The Medicalization of Life

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The more people are exposed to contemporary health care, the more they perceive themselves to be sick, or at risk, and the higher the rates of self-reported illness.


Three Key Aspects

• Clinical: serious side effects of treatment that were worse than the original condition
• Social: general public is made reliant on the medical profession to cope with life in society
• Structural: the idea of birth, aging and dying as medical illnesses, leaves individuals and societies less able to deal with these "natural" processes.

Ivan Illich, Limits to medicine: Medical nemesis 1975

• Constructive medicalization can be freeing and validating for the individual, where over-medicalization can be harmful, due to excessive treatment and intervention.

• Medicalization runs the risk of turning everyday experiences into disease and narrowing the definition of who and what is normal.
PREVENTION

- The U.S. Centers for Disease Control and Prevention (CDC) estimates that eliminating three risk factors - poor diet, inactivity, and smoking - would prevent:
  - 80% of heart disease and stroke
  - 80% of type 2 diabetes
  - 40% of cancers

Current cigarette smoking

NOTE: Smoked 100 cigarettes in their lifetime and smokes now every day or some days.
SOURCE: CDC/NCHS, Deaths, United States, 2013, Figure 7 and Table 47. Data from the National Health Interview Survey (NHIS).
• CAD is leading cause of death in US
• CAD was considered primarily a lipid accumulation mediated disease; now shown to involve an ongoing inflammatory response.


Women’s Health Study: hs-CRP, Lipids, & Risk of Future CV Events

Quartile of TC: HDL-C

Quartile of hs-CRP

The Lancet Versus BMJ

• Though the benefits of statins for secondary prevention or in people at high risk of cardiovascular disease are undisputed, proposals to offer them to large numbers of people at lower risk remain controversial.
• “Muscle pain and fatigability are not a figment of misattribution and public misinformation,” he says. “They are too prevalent and recurrent in people who desperately want to stay on statins. Rather than discount a widely observed phenomenon, we should ask why there is such a mismatch with reporting in the trials.”
• Statins are not miraculous, nor are they poison. “Academics debate who should receive statins based on health-economics arguments, telling us about numbers of patients who have been harmed or the number of lives that have been saved. Relating such numbers and quoting these to a patient who is having statin-related myopathy (muscle weakness) or to a patient who has had a heart attack despite taking statins is not likely to be helpful to that patient.”

www.bmj.com/content/355/bmj.i6334
Statins Given for 5 Years for Heart Disease Prevention (With Known Heart Disease)

In Summary, for those who took the statin for 5 years:

Benefits in NNT
- 3 in 83 were helped (life saved)
- 3 in 39 were helped (preventing non-fatal heart attack)
- 1 in 135 were helped (preventing stroke)

Harms in NNT
- 1 in 50 were harmed (develop diabetes*)
- 1 in 10 were harmed (muscle damage)
- 1 in 250 were harmed (preventing stroke)

*The development of diabetes is one such unanticipated harm found in a recent large study and it was not listed in the data above, although it is a known risk.

Benefits in Percentage
- 96% saw no benefit
- 1.2% were helped by being saved from death
- 2.6% were helped by preventing a repeat heart attack
- 0.8% were helped by preventing a stroke

Harms in Percentage
- 2% were harmed by developing diabetes**
- 10% were harmed by muscle damage


Statin Drugs Given for 5 Years for Heart Disease Prevention (Without Known Heart Disease)

In Summary, for those who took the statin for 5 years:

Benefits in NNT
- 1 in 35 were helped (life saved)
- 1 in 60 were helped (preventing heart attack)
- 1 in 250 were helped (preventing stroke)

Harms in NNT
- 1 in 10 were harmed (muscle damage)

Benefits in Percentage
- 98% saw no benefit
- 0% were helped by being saved from death
- 1.0% were helped by preventing a heart attack
- 0.4% were helped by preventing a stroke

Harms in Percentage
- 2% were harmed by developing diabetes**
- 10% were harmed by muscle damage

http://www.thennt.com/nnt/statins-for-heart-disease-prevention-without-known-heart-disease/

Exercise

- Men who run 1 hour or more per week reduce risk of heart disease by 42%.
- Studies suggest that active women have a 50% risk reduction in developing heart disease.
- Guidelines 60-90 minutes moderate exercise everyday if overweight.

• In the Lyon Diet Heart Study – there was a 72% reduction in having another heart attack during 4 years of follow-up in those who had a heart attack.
• In 2013, the PREDIMED trial showing a significant risk reduction in a low-risk population.
Magnesium and the Heart

• Review 44 studies: Mg supplements enhance blood-pressure lowering effect of BP medications in stage 1 hypertension when given 230-460 mg/d.
• Nurses Health Study (88,375 women) found every 0.25-mg/dL increment in plasma magnesium –41% lower risk of sudden cardiac death.
• Meta-analysis of 241,378 patients with 6,477 strokes showed an inverse relationship of dietary magnesium to the incidence of ischemic stroke.


Magnesium and Diabetes

• Meta-analysis of 7 prospective studies (286,668 patients, 10,912 cases of diabetes, 6-17 years follow-up) found 100 mg/day increase in total magnesium intake decreased the risk of diabetes by a statistically significant 15%.
• Hypomagnesemia linked to poor control of type 2 diabetes and depletion of serum magnesium occurs exponentially with duration of disease.
• In those with good renal function: chelated magnesium at doses of 300-500 mg per day.


American Heart Association

• “Omega-3 fish oil supplements prescribed by a healthcare provider may help prevent death from heart disease in patients who recently had a heart attack and may prevent death and hospitalizations in patients with heart failure.”
• There was insufficient evidence to evaluate the role of fish oil supplements in primary prevention of CVD.


Mind-Heart

• InterHeart Trial, an international study conducted in 52 countries that included more than 27,000 participants, revealed that depression, social isolation and a feeling of hopelessness increased a woman’s risk of having a heart attack more than diabetes, high blood pressure, smoking, or obesity.

Not In Statin Benefit Group Due To 10-Year ASCVD Risk <5%
http://tools.acc.org/ascvd-risk-estimator/

Inattentive Presentation:
At least 6 of following:
• Fails to give close attention to details or makes careless mistakes.
• Has difficulty sustaining attention.
• Does not appear to listen.
• Struggles to follow through on instructions.
• Has difficulty with organization.
• Avoids or dislikes tasks requiring a lot of thinking.
• Loses things.
• Is easily distracted.
• Is forgetful in daily activities.

Hyperactive-Impulsive
At least 6 of following:
• Fidgets with hands or feet or squirms in chair.
• Has difficulty remaining seated.
• Runs about or climbs excessively in children; extreme restlessness in adults.
• Difficulty engaging in activities quietly.
• Acts as if driven by a motor; adults will often feel inside like they were driven by a motor.
• Talks excessively.
• Blurs out answers before questions have been completed.
• Difficulty waiting or taking turns.
Meds and ADHD

• 11% of school aged kids in US have ADHD diagnosis.
• 87% of children are prescribed medication, mostly methylphenidates (Ritalin) and amphetamines (such as Adderall). (15 have been approved for children)
• Meds can cause liver toxicity, weight loss, sleep problems, mood swings, and even thoughts of suicide. They can also interfere with growth.
• Between $320-$500 million spent annually in U.S. on medications for those inappropriately diagnosed ADHD.

• Children go to school after eating a bagel and orange juice, or sugary cereal, or pop-tarts—meals with no fat, no protein, and a high glycemic load.
• Blood sugar goes up and then comes crashing down. Stress hormones, poor focus, inability to concentrate result. Is this a surprise?

Other Causes?

• Less effective parenting
• Everyone more stressed
• Higher demands on children
• Environmental toxins
• High carb, low nutrient diet, nutrient deficits

Figure H.3.a. Age-adjusted prevalence estimates of low body iron stores (< 0 mg/dL) in U.S. children and women by race/ethnicity. National Health and Nutrition Examination Survey, 2003–2006.

Error bars represent 95% confidence intervals. Bars not sharing a common letter differ within children and women (p < 0.05). Age adjustment was done using direct standardization.
Iron and Attention

• A 2010 meta-analysis in the *Nutrition Journal* that included 14 randomized controlled trials of children over the age of 6, adolescents, and adult women who had iron deficiency anemia found that iron supplementation improved attention, concentration, and IQ.

• Unusually low ferritin levels (mean: 18.4 ng/mL; 23% participants <7 ng/mL) in study of ADHD children in Iowa City explains the observed correlation with ADHD symptom scores.


Lead and Hyperactivity

• Low lead levels (< 5 µg/dL) have been associated with inattentive and hyperactivity symptoms and learning difficulties in school-age children.


Pesticide Exposure and ADHD

• Pound for pound, children drink 2.5 times more water, eat 3-4 times more food, and breathe 2 times more air. They are exposed to more pesticide.

• Using data from NHANES – children with typical levels of pesticide exposure from eating pesticide-treated fruits/vegetables, have higher risk of developing ADHD.

• Children ages 8-15 with higher urinary levels of dimethyl alkylphosphate (DMAP), had twice the odds of ADHD when compared with children with low or undetectable levels.

• Organophosphate exposure, at levels common among US children, may contribute to ADHD prevalence.


“If we are going to live so intimately with these [agricultural] chemicals—eating and drinking them—taking them into the very marrow of our bones—we had better know something about their nature and their power.”

Rachel Carson
Silent Spring
Meditation interventions are being increasingly implemented among youth in school, community, and clinic based settings. Review of 16 studies found that sitting meditation can be an effective intervention for psychosocial, and behavioral problems among children and adolescents.


Neurofeedback

- 104 children (7-11 years) with ADHD randomly assigned to receive in school 40-session computer training intervention: neurofeedback, cognitive training, or control condition and evaluated six months post-intervention.
- Neurofeedback participants made more prompt and greater improvements in ADHD symptoms, which were sustained at the 6-month follow-up. CT and control groups both had increased med dosing during follow up.


Insecticides and Cancer

- Meta-analysis of 16 studies found childhood exposure to indoor residential insecticides associated with a significant increased risk of childhood leukemia and lymphomas.
- Positive but not statistically significant association also found for childhood brain tumors.

Integrated Pest Management

- IPM focuses on nontoxic and less toxic methods to control pest problems.
- Benefits include: reducing number of pests, reducing number of pesticide applications, lower cost while protecting human health.
- IPM in schools has been recommended by the USDA, EPA, American Public Health Association, and National PTA.

www.epa.gov/managing-pests-schools/introduction-integrated-pest-management

A Nation On The Edge?

- According to CDC, 11% of Americans 12 and older take antidepressant medications:
  - 400% increase from the 1980s, ~270 million prescriptions per year.
  - 1 in 4 women 40-60 years take antidepressants.
  - Prevalence anxiety disorders ages 9 - 17 is 13%.
  - 1 in 8 adolescents suffer from depression.


Stephen Ilyas, and Joanna Moncrieff BJP 2012;200:393-398
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Publication Bias?

• 74 FDA-registered studies, 31% not published.
• According to published literature, 94% of trials conducted were positive.
• By contrast, FDA analysis showed that only 51% were positive.

Turner, et al. NEJM 2008 Jan 17;358(3):252-60

Effectiveness Questioned

• The magnitude of benefit for antidepressant medication compared with placebo may be *minimal or nonexistent*, on average, in patients with mild or moderate symptoms.
• For patients with *very severe depression*, the *benefit of medications over placebo is substantial*.


Drugging the Mind

• Drug companies have had remarkable success in making psychotropic drugs part of everyday life.
• In 2009, antipsychotics reigned as the top-selling class of all medications in the USA, generating $14.6 billion of revenue.
• Over-diagnosis and overtreatment of mental disorders is of particular concern because diagnostic decisions are based mostly on patient self-report, not on objective signs or laboratory tests.


Oh what to do, what to dooo???
Exercise and Mental Health

- The relationship between physical activity and mental health has been widely investigated and has been shown to reduce the harmful effects of stressors when performed at moderate intensities.
- The overwhelming evidence present in the literature today suggests that exercise ensures successful brain functioning.
- 92 studies, 4,310 participants for effect of physical activity on depression; 306 study effects with 10,755 participants for effect on anxiety concluded: physical activity reduces depression and anxiety.

Desai et al. Neuropsychobiology 2009; 59(4):191-8

Meditation

- Meditation practice is the deliberate self-regulation of attention in the present moment. Concentration, relaxation, altered states of consciousness, and maintenance of a self-observing attitude.
- Science suggests it can be a powerful tool for attention, regulating emotion, and increasing self-awareness and the cultivation of mindfulness.

- Loneliness turns on genes that promote inflammation, major driver of heart disease, stroke, diabetes, cancer and possibly depression.
- Social isolation increases stress response and reduces immune response.

Loneliness, Social Isolation & Your Health

• 148 studies on the effects of social isolation on health found it is:
  • As bad as smoking 15 cigarettes a day.
  • As dangerous as being an alcoholic.
  • As harmful as never exercising.
  • Twice as dangerous as obesity.


Call it a clan, call it a network, call it a tribe, call it a family. Whatever you call it, whoever you are, you need one.

~ Jane Howard

Each one has to find his peace from within. And peace to be real must be unaffected by outside circumstances.

Mahatma Gandhi
• In truth, there is a lot we can't control in our lives, and there are often no easy fixes for the problems we face.
• Most of us were never given any tools to deal with the curve balls life throws at us.
• Having a purpose in life and positive affect may serve as a buffer against life challenges.


“There are voices which we hear in solitude ...
but they grow faint and inaudible as we enter into the world.”

Ralph Waldo Emerson

To speak gratitude is courteous and pleasant,
to enact gratitude is generous and noble,
but to live gratitude is to touch Heaven.

Johannes A. Gaertner, quoted in Words of Gratitude
Healing may not so much be about getting better, but about letting go, of all the expectations, all of the beliefs, and becoming who you are.”

— Rachel Naomi Remen, M.D.