

building willpower: it's like strengthening & nourishing a muscle

this handout with links to all research studies was posted to www.stressedtozest.com on 9.07.11

*"If you can keep your head when all about you are losing theirs and blaming it on you ..."
"If" by Rudyard Kipling*

building willpower is like strengthening a muscle:

In yesterday's post on "Self-control ... the importance of training", I talked about Mischel and colleagues' research on helping children develop better self-control, while in the first post in this series "Self-control, conscientiousness, grit ... whatever word you use, it's sure important to have it", I described Moffitt et al's recent 1000 child, 30 year follow-up study showing how crucially important self-control is for such a large number of health & wellbeing outcomes. I've written "The great news is that the research is beginning to roll in – we can teach ourselves to increase self-control and achieve longer-term aims that are important to us. This can be done as an across-the-board project – building our "self-control muscle" so that it can help us in many different situations. It can also be done in a focused way – to boost self-control and be more successful at achieving a particular target goal."

So here's some across-the-board advice about building & nourishing self-control. Willpower is a bit like a physical muscle. It can be strengthened with regular practice and it can tire. Hagger & colleagues' "Ego depletion and the strength model of self-control: a meta-analysis" supports this view with the additional observation that motivation & fatigue are also likely to be important. So one simple way to strengthen our willpower is to choose a possible, but challenging activity and repeat it regularly. In their paper "Longitudinal gains in self-regulation from regular physical exercise", Oaten & Cheng reported "The purpose of the present study was to test whether the repeated practice of self-regulation could improve regulatory strength over time. Method: Regulatory performance was assessed at baseline, then at monthly intervals for a period of 4 months using a visual tracking task ... Following a 2-month control phase, participants entered a 2-month self-regulation programme designed to increase regulatory strength: a programme of regular physical exercise. Results: Relative to the control phase, participants who exercised showed significant improvement in self-regulatory capacity as measured by an enhanced performance on the visual tracking task following a thought-suppression task. During the regulatory exercise phase, participants also reported significant decreases in ... smoking, alcohol and caffeine consumption, and an increase in healthy eating, emotional control, maintenance of household chores, attendance to commitments, monitoring of spending and an improvement in study habits ... Conclusions: The uptake and maintenance of an exercise programme over a 2-month period produced significant improvements in a wide range of regulatory behaviours. Nearly every major personal and social problem has some degree of regulatory failure. The idea that the capacity for self-regulation can be improved is therefore of vast practical importance."

Taking up and maintaining some form of regular physical exercise is a great way of building self-control, but "willpower strengthening challenges" can involve a whole series of other options as well. So, in their research, Gailliot et al used "two weeks of self-regulation exercises such as using one's non-dominant hand or refraining from cursing", Oaten & Cheng – in further work – used four months of "financial monitoring", Muraven used "cutting back on sweets or squeezing a handgrip", and Masicampo & Baumeister proposed that "mindfulness therapies may qualify as one example of self-control exercise". Hagger & colleagues – in their paper "The strength model of self-regulation failure and health-related behaviour" – applied this idea across four key health practices, writing "Successful self-regulation is associated with adherence to health- [Cont.]

related behaviour in many domains. In contrast, self-regulatory failure is linked to poor adherence and drop-out. This review presents the strength model of self-control as a framework to explain self-regulation in health-related behaviour contexts. In the model, self-regulation is conceptualised as a limited resource that once depleted results in reduced capacity to further regulate the self. We provide an overview of the hypotheses of the strength model and review research applying the model to self-regulation in four health-related behaviour domains: dietary restraint and eating behaviour, alcohol consumption, smoking cessation and physical activity. Based on our review, we recommend practitioners adopt strategies to minimise self-regulatory failure in people engaging in health-related behaviours such as minimising demands on self-control resources in the early stages of uptake and eating regularly to prevent hypoglycaemia. We advocate techniques to improve self-control strength through rest and training on self-control tasks. Suggestions on how these techniques can be integrated into health-related behaviour-change interventions are provided."

willpower benefits from good blood glucose levels too:

It's interesting that Hagger et al comment on the value for self-control of "eating regularly to prevent hypoglycaemia". Gailliot & Baumeister looked at this more fully in their paper "The physiology of willpower: linking blood glucose to self-control" saying "Past research indicates that self-control relies on some sort of limited energy source. This review suggests that blood glucose is one important part of the energy source of self-control. Acts of self-control deplete relatively large amounts of glucose. Self-control failures are more likely when glucose is low or cannot be mobilized effectively to the brain (i.e., when insulin is low or insensitive). Restoring glucose to a sufficient level typically improves self-control. Numerous self-control behaviors fit this pattern, including controlling attention, regulating emotions, quitting smoking, coping with stress, resisting impulsivity, and refraining from criminal and aggressive behavior. Alcohol reduces glucose throughout the brain and body and likewise impairs many forms of self-control. Furthermore, self-control failure is most likely during times of the day when glucose is used least effectively. Self-control thus appears highly susceptible to glucose. Self-control benefits numerous social and interpersonal processes. Glucose might therefore be related to a broad range of social behavior."

And advice from the website www.caloriesperhour.com on maintaining more level blood glucose levels runs *"Never skip a meal, especially breakfast, and eat healthy snacks between meals. Eating frequently prevents hunger pangs and the binges that follow, provides consistent energy, and may be the single most effective way to maintain metabolism efficiency. When you will be away from home or work, plan your snacks and take them along so that you will be able to eat regularly and won't be tempted by junk food. This may be good advice for people who stay at home, too ... It will be very important that any snacks are healthy; that they are pre-portioned so you won't be tempted to overeat; and that meal sizes are reduced to compensate for the additional calories the snacks provide. High fiber snacks and meals also help to regulate your blood sugar level. The fiber slows down glucose absorption and your rate of digestion, keeping your blood sugar level more consistent and warding off feelings of hunger. This makes eating apples and oranges a better choice than drinking (pulp free) apple and orange juice."* For more specific advice see, for example, the British Dietetic Association's helpful set of free leaflets. For more advice on building willpower see the post *"Building willpower: the magnificent seven"*.

For direct links to all mentioned research references, see the www.stressedtozest.com blog post on 9.07.11. See too the associated posts on 14.06, 15.06 & 17.06 and the companion handouts on the many benefits of self-control and on how to build it.

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Moffitt, T. E., L. Arseneault, et al. (2011). *"A gradient of childhood self-control predicts health, wealth, and public safety."* Proceedings of the National Academy of Sciences 108(7): 2693-2698. (for fuller description see <http://bps-research-digest.blogspot.com/> on 17/5/11 and also the excellent resources on the joint Moffitt/Caspi website at <http://www.moffittcaspi.com/index.html>).

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