

is 50 months and in SILCAAT 54 months. A new study, STALWART, in patients not taking antiretroviral therapy has been started, with a target sample size of 480 patients. Data from these studies are blinded and periodically reviewed by an independent data and safety monitoring board. More information can be found at <http://www.espritstudy.org>.

I declare that I have no conflict of interest.

*Brian Angus on behalf of the ESPRIT, STALWART, and SILCAAT trial steering committees*

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## Does cannabis use cause schizophrenia?

As Wayne Hall notes in his Comment (Jan 21, p 193),<sup>1</sup> we have been more cautious than others about the strength of epidemiological evidence that cannabis use causes schizophrenia.<sup>2</sup> We think this caution is well founded. The importance of considering residual confounding, bias, and reverse causation as alternative explanations for small increased relative risks apparent in methodologically heterogeneous observational studies not amenable to informative meta-analysis is a hard lesson epidemiologists have learned from experience.<sup>3</sup>

We are also cautious about reports of genetically based vulnerability of some individuals to a psychotogenic effect of cannabis use.<sup>4</sup> No robust main effect of COMT genotype was seen in this study, effects being confined to the subgroup of cannabis users who started use in adolescence. Time will tell, and we agree further study of this question is important, but such interaction-only effects confined to subgroups rarely replicate.<sup>5</sup> Further, even if an effect of cannabis is confined to the genetically vulnerable, the average increased risk

apparent in non-genetically informed studies is around two-fold overall. Given the (often small) cannabis doses that this risk was associated with, generally over fairly short follow-up periods, it is noteworthy that a substantial increase in schizophrenia has not been seen after apparently substantial increases in population cannabis exposure.

None of this evidence excludes the possibility of a causal effect. Population changes in other factors causing schizophrenia might have masked effects of cannabis and, in any case, data on population rates of both cannabis use and schizophrenia are neither abundant nor of high quality. In individuals, non-causal artifact is likely to explain part of the apparent association, but not necessarily all of it.

It is also unfortunate that the debate around whether cannabis causes schizophrenia has become conflated with the debate around the legal status of cannabis, and that this question has come to dominate discussions around the appropriate public-health response. The public-health case for prevention of cannabis use by young people is strong, irrespective of whether use also causes schizophrenia. Most users seem to smoke cannabis with tobacco; cannabis use can actually lead to initiation of tobacco use, reinforce toxic effects of tobacco, and make abstinence from tobacco more difficult. Moreover, in most jurisdictions, cannabis use exposes young people to risks of criminalisation that could have additional adverse consequences for their health. We need to develop (because they do not currently exist) cost-effective and humane interventions to reduce cannabis use by young people. Assessment of the effects of these interventions should also allow clarification of the true consequences of cannabis use.<sup>2</sup>

Schizophrenia is enormously important; it remains substantially unexplained and thus unpreventable. If up to 50% (as the most extreme estimates suggest) of schizophrenia is genuinely attributable to cannabis use, this provides considerable scope for prevention.

However, premature conclusions around causality are likely to be counter-productive and could hinder the overall endeavour to find ways to effectively improve population mental health.

We declare that we have no conflict of interest.

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## Subsidising exercise in elderly people

Maria A Fiatarone Singh (Special Issue 2005, p s51)<sup>1</sup> clearly reviews the main facts on ageing well. Ageing will be a major challenge for forthcoming generations, and the most potent medicine available is exercise. Among the barriers to increasing the feasibility of exercise, the absence of financial incentives is a major one. Fiatarone Singh regrets that governments and private health insurance providers do not subsidise exercise. We would like to share some encouraging news.

We have been able to convince two health insurance companies, one public (Mutualité Sociale Agricole) and one private (Mutuelle Générale de l'Éducation Nationale), to co-subsidise an exercise programme in elderly people. This programme was adapted from a 2-month personalised interval

