Bolivia	-	Laxative
Brazil	-	Febrifuge
Canary Islands	-	Dental caries
Haiti	-	Diabetes
India	-	Aphrodisiac
Nepal	-	Amenorrhea
Panama	-	Stomach ulcers
Peru	-	Asthma
Puerto Rico	-	Common colds
Saudi Arabia	-	Piles
South Korea	-	Contraceptive
Taiwan	-	Hepatitis
West Indies	-	Syphilis prevention

Natural = safe



CAM/diabetes: a plethora of bogus claims

**Google: alternative medicine/diabetes
~23 million hits**

**7 CAM-books offeredn umerous
different treatments for diabetes**

Complementary therapies recommended for diabetes in 7 books on CAM

Acupuncture	Chromium	Massage
Aromatherapy	Coccoloba indica	meditation (2)
Artemisia haba-alba	Detoxification therapy	Momordica charantia (2)
Atriplex halimus	Fenugreek (3)	Mulberry leaves
Ayurvedic medicine	Garlic (3)	Olive leaves
Bidens pilosa	Ginkgo biloba (3)	Onion (2)
Bilberry	Ginseng (3)	Osteopathy
Biofeedback (2)	Glynnema sylvestre (2)	Ozone therapy
Bioelectromagnetic therapy (2)	Goat's rue	Pyroxidine
Biotin	Guided imagery	Qigong (2)
Bitter melon	Hawthorne	Reflexology
Blueberry	Hydrogen peroxide	Relaxation
Burdock	Hydrotherapy	Selenium
Cayenne (topical)	Hypnotherapy	Tecoma stans
Chelation therapy	Juice therapy	Yoga (3)
Chinese herbs	Magnesium	

CAM for diabetes: advice on websites

Design: survey of 13 most frequented websites

- Results:
- one site overtly discouraged conventional therapies
 - most recommended several CAM modalities
 - in total, 372 different treatments were recommended

Claims for homeopathy (~21m website on Google)

Homeopathy is effective for:

- **Diabetes**
- Cancer
- Dengue
- Typhus
- Influenza
- Smallpox
- Measles
- Chickenpox
- Encephalitis
- "and other fatal diseases"

Source: Google news (1st 2 weeks in Oct 2011)

WHO 2003 Acupuncture

Diseases for which the therapeutic effect of acupuncture has been shown but for which further proof is needed

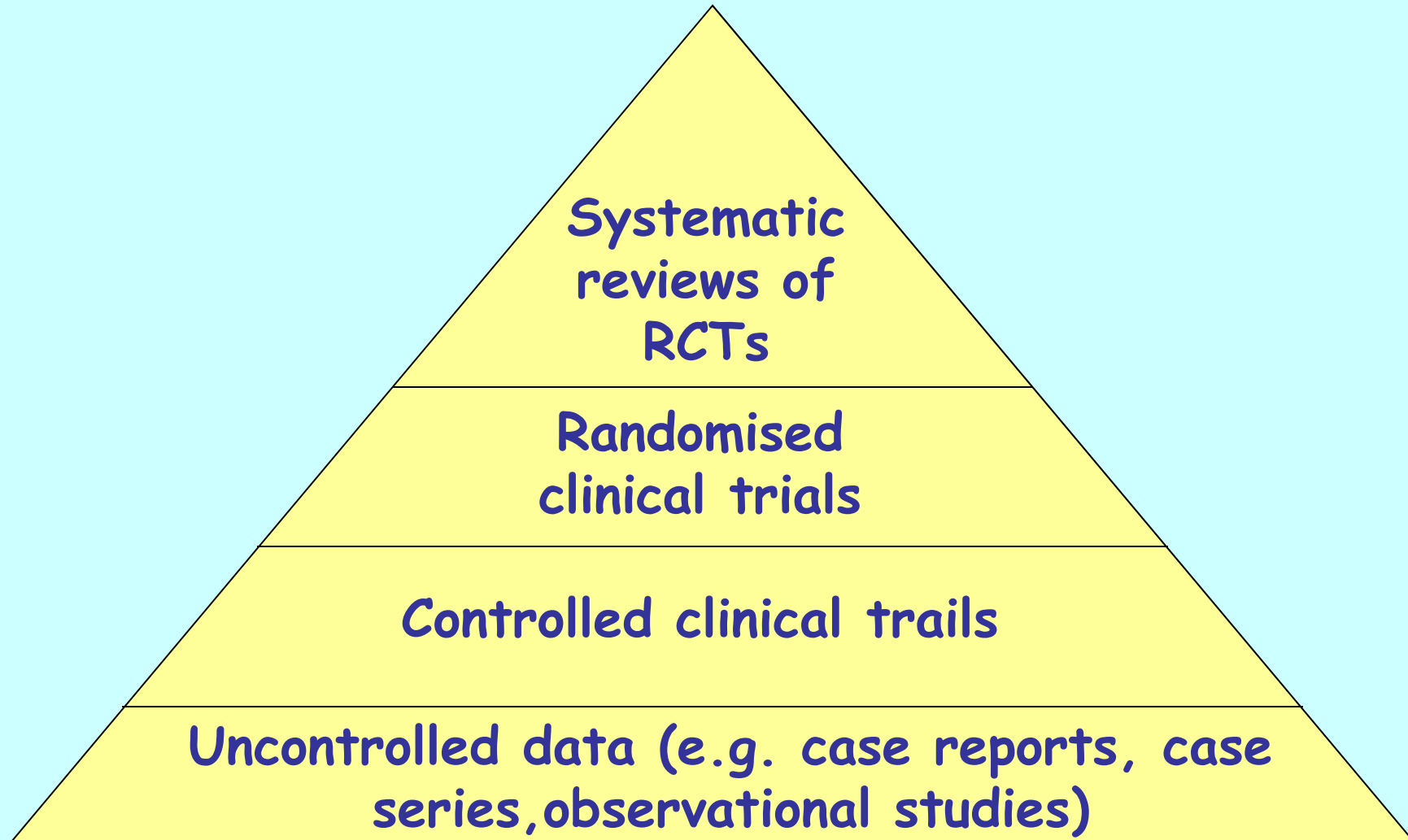
Diabetes mellitus, non-insulin dependent

THE EVIDENCE



-

Hierarchy of evidence



CAM for diabetes

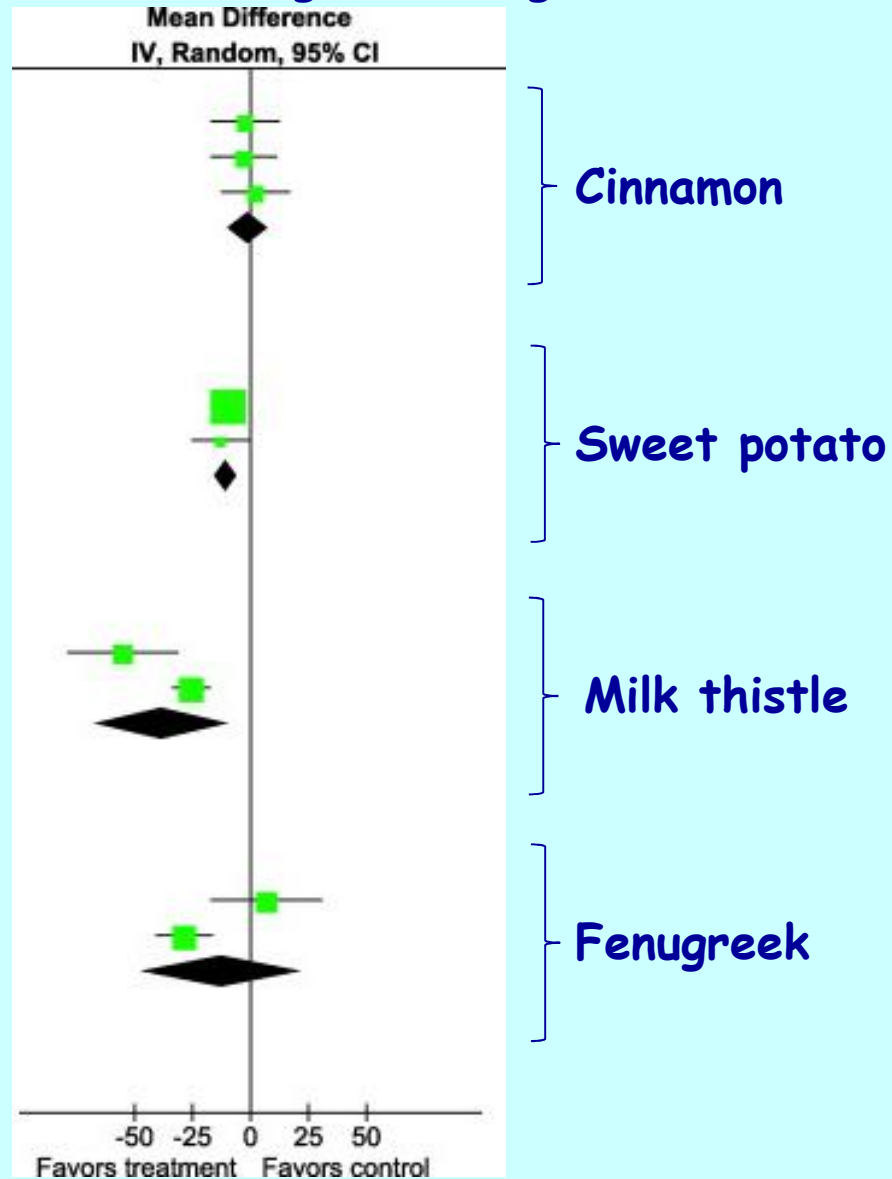
Design: Systematic review

Sample: 31 studies (mostly poor quality)

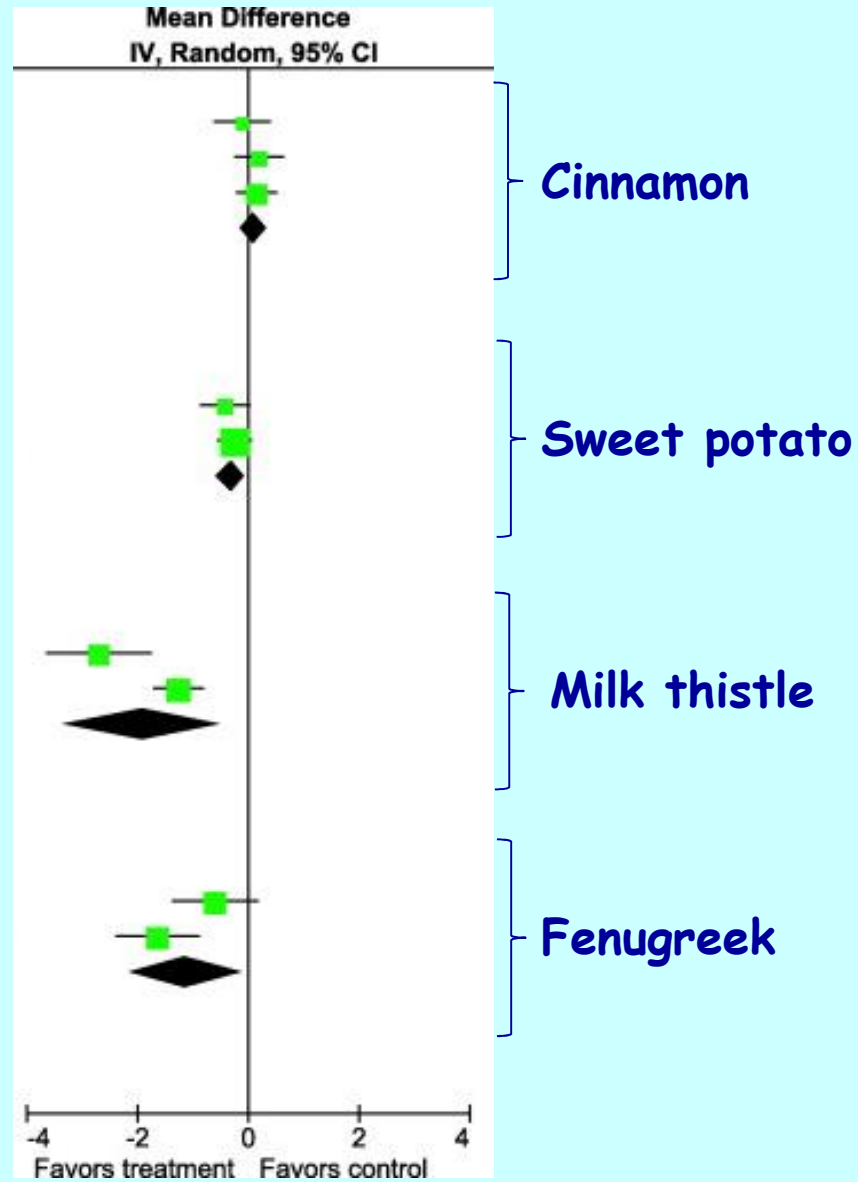
Conclusion: Potentially beneficial

- chromium
- gymnema
- fibre
- green tea
- fenugreek

Effect on fasting blood sugar



Effect on Hb A1c



Ayurvedic remedies for diabetes

Design: Cochrane Review

Sample: 6 RCT of oral remedies
1 RCT of whole system

Results: Positive effects on metabolic control for
Diabecon, Inolter, Cogent DB

Conclusions: "...due to methodological deficiencies... we were
unable to draw any definitive conclusions..."

Interim conclusion: CAM for improving metabolic control?

Some herbals seem to have an effect

Is this a good or a bad thing?

Herbal remedies that might interact with anti-diabetic drugs

Alfalfa	↑	Elecampane	↓	Licorice	↓
Aloe vera	↑	Eucalyptus	↑	Marshmallow	↑
Basil	↑	Fenugreek	↑	Melatonin	↑
Bee pollen	↓	Figwort	↓	Myrrh	↑
Burdock	↑	Garlic	↑	Myrtle	↑
Celandine	↑	Ginseng, eleutherococcus	↑	Nettle	↑
Celery	↑	Ginseng, panax	↑	Night-blooming cereus	
Coriander	↑	Gotu kola	↓	↑	
Cornsilk	↑	Guar gum	↑	Onion	↑
Damiana	↑	Horehound	↑	Sage	↑
Dandelion	↑	Hydrocotyle	↓	St John's wort	↓
Devil's claw	↓	Juniper	↑	Tansy	↑

↑ = increase ↓ = decrease of effects

**CAM for improving
quality of life of
diabetic patients**

Qi gong for diabetes

Design: Systematic review

Sample: 9 studies (poor quality)

Conclusion: "Collectively, this **evidence is insufficient...**"

Tai chi for diabetes

Design: Systematic review

Sample: 5 studies (poor quality)

Conclusion: "Evidence... is scarce and **not convincing**"

Yoga for diabetes

Design: Systematic review

Sample: 5 studies (poor quality)

Conclusion: "A definitive **recommendation**
...cannot be reached at present"

CAM FOR DIABETES?

Design: Systematic review of systematic reviews

Sample: 12 systematic reviews were located

Results: 6 were of good quality

11 reviews failed to be positive

massage at injection site increases absorption of insulin



CONCLUSIONS

1. CAM is popular
2. Many bogus claims put patients at risk
3. The reliable evidence is disappointing:
4. Some herbals might have an effect on metabolic control - but is this positive?
5. Other CAMs might improve QoL
6. Patients deserve trustworthy information, recommendations and guidance



<http://edzardernst.com>