From: Peter Thiel [redacted]
Sent: Sunday, September 14, 2014 4:15 PM
To: Jeffrey Epstein (jeevacation@gmail.com)
Subject: FW: Reply to Benzo study

Quick feedback from my on-staff health expert...

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Last ni=ht was a lot of fun, as always!

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<= class=MsoNormal>From: Jason Camm
Sent: Sunday, September 14, 2=14 8:44 AM
To: Peter Thiel
Subject: Reply to Benzo stu=y

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Yes, I saw this a few days ago.

Initial thoughts,=Benzodiazapines act on similar receptors to GHB. Whilst they are both CNS =epressants, Benzo's actually reduce the amount of stage 3 and 4 slee= (deep sleep associated with growth hormone release and memory consolidati=n) to almost negligible levels. GHB, as we have discussed before, is actua=ly a potent initiator of stage 3 and 4 sleep.

Whilst I think the associ=tion does deserve further study, there are a few explanations that can be =onsidered from this paper:

1.&n=sp; A true associati=n that reflects Benzo use in the early stages of AD

2. <=[endif]>Benzo's may cause minor brain damage additive to AD

3. =/span>A direct relationship between Benzo and the AD dise=se process

4. =nbsp; This could all be a false positi=e/ statistical fluke

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A few poi=ts of note:

=![if !supportLists]>* &nb=p; the =tudy only finds an association with AD (to medications you are not prescri=ed (Ambien/ Zolpidem/ Lunesta are NOT considered Benzo's in this stu=y)).

· <=span>Non-specific symptoms have been shown to arise over = decade before AD diagnosis, a 5 year study is not long enough to exclude =everse causality.

&n=sp; Difficulty initiating sleep is also an =arly sign of AD - it is likely more people with AD are being prescri=ed the drug in the first place.

<=pan style='font-family:Symbol'>·<=pan style='font:7.0pt "Times New Roman"'> &=bsp; Benzo's have been sh=wn to repeatedly impair memory through their effect on the brain. I have a=number of hypothesis on this.

After the Metamed report, I did some further research on alternative= to GHB via sleep specialists. Non-benzo's (a newer class of d=ugs) such as Ambien, Zolpidem or Lunesta allow some stage 3 and 4 sleep to=occur and are considered to be more mimetic of a natural sleep cycle. Thes= are currently less commonly prescribed in the UK (where the study was per=ormed) than the US.

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In addition to your sleep cycle there are = number of other risk factors for AD relating to sleep. These include:

* Jet lag

· = Sleep deprivation

&=bsp; Ex=essive daytime sleepiness

· =nbsp; Sleep fragmentation<=p>

We have s=en on a number of occasions that your recovery time from long haul flights=is general better than most people can expect. You generally try to aim fo= 6-8 hrs of sleep a night. You do not report excessive sleepiness through =he day.

It is unclear if sleep fragmentation is actually an issue for =ou because of the way GHB use effects sleep architecture (the proposed mec=anism is that memory consolidation and formation is primarily achieved at =ight in stage 3 and 4 of sleep – in fragmented sleep these stage do =ot occur. The use of GHB changes sleep architecture such that you have a g=eat deal of stage 3 and 4 sleep but also fragment your sleep – there=are currently no studies assessing this, nor does anyone seem to have a go=d opinion).

Considerations=specific to you:

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*=nbsp; We already have you using a new class of drugs not associated with the=risks measured in this study (Ambien/ zolpidem on days where you do not us= GHB).

· =/span>We should consider a sleep study which should measu=e:

1) sle=p architecture across 3 nights. (night one take Xyrem, night two do not)

2)=span style='font:7.0pt "Times New Roman"'> =If your sleep architecture is in fact altered resu=ting in greater amounts of REM sleep, does taking Zolpidem on night 3 chan=e this?

3) &n=sp; any apnea events

Having this in=o would allow us to customize any changes that may in fact reduce risk of =isease as well as potentially improving quality of life.

Let me know you= thoughts,

Jason

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Jason Camm

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