

# Patient Psychology Research Review™

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Issue 10 - 2014

## In this issue:

- *Depression and treatment adherence in HIV/AIDS*
- *A weighty matter*
- *Payments improve HPV vaccine uptake*
- *Have a purposeful life and live longer*
- *Earlier test results don't improve patient reassurance*
- *Tai Chi reduces fatigue in breast cancer survivors*
- *What's in a name?*
- *Advice about side effects can be unhelpful*
- *Posture affects stress responses*



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## Welcome to the latest issue of Patient Psychology Research Review.

Highlights include evidence that detection and treatment of depression in patients with HIV/AIDS can improve their antiretroviral therapy adherence. We also report that financial incentives improve HPV vaccination uptake in girls, a purposeful life helps you live longer, Tai Chi reduces fatigue in breast cancer survivors, and drug names can influence your perception of how well they work. We finish with a study emphasising the power of good posture.

We hope you find the selected studies interesting and look forward to any feedback you might have.

Kind regards

**Keith Petrie**

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## Depression treatment enhances adherence to antiretroviral therapy

**Authors:** Sin N & DiMatteo M

**Summary:** This meta-analysis examined whether treatment of depression and psychological distress improves adherence to antiretroviral therapy in patients with HIV/AIDS. PubMed and PsycINFO databases were systematically searched for studies that reported an association between depression treatment (or a mental health intervention) and antiretroviral adherence. 29 studies involving 12,243 people living with HIV/AIDS were included. Pooled analysis showed that treatment of depression and psychological distress improved antiretroviral adherence ( $p < 0.001$ ). The odds of a patient adhering to antiretroviral therapy were 83% better if they were also treated for depression. Greater improvements in adherence were seen in patients with lower CD4 counts and in those with more severe depression. These findings support the need for detection and treatment of depression in patients with HIV/AIDS.

**Comment:** While there have been a number of studies showing a link between depression and non-adherence, this meta-analysis provides good evidence that treating depression in patients with HIV infection is also likely to improve adherence to antiretroviral therapy. The review collated the results of 29 studies, including both observational and randomised clinical trials, using antidepressant or psychological interventions such as CBT. The odds of adhering to antiretroviral therapy were 83% better if the patient was being treated for depression. The interventions were also helpful for improving depressive symptoms and seemed more helpful to patients with lower CD4 counts. Treatments that were longer and were administered in a one to one format, rather than a group, seemed to be more effective for improving adherence. The review supports the idea that effective management of depression is likely to be an important strategy for improving medication adherence and quality of life in patients with chronic illness.

**Reference:** *Ann Behav Med* 2014;47(3):259-269

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### A weighty matter: heaviness influences the evaluation of disease severity, drug effectiveness, and side effects

**Authors:** Kaspar K

**Summary:** This study used 5 experiments to examine the impact of weight on the evaluation of disease severity, drug effectiveness and adverse events. Bodily sensation of weight (i.e. carrying a heavy versus light clipboard or using a heavy versus light drug packet) was found to influence people's evaluation of diseases and drugs. The experience of heaviness enhanced the estimated seriousness of diseases and the estimated effectiveness of drugs. The perceived seriousness of adverse effects was also affected by weight (only when drug effectiveness was not attended to).

**Comment:** Recently in psychology there has been an interest in embodiment phenomena or how bodily sensations influence judgements and behaviour (there is another example of this with posture later in the review). For example, studies have found that holding a warm cup encourages warm and friendly behaviour. Also, interestingly, fishy smells seem to reduce trust and people's willingness to invest money. The study applies this approach to drugs by looking at how heaviness influences perceptions of effectiveness and side effects. Weight is often associated with seriousness and more importance. The researchers found that by giving study participants heavy versus light clipboards or drug packets, weight influenced participants' estimation of the drug's effectiveness but generally did not influence perceptions of side effects. This is another example of how we can be subtly influenced by physical sensations in forming judgements.

**Reference:** *PLoS ONE 8(11):e78307*

[Abstract](#)

### Financial incentives for increasing uptake of HPV vaccinations

**Authors:** Mantzari E et al.

**Summary:** This randomised controlled trial assessed the impact of financial incentives on uptake and completion of an HPV vaccination programme in England. 1000 girls aged 16–18 years were invited to participate in an HPV vaccination programme: 500 of them were invited for the first time, and 500 of them had been unresponsive to previous invitations. The girls randomly received either a standard invitation letter or a letter including the offer of shopping vouchers worth £45 for undergoing 3 vaccinations. In girls invited for the first time, uptake was 1.63-fold higher for the first and 2.15-fold higher for the third vaccination in those who received payment versus no payment. In previous non-attenders, corresponding uptakes increased 2.65-fold and 4.28-fold in those who received payment. The impact of the financial incentive was not moderated by participants' deprivation level.

**Comment:** There has been an interest in whether financial incentives can be used to improve patient compliance with health care or engage in preventative treatments designed to improve their long-term health. There is reasonable support, at least from studies in the US, that financial incentives do improve adherence to treatment programmes (Giuffrida & Torgerson, 1997) and may encourage people to engage in one-off health protective behaviours such as vaccination. The authors in the current UK study found a significant but relatively modest increase in HPV vaccination in girls offered shopping vouchers to complete three vaccinations. The effect was strongest in girls who had not previously attended their vaccination appointments. Interestingly, the effects were not influenced by deprivation level. The results suggest financial incentives may be useful but are unlikely to be all that is required to raise vaccination rates up to goal levels.

**Reference:** *Health Psychol 2014; published online Aug 18*

[Abstract](#)

### Purpose in life as a predictor of mortality across adulthood

**Authors:** Hill P & Turiano N

**Summary:** This study analysed data from the longitudinal Midlife in the United States (MIDUS) sample to examine whether purpose in life promotes longevity across the adult years. Individuals were followed up for 14 years after baseline assessment. Proportional-hazards models demonstrated that purposeful individuals lived longer than their counterparts, even after controlling for other markers of psychological and affective well-being. These longevity benefits were not conditional on the participants' age or whether they had retired from the workforce. Having a purpose in life appears to buffer against mortality risk across the adult years.

**Comment:** This study using a sample of over 7,000 adults followed for 14 years found participants who had a lower purpose in life were more likely to die after controlling for other psychological measures of distress. The researchers measured purpose in life by three questions: "Some people wander aimlessly through life, but I am not one of them"; "I live life one day at a time and don't really think about the future"; and "I sometimes feel as if I've done all there is to do in life" rated on a 7-point scale by participants on how accurately this describes their personality. The effects did not seem dependent on age, suggesting that maintaining a strong purpose in life is as important to younger age groups as it is to those who have retired.

**Reference:** *Psychol Sci 2014;25:1482-1486*

[Abstract](#)

## Patient Psychology Research Review

### Independent commentary by Professor Keith Petrie

Keith Petrie is Professor of Health Psychology at Auckland University Medical School. Keith Petrie worked as a clinical psychologist in medical settings before taking up a faculty position in Auckland. His early work in pain clinics and medical wards sparked his interest in the field of health psychology and, in particular, the different ways patients cope with medical symptoms and treatment. His research group also does work on adherence to treatment, psychoimmunology, symptom reporting as well as the placebo and nocebo response.



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### Does the early feedback of results improve reassurance following diagnostic testing? A randomized controlled trial in patients undergoing cardiac investigation

Authors: Patience A et al.

Summary: This study investigated whether the early provision of a normal diagnostic result immediately after medical testing improves patient reassurance. 51 cardiology outpatients with no known cardiac pathology who were referred for an echocardiogram were randomised after normal test results to receive their results from a cardiologist immediately or after a 4-week wait. Data analysis showed that the provision of early results had no impact on patient reassurance. In both groups, patients who were more anxious about their heart were significantly less reassured by a normal result. Cardiac anxiety was strongly associated with lower reassurance.

Comment: Reassurance is one of the most common interventions used in medicine but often it is ineffective in allaying patients' worries about symptoms. This study from our group in Auckland looked at whether the speed that patients received feedback from diagnostic testing influenced the reassurance reported by patients. We found that the early feedback of results did not have any effect on reassurance. However, we found that anxiety plays an important role in reassurance. Patients with higher levels of pre-existing cardiac anxiety were more difficult to reassure compared to those with lower levels of cardiac anxiety, regardless of whether results were provided immediately or at the usual 1-month time point. Focusing on tailored interventions for patients with high levels of anxiety is likely to provide a better bet for improving reassurance than reducing the timeliness for feedback of results.

Reference: Health Psychol 2014; published online Aug 18  
Abstract

### Randomized controlled trial of Qigong/Tai Chi Easy on cancer-related fatigue in breast cancer survivors

Authors: Larkey L et al.

Summary: This study examined the effects of a meditative movement practice, Qigong/Tai Chi Easy, on persistent fatigue and other symptoms in breast cancer survivors. 87 postmenopausal, fatigued breast cancer survivors were randomised to undergo 12 weeks of Tai Chi or sham Tai Chi (controls). Fatigue decreased significantly in the Tai Chi group compared with controls at 12 weeks (p=0.005) and after a further 3 months (p=0.024). Depression and sleep quality improved over time in both groups, and did not differ significantly between groups.

Comment: This is an interesting and unusual study from the point of view of having a sham control group to control for the effects of time, attention and expectation. The true Tai Chi group showed significant improvements in fatigue compared to the sham group but both groups improved their levels of depression and sleep. The results overall suggest that gentle exercise and getting patients moving is going to improve symptoms and mood. The study joins an already growing list of publications supporting the benefits of Tai Chi in health settings (e.g. Jahnke et al., 2010).

Reference: Ann Behav Med 2014; online publication Aug 15  
Abstract

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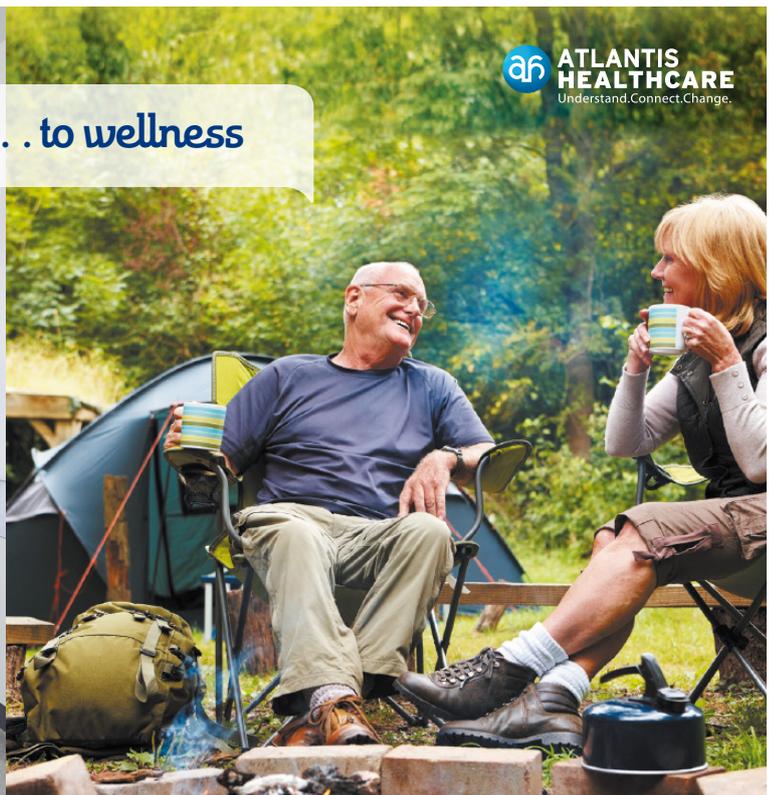
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## What is in a name: drug names convey implicit information about their riskiness and efficacy

**Authors:** Tasso A et al.

**Summary:** This study explored whether the names of medicines influence people's perceptions of their efficacy and side effects. 112 volunteers were asked to evaluate the perceived efficacy and risk associated with hypothetical drug names. Names that were opaque (without meaning), functional (targeting the health issue that the drug is meant to solve) or persuasive (targeting the expected outcome of the treatment) were compared. Persuasive names were perceived to be more effective and less risky than opaque or functional names. Names that target the expected outcome of the drug may bias patient perception of risk and efficacy.

**Comment:** Drug names are an important part of the marketing of medication and millions of dollars are spent on advertising by pharmaceutical companies to create a positive brand for new treatments. This experimental study tested whether opaque (meaningless), functional and persuasive names influenced perceptions of efficacy and riskiness. The researchers found transparent persuasive drug names like "Airpro" and "Dermosan", as two examples they used, were seen as more effective, less risky and less likely to cause concern about addiction than drugs with opaque (Brisivan, Cabrina) or transparent functional names (Airblock, Dermomal). Transparent functional named drugs were also perceived as needing a shorter time to work. Perhaps this is an important aspect of the success of drugs like Prozac and Viagra?

**Reference:** *Appl Cogn Psychol* 2014;28:539-544

[Abstract](#)



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## Unhelpful information about adverse drug reactions

**Authors:** Tan K et al.

**Summary:** This study evaluated the impact of information about adverse drug reactions in clinical practice. Information was extracted from several sources (a regulatory agency, a government funded source, 2 popular internet sites and a patient-centred website) about the number, type, and methods of presentation of adverse reactions for 15 commonly prescribed drugs, including metoprolol, simvastatin, celecoxib, lisinopril and quetiapine. The number of adverse reactions listed for each drug was considerable: for 8 of the 15 drugs the median number was more than 50. Reports were inconsistent, with the number of listed adverse drug reactions varying markedly between sources. There was substantial overlap between symptoms experienced commonly in daily life and frequently listed adverse drug reactions which suggests misattribution of such symptoms as adverse reactions. When possible, information should be presented with the accepted hierarchy of evidence to allow patients to make informed decisions. Greater prominence should be given to adverse events data from randomised trials than from other study designs.

**Comment:** This study highlights how poor the information on drug side effects is on the internet. We found commonly used websites for drug information such as Drugs.com listed an enormous range of side effects for common drugs used for chronic illness, with very little information on seriousness or the actual frequency of side effects. Many of the side effects overlap strongly and are likely to be contaminated with symptoms that are commonly experienced in daily life. The likely effect of this information is to deter patients from starting drug therapy or continuing with treatment for fear of experiencing side effects. It is important that websites put more thought into indicating the level of evidence for drug reactions rather than a blanket listing of symptoms. Also, more work is needed on making the material easier for patients to formulate a balanced perception of their level of personal risk.

**Reference:** *BMJ* 2014;349:g5019

[Abstract](#)

## Do slumped and upright postures affect stress responses?

**Authors:** Nair S et al.

**Summary:** This study investigated whether an upright seated posture could influence affective and cardiovascular responses to a psychological stress task. 74 participants were randomised to hold either a slumped or upright seated posture while they completed a reading task, the Trier Social Stress speech task, assessments of mood, self-esteem, and perceived threat. Blood pressure and heart rate were continuously measured during the experiment. Upright participants reported higher self-esteem, more arousal, better mood, and lower fear than slumped participants. Linguistic analysis showed that slumped participants used more negative emotion words, first-person singular pronouns, affective process words, sadness words, and fewer positive emotion words during the speech task.

**Comment:** Finally, here is an interesting piece of research that shows the power of posture. In this cleverly designed study, participants were put in an upright or slumped posture after being provided with a cover story that the researchers were interested in the effect of physiotherapy tape on daily tasks. Upright participants reported a better mood after being put in their posture. During a common stress task, which involved public speaking, those participants with an upright posture maintained their self esteem compared to slumped participants who reduced their self esteem level in response to the task. Slumped participants also used more negative words and less positive words during their speech compared to upright participants. The study suggests that posture may be a simple and useful intervention to build resilience to stress and perhaps help with depression. If your parents told you to sit up straight, maybe they were right all along.

**Reference:** *Health Psychol* 2014; published online Sep 15

[Abstract](#)

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