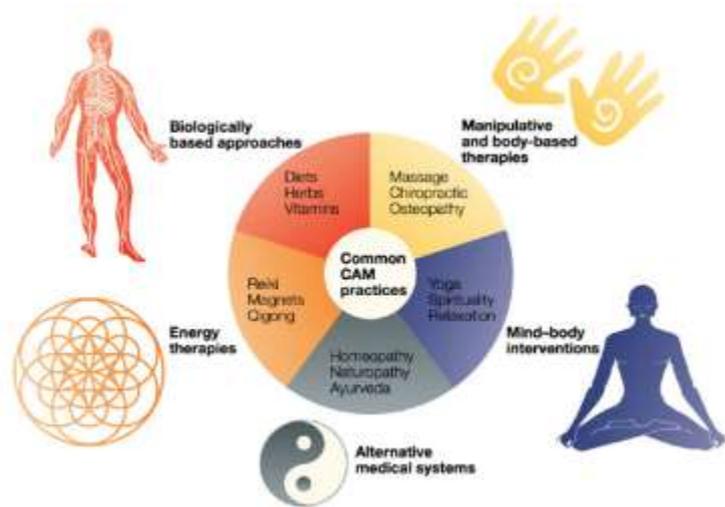


Can Complementary and Alternative Medicine be Evidence-Based Medicine?



Nature Reviews | Immunology



What is EBVM?

the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.

integrating our clinical expertise and our patient's unique values and circumstances with the best available external clinical evidence from systematic research.



What is EBVM?

the more profound philosophy behind EBVM...confidence in the scientific methodology that has developed over the centuries to enable us to distinguish what is likely to be true from what is likely to be false (or unproven).



Principle	Description
Realism	The world exists independent of human beliefs
Empiricism	We can develop true knowledge of the world through perception and experimentation
Reductionism	A powerful way to understand complex entities is to investigate their components
Methodological Naturalism	Science can only test and employ claims about the natural, physical world
Scientific Skepticism	Knowledge claims must be justified by empirical scientific evidence

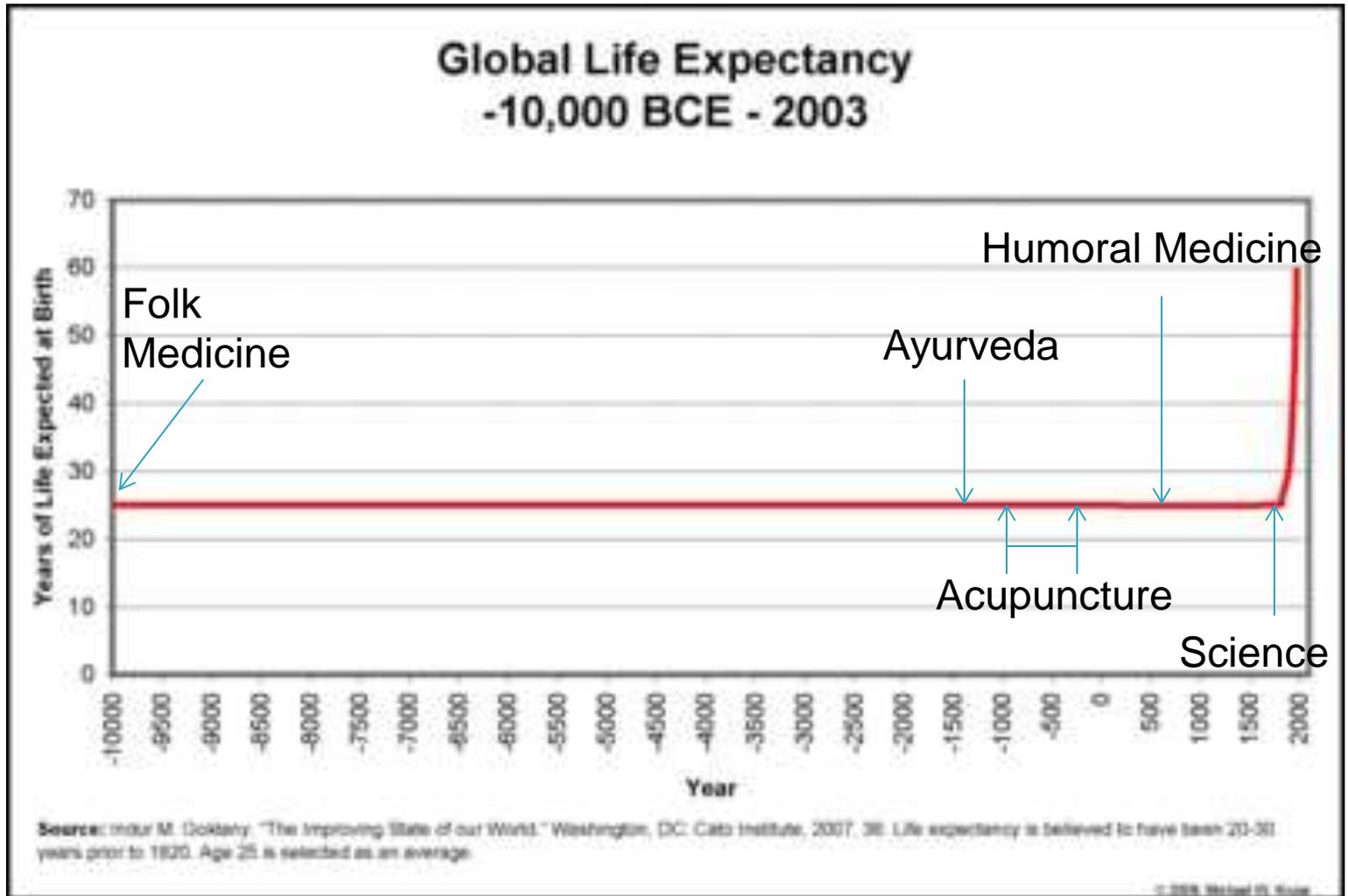
EBVIM

Evidence-Based Veterinary Medicine



“[Science] is the worst form of [epistemology], except for all those other forms that have been tried.”
(Winston Churchill, from a House of Commons speech on Nov. 11, 1947)

Human Life Expectancy



We Are Easily Fooled



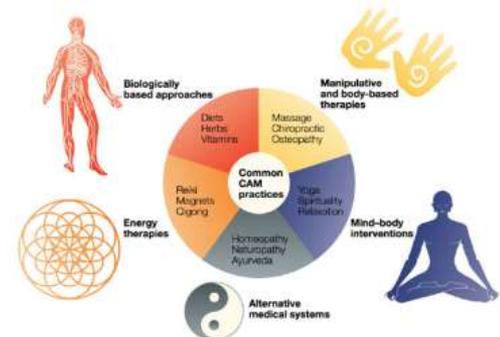
We Are Easily Fooled

- We tend to see what we look for and expect to see; we remember things which confirm our beliefs and ignore or forget those that show us to be wrong
- Being smart, well-educated, experienced, or well-intentioned doesn't protect us much from common errors in judgment
- The judgment of individuals, however respected or numerous, is less reliable than the assessment of objective scientific research

What is CAM?

Terminology

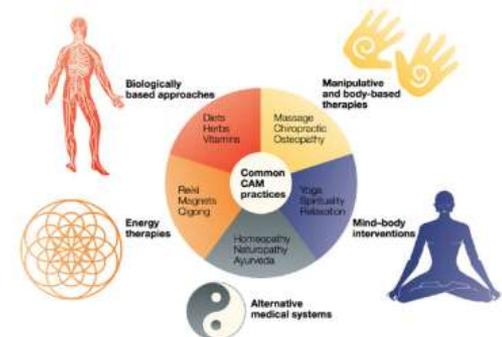
1. Alternative
2. Complementary
3. Integrative
4. Holistic
5. Natural
6. CAM/CAVM



What is CAM?

The identification of standard and broadly accepted definitions applicable to CAVM, including the definition of CAVM itself, is challenging. ...a heterogeneous group of preventive, diagnostic, and therapeutic philosophies and practices. The theoretical bases and techniques of CAVM may diverge from veterinary medicine routinely taught in North American veterinary medical schools or may differ from current scientific knowledge, or both.

AVMA Guidelines for Complementary and Alternative Veterinary Medicine

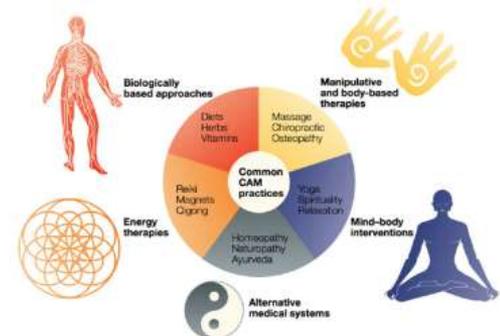


What is CAM?

Holistic Medicine-

A healing philosophy which views the patient as a whole body rather than as a disease or a collection of symptoms. A patient's emotional and spiritual state can affect the patient's condition. Holistic practitioners may combine traditional forms of treatment (medication and surgery) with alternative forms of treatment including homeopathy, acupuncture, chiropractic, massage, and herbal medicine.

Veterinary Institute of Integrative Medicine



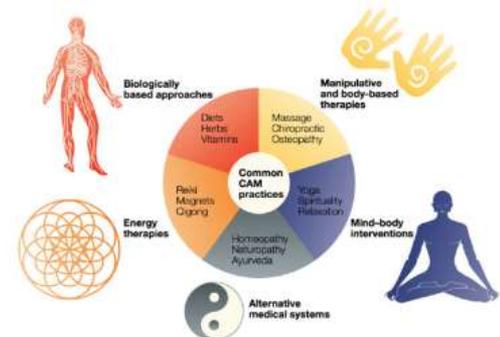
Complementary & Alternative Medicine

Principle	Description
Postmodernism/Constructivism	Our models of reality are only social/cultural constructs
Cultural Relativism	All cultural paradigms are of equal value
Holism	Complex systems can only be truly understood as whole entities in context
Vitalism	Living systems are defined by the presence of a nonphysical vital essence
Panepistemia	Non-empirical forms of evidence, including tradition, intuition, and revelation, are equivalent to scientific evidence

Post-Modernism/Relativism

If no paradigm does have absolute value, there is no absolute basis with which to judge another paradigm. Any paradigm will appear limited or incorrect from the perspective of a different paradigm, so Chinese medicine will seem incorrect from a biomedical point of view, and vice versa.

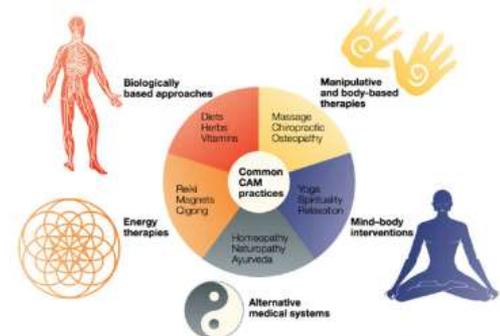
Churchill, A.
Journal of Chinese Medicine



Post-Modernism/Relativism

The invocation of a saint can cure intractable cancer; a voodoo curse can kill...A shaman applying a curse does not consider it to be a placebo, nor does his victim. To them, real magic is involved. To interpret it otherwise is to make a culturally, paradigmatically biased judgment. We can never prove the shaman wrong, only offer an alternative explanation.

Churchill, A
Journal of Chinese Medicine



Post-Modernism/Relativism

Orthodox medicine should consider abandoning demands that CAM become evidence-based, at least as 'evidence' is currently narrowly defined...

Tonelli, MR. and Callahan, TC.
Academic Medicine

[EBM] frameworks presume the “objectivity” of the evidentiary practices of modern Western science and privilege the epistemologies, ontologies, and practices that underlie biomedicine. They hold that notions of evidence underlying EBM standards and RCTs entail a series of assumptions that are incompatible with theories and practices central to Chinese medicine.

Shea, JL
Journal of Complementary and Alternative Medicine

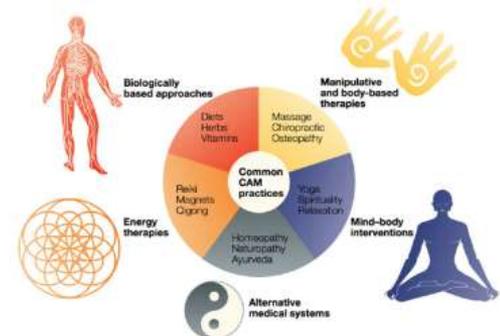


Holism

Holism or holistic treatment involves treating the body as a whole, including the mind and spirit ...The whole is not entirely explicable in terms of its parts...This means that we cannot usefully consider one part of the animal in isolation

Animals (and humans) do not function in parts, we function as a whole and mind, body...and spirit are an inseparable entity. This is a fact and to think and work otherwise will inevitably lead to failure.

Day, C.
Alternative Veterinary Medical Centre



Holism

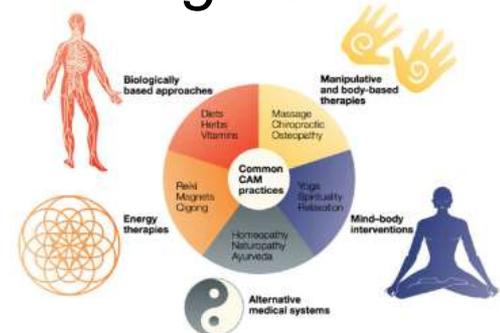
...[EBM requires] the idea that there is a legitimate hierarchy of knowledge and method with the RCT as the gold standard...

There are practitioners of naturopathic modalities who do not subscribe to this hierarchy at all; they tend to see this as a form of nonholistic reductionism.

It is inappropriate to superimpose reductionistic methodologies that are paradigmatically incongruent with the holistic practice of naturopathy.

Jagtenberg, T. et al

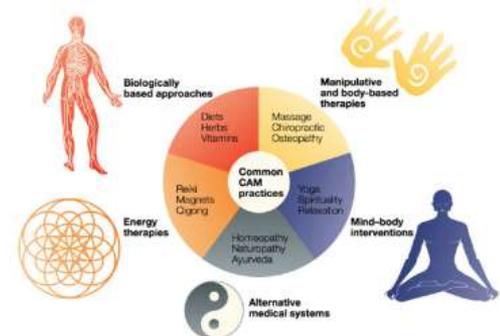
Journal of Alternative and Complementary Medicine



Holism

*...Reductionism may be the opposite of holism.
It is anyway very foreign to the methodology
and reasoning of a holistic vet...*

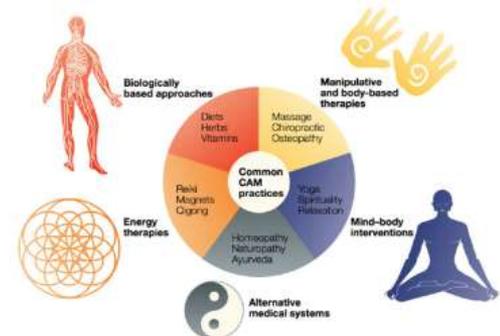
Day, C.
Alternative Veterinary Medical Centre



Vitalism

Acupuncture reconnects and balances Life energy... Energy medicines such as homeopathy, homotoxicology, Reiki, craniosacral therapy, and others align the physical, mental, and spiritual portions of the organism. Yes, I did say spiritual and that is a big part of holistic medicine – recognizing the spiritual nature of Life.

Richard Palmquist, DVM
Whole Dog Journal

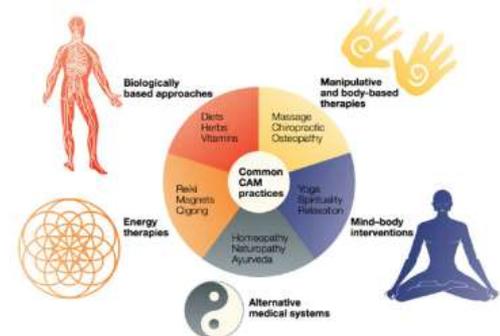


Vitalism

"pharmacological and surgical approaches appear incomplete because they ignore the Vital Force which animates and breathes life into the biomachinery of living systems..."
Energetic force is unique, distinguishing living from nonliving systems and people from machines. Medical therapies that promote this energy...should be given primary consideration.

Stefanatos, J.

Complementary and Alternative Veterinary
Medicine: Principles and Practice

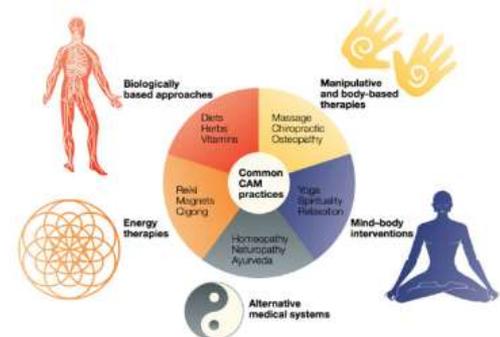


Vitalism

Holistic practitioners believe that vital life energy is the most important factor in the health of the patient...Because medical science has defined itself on a strictly physical basis, it is true that vitalism is unscientific. By definition, vitalism embraces a concept about a nonphysical force that can never be understood within the current scientific, medical paradigm.

Doug Knueven, DVM,CVA, CAC

The Holistic Health Guide: Natural care for the whole dog



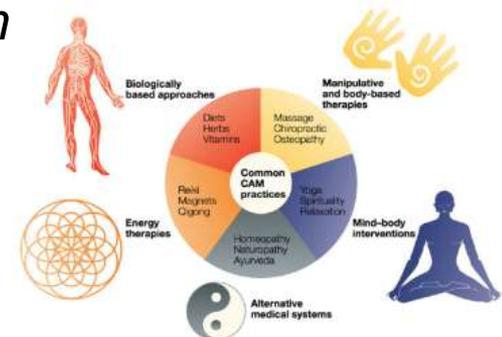
Who Needs Scientific Evidence?

To prefer indirect evidence, such as that from clinical trials, over primary experience represents an epistemic choice...CAM practitioners...can continue to emphasize individual outcomes without inconsistency even when the therapies they utilize have failed to demonstrate efficacy in controlled clinical trials.

Tonelli, MR. and Callahan, TC.
Academic Medicine

Users of homeopathy did not see a need for scientific testing and were happy with their own judgment of whether the treatment was working for...RCTs came at the bottom of their hierarchy of evidence. Anecdotal evidence, particularly from friends and family, rated highest.

Barry CA
Social Science and Medicine

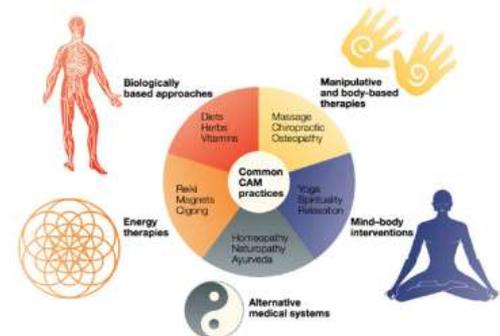


EBVM Might Change CAVM

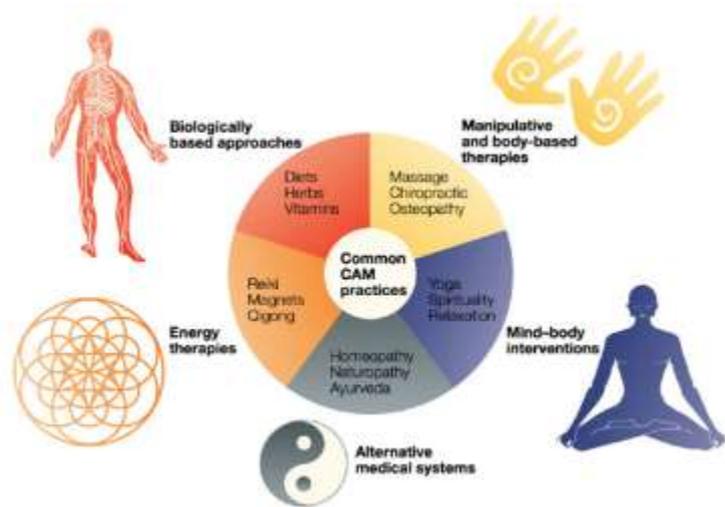
[EBVM] can act as a reformulation of the very nature of a therapy, generally in the direction of medicalisation. Where homeopathy has been tested on a biomedically diagnosed disorder...it suggests to the readers that homeopathy can be used in a biomedicalised way...ignoring the mental, spiritual, and relational picture in favour of physical symptoms...

Evidence-based epistemology can in itself have transformative effects on alternative therapies...scientifically constructed 'evidence' for an alternative therapy only works when the therapy has mutated into a medicalised version and divested itself of its alternative philosophy.

Barry, CA
Social Science and Medicine



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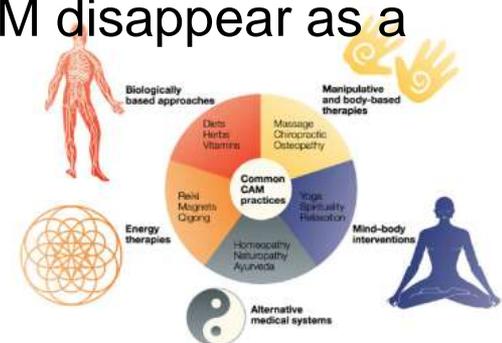
Nature Reviews | Immunology



Can Complementary and Alternative Medicine be Evidence-Based Medicine?

Yes if...

- Individual interventions are tested for specific indications at all levels of evidence
- Levels of evidence are respected and the highest level given precedence
- Interventions are accepted or rejected as indicated by the formal evidence appraisal
- Will these interventions still be CAM? Will CAM disappear as a category? Should it?
- Is doing this the best use of resources?



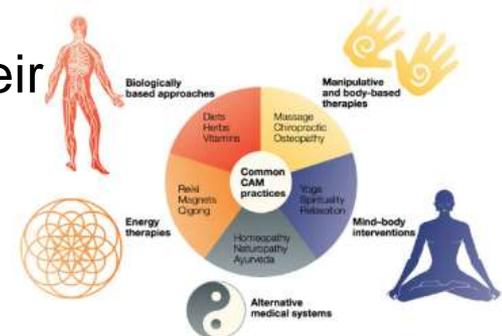
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No if...

- If EBM methods are incompatible with CAM therapies because of
 - Post-modernism- No such thing as true or false, just points of view
 - Cultural Relativism- Inappropriate to judge one paradigm by another; all sets of metaphors are equally valid
 - Holism vs Reductionism
 - Vitalism vs Methodological Naturalism

• Medicalizing CAM therapies strips them of their character and value

• The results of EBM evaluation will be ignored



Things to Think About

- What philosophical principles underlie your approach?
- How do these complement or antagonize other approaches?
Particular therapies?
- How can understanding these issues facilitate productive debate and discussion?
- Should CAM assimilate? Should EBM accommodate? Should they be separate but equal? Separate but unequal?
- What about other values?
 - What clients want?
 - Practitioner autonomy?
 - Informed consent?
 - Patient welfare?

