



DALLAS BUYERS CLUB (THE MOVIE) MEETS NEW YORK BUYERS' CLUB (THE REALITY)

The movie *Dallas Buyers Club* scored a couple of splashy wins at the Oscars on March 2: Best Actor for Matthew McConaughey (playing Ron Woodroof, the cantankerous founder of the early AIDS buyers' club); and Best Supporting Actor for Jared Leto (playing Rayon, a transgender HIV+ woman who becomes Woodroof's sidekick). Bravura performances indeed, and controversial, too—just read the blogs!

Meanwhile for us at the New York Buyers' Club... real life goes on. We think *Dallas Buyers Club* does an important job in casting its bright Hollywood lights on the work of buyers' clubs in the fight against HIV/AIDS, beginning in the early days of the pandemic. But here at NYBC--the last HIV/AIDS buyers' club standing--we would like to present our own award: to YOU! For being an NYBC member, and thereby participating in a long-running community effort to distribute the best available information about managing symptoms and side effects of HIV and HIV meds, while also helping to make beneficial supplements widely accessible through a nonprofit co-op. And a special thanks to the many contributors out there who lent their financial support to NYBC's recent successful fundraising campaign—you're our equivalent of the Hollywood producer, without whom the magic can't happen!

Of course much has changed, and a great deal has changed for the better, since the days depicted in *Dallas Buyers Club*. Some may even ask why we need a buyers' club, given that HIV meds have advanced so much in the past 20 years. Unlike Ron Woodroof's Dallas Buyers Club, NYBC is not importing unapproved drugs or trying novel therapies—that desperate search for any sort of treatment has abated (at least in the wealthier countries). We can look back at the time when New York was home to the PWA Health Group and DAAIR (from which NYBC arose), and there were buyers' clubs for people with HIV/AIDS in



Boston, Houston, San Francisco, Chicago, Atlanta, and Phoenix, among other places. But what need does the New York Buyers' Club fill today?

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Well, recent research brings into sharper focus what we have understood for quite a while: living long term with HIV is a huge challenge. Antiretroviral (ARV) therapy works to reduce the risk of an AIDS-defining illness to nearly zero, while offering the prospect of a normal life span. But problems abound. First, several non-AIDS-defining conditions become more common. These include several cancers, some stemming from infections like HPV. Then there are the longer term effects of ARV, which can threaten quality of life and increase mortality risk, including challenges to the cardiovascular system, nerves, cognitive function, liver, kidneys, and bones.

These side effects are being understood today by some old mechanisms that are getting new attention. At NYBC's community event on HIV and Aging, held last March, our speaker Steve Karpiak, Ph.D. emphasized the inflammatory processes that continue throughout HIV infection and the cascade of

damage that persistent inflammation causes, even as ARV therapy holds the virus in check. And just last October, we were interested to read a comprehensive review on the health effects of chronic inflammation during HIV infection. According to this overview, many markers of inflammation remain high during HIV infection, and those inflammatory problems are linked to elevated risk of cardiovascular, liver, kidney, bone, and neurologic diseases. But none of this is really news to us: addressing the chronic inflammation that accompanies HIV has been central to our work at NYBC—and between those of us at NYBC and those who go back to DAAIR days, we've been addressing this model of the disease for over 20 years!

The recent review of inflammation effects during HIV did suggest that probiotics, for example, may hold promise for countering inflammatory processes that are concentrated in the gut. Indeed, probiotics have been a staple in the

NYBC catalog from the start, even when we were simply recommending them to support gastrointestinal health and improve absorption of nutrients. Now we're looking forward to new research on supplements, which in this case may help us understand the additional benefits of probiotics as anti-inflammatories. Meanwhile, NYBC continues to search out the latest news about a wide array of topics, from hepatitis C coinfection, to alternative treatments for sleep and mood disorders, to the value of a daily multivitamin with selenium for people with HIV (for these last two topics, see articles in this *SUPPLEMENT*).

In conclusion (music coming up now, so we must hurry), see *Dallas Buyers Club*, both for the Oscar-winning performances, and for its slice of history about HIV/AIDS buyers' clubs. But please remember to think of the New York Buyers' Club as well, and what it's doing for you *today!*

NEW RESEARCH ON DEPRESSION, AND A NEW LOOK AT SUPPLEMENTS FOR MOOD AND SLEEP DISORDERS

At the end of 2013, there was much buzz about new studies showing that curing insomnia in people with depression might double the chance of a complete recovery from depression. The studies, financed by the National Institute of Mental Health, were welcomed as the most significant advance in treating depression since the introduction of the *selective serotonin reuptake inhibitor* (SSRI), Prozac, twenty-five years ago. In effect, the new research findings turn conventional wisdom on its head, since they suggest that insomnia can be a main cause of depression, rather than just a symptom or a side effect, as has usually been assumed. If you can successfully treat a depressed person's insomnia, according to the new view, you eliminate one of the main factors causing the depressed state.

As we followed reports on this breakthrough research on insomnia and depression, we were especially encouraged to read comments from Washington, D.C. psychiatrist James Gordon, who has advocated an integrative approach to treating depression. Here's his letter to *The New York Times*:

I welcome a new report's finding that cognitive behavioral therapy is improving the outcome for depressed people with significant insomnia ("Sleep Therapy Seen as an Aid for Depression," front page, Nov. 19).

It reminds us that changes in attitude and perspective, and a therapeutic relationship, can right biological imbalances - like disordered sleep - and significantly enhance the lives of troubled people. The study also puts the therapeutic role of antidepressant medication in perspective: the depressed participants who received behavioral therapy did equally well whether or not they were taking the drugs.

I hope that these results will encourage the National Institute of Mental Health, researchers, clinicians and all of us to expand our horizons.

There are a number of other nonpharmacological therapies — including meditation, physical exercise, dietary change and nutritional supplementation, acupuncture and group sup-

port — that show promise for improving clinical depression and enhancing brain function.

At NYBC we have long believed that non-prescription therapies, such as supplements, are valuable alternatives for treating mood disorders and sleep disorders. When the Centers for Disease Control surveyed use of antidepressant drugs in 2008, it found that one in 10 Americans was taking an antidepressant, and many had taken these drugs for years. Over a period of ten years, antidepressant use in the U.S. had shot up 400 percent! So the question arises: how much of this spectacular increase represented real gains in treatment, and how much

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was over-prescribing? As Dr. Gordon mentions in his letter above, in some cases behavioral therapy for depression has worked just as well whether people were taking antidepressants or not—hardly a strong argument for the value of the prescription drugs. And a well-publicized 2008 report in the *New England Journal of Medicine* found that pharmaceutical companies had consistently reported only the most favorable trial outcomes for their popular antidepressants, passing over evidence that suggested a more limited effectiveness. Furthermore, as with many drugs, especially those used over a long period, antidepressants have side effects. Higher bone fracture risk and multiple cardiovascular risks have been identified; sexual side effects are common with antidepressants in both men and women; and withdrawal symptoms for those tapering off antidepressants include a long list of problems, such as panic attacks, insomnia, poor concentration and impaired memory.

Turning to the alternatives, we describe below supplements that NYBC has highlighted over the years for sleep and mood disorders. Note cautions about their use, but also note that some of these products may actually carry added benefits, rather than unwanted side effects.

1 Melatonin is a hormone occurring naturally in the body, but some people who have trouble sleeping have low melatonin levels. Melatonin has been used for jet lag, for adjusting sleep-wake cycles for people doing shift work on varying schedules, and for insomnia, including insomnia due to high blood pressure medications called beta-blockers. It is also used as a sleep aid when discontinuing benzodiazepines (Klonopin, Xanax, etc.) and to reduce side effects when quitting smoking.

2 Epidemiologists have noted that populations that eat fish regularly have low rates of depression. And research has found that omega-3 fatty acids in **fish oil supplements** can be of benefit in treating depression and bipolar disorder. Fish oil can also be taken with other antidepressants as an adjunct therapy. Doses found effective in treating depression are quite high, 3 to 9 grams per day, so be aware of potential problems related to the supplement's blood-thinning properties. Added benefit: fish oil can help manage cholesterol, and supports cardiovascular health.

3 Deficiencies in the **B vitamins**, especially **B12 and folate**, can result in neurologic symptoms — for example, numbness, tingling and loss of dexterity — and the deterioration of mental function, which causes symptoms such as memory loss, confusion, disorientation, depression, irrational anger and paranoia. A number of studies have shown that vitamin B12 is deficient in a large percentage of people with HIV, and the deficiency can begin early in the disease. Supplementing with a B complex protects against deficiency and supports cognitive health and mental function.

4 Vitamin D deficiency has also been linked to depressed states. Lack of the "sunshine vitamin" may be especially associated with Seasonal Affective Disorder (SAD), the "winter blues." Vitamin D also supports bone health, and may protect against colds and flus.

5 Theanine, an amino acid found in green tea, acts as a relaxing agent by increasing levels of certain neurotransmitters (=brain chemicals that shape your mood), including serotonin, dopamine, and GABA (gamma amino butyric acid). Human studies have been limited to date, but one small study showed that theanine decreases stress responses such as elevated heart rate. Another investigation compared theanine's calming effect to that of a standard anti-anxiety prescription drug, and found that theanine performed somewhat better. NYBC stocks Theanine Serene (see inset), a combination supplement that includes theanine and GABA.

6 Probiotics. Very recent research has looked into the communication between the digestive system and the brain, with a goal of understanding how gut health may influence chronic conditions, including mood disorders like depression and anxiety. For example, it has been shown that certain probiotics promote production of the calming, anti-stress neurotransmitter GABA in the body, pointing to a direct influence of probiotics on mood. Other potential links between the gastrointestinal system's microorganisms and brain function are currently being explored.

7 L-Tryptophan and 5-HTP (5-hydroxy L-tryptophan). These closely related supplements are converted in the body to serotonin and to melatonin. (Take L-tryptophan with carbohydrates to make it effective.) Their use as antidepressants has been studied, and they have also been found to aid sleep and suppress appetite. (To minimize appetite suppression, take the supplement one hour before bedtime.) Although L-Tryptophan and 5-HTP are close relatives, people may respond somewhat differently to them, so it may be worthwhile to try the other if the first doesn't produce an effect. An added benefit: 5-HTP may also decrease symp-

oms of bromyalgia and migraine headaches.

8 In research funded by the National Institute of Mental Health, **DHEA** (dehydroepiandrosterone) was found to be an effective therapy for mild-to-moderate or severe midlife depression, on a par with some prescription drugs. Moreover, the research showed that taking DHEA promoted both a significant lifting of depressive symptoms and an improvement in sexual functioning. Note that dosing recommendations vary for men versus women, and DHEA is not recommended for those diagnosed with prostate conditions or cancer.

9 SAME (S-adenosyl-L-methionine) is produced naturally in the body from the amino acid *methionine*. Supplementing with SAME increases concentrations of the neurotransmitters serotonin and dopamine. Several studies show SAME having an antidepressant effect comparable to that of some prescription drugs. SAME should be used cautiously with other antidepressants, because the combination may push serotonin levels too high. Taking a B-complex vitamin while using SAME can counter build-up of homocysteine, which has been linked to heart disease. Caution: SAME may increase likelihood

of pneumocystis infection in immune-compromised people.

10 St. John's Wort is a widely-used herb with clinically demonstrated (multiple, well-controlled studies, mostly in Europe) antidepressant effects for mild to moderate depression, generally without the side effects of prescription antidepressants. High doses of the herb may cause a sensitivity to light (phototoxicity), so avoid direct sunlight or sunbathing while using. Do not take St. John's Wort with 5-HTP, serotonin re-uptake inhibitors (like Prozac), or with protease inhibitors, as it may affect beneficial liver enzymes. St. John's Wort may also have activity against Epstein-Barr and herpes infections.

11 Finally, we'll mention another combination supplement that NYBC has stocked: **GABA Soothe** (Jarrow). The GABA in this supplement is the neurotransmitter that promotes calmness coupled with mental focus. Also included is theanine (see above for a description of its anti-anxiety effects) and an extract of ashwagandha, an herb which has long been used in the Ayurvedic tradition of India to reduce fatigue and tension associated with stress.

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Melatonin Our body's natural "sleep hormone," melatonin is secreted by the pineal gland in response to darkness. It has been found to be useful in the treatment of various sleep disorders, including not only insomnia but also delayed sleep phase disorder and jet lag-related sleeping problems.

NYBC stocks three strengths of melatonin to make fine-tuning dosing easier. **Source Naturals** offers melatonin in two strengths (100 x 1mg tablets, \$5.00; 50 x 5mg tablets, \$7.00); from **Douglas Labs** we carry a similar sublingual in a 3mg dose (60 x 3mg tabs, \$7.15/bottle). Prior consultation with a qualified doctor is strongly recommended for those with HIV, diabetes, a depressive disorder, a thyroid condition, epilepsy, leukemia or a lymph disorder, or if you are using MAO inhibitor drugs or corticosteroids.

Fish Oil There have been recent studies showing that fish oil can be beneficial in treating depression and bipolar disorder. It's also of note that it can be taken with other antidepressants. Doses found effective in treating depression are quite high, 3 to 9 grams per day. NYBC stocks 10 varieties of "fatty acid" supplements, starting at \$6.75.

Vitamins Vitamin D Vitamin D3 is increasingly found to be important to sustain good health of not only bones, but other tissues such as the

brain, intestines, muscle and immune function as well. NYBC carries four strengths from **Jarrow Formulas**, ranging from 400 to 5000mg; \$3.75 - \$7.60. The B vitamins are also vital to good cognitive health - see **Methyl B-12**, page 4).

Amino Acids Theanine L-theanine is the predominant amino acid in green tea and is used for promoting relaxation and improving mood, and may also enhance learning ability.

Theanine Serene (Source Naturals) Each bottle, 120 tablets; \$16.25. Theanine Serene acts as a relaxing agent by increasing levels of various brain chemicals (neurotransmitters). Also included is taurine, an essential amino acid that may protect against oxidative stress, neurodegenerative diseases, and atherosclerosis.

Tryptophan The root cause of many a Thanksgiving post-turkey nap, this amino acid is the immediate precursor of the brain chemical *serotonin*, involved in a number of both mood and cognitive activities. Studies suggest that it may have some benefit in managing depression, insomnia and other conditions. NYBC's offerings include **L-Tryptophan** (Source Naturals) Each bottle 30 x 500mg, \$7.25.

SAME (S-adenosyl-L-methionine) First studied by Italian researchers in the 1950s, SAME is produced naturally in the body from the amino

acid *methionine*. Taken as a supplement, it increases concentrations of the neurotransmitters serotonin and L-dopamine, which affect mood. Several studies done over the years show SAME to have an anti-depressant effect comparable to prescription drugs. See our website for precautions. **SAM-e 400** (Jarrow Formulas), 30 x 400mg tablets; \$28.25.

5-HTP (Jarrow Formulas) Each bottle, 60 x 100mg 5-hydroxy-tryptophan; \$16.50. Used to help offset depression and improve sleep, 5-HTP is also used as an appetite suppressant. Do not take alongside Vitamin B6, with MAO inhibitors, or other antidepressants. See our website for detailed information.

GABA Soothe (Jarrow Formulas) 30 vegetarian capsules; \$13.50. Each capsule contains gamma-aminobutyric acid (GABA, a non-alpha amino acid), theanine, and Sensoril extract from roots and leaves of *withania somnifera* and *ashwagandha* (Indian ginseng).

Probiotics Ultra Jarro-Dophilus (Jarrow Formulas) Each bottle, 60 vegetarian capsules; \$20.80. Each capsule contains more than 40 billion beneficial intestinal organisms (at the time of manufacture). Probiotics are considered essential for people with malabsorption, antibiotic use, and general GI tract dysfunction common in many diseases.

Anabolic Steroids DHEA (De-HydroEpiAndrosterone) Produced naturally in the body, DHEA escaped being banned in the U.S. in 2005 partly because unlike other steroids, it can't be used for "doping." A large study sponsored by the National Institute of Mental Health found DHEA to be an effective therapy for mild-to-moderate midlife depression, on a par with some prescription drugs. Moreover, the data showed improved sexual function, a commonly reported side effect of drugs prescribed for depression. NYBC stocks Douglas Labs' **DHEA**; 100 x 50mg caps, \$22.20.

Botanicals St. John's Wort is a common herb, whose natural "active ingredient" is *hypericin*. The herb has clinically proven (multiple, well-controlled studies, mostly in Germany) antidepressant effects for mild to moderate depression - without the side effects the drugs can cause. While a U.S. study found no benefit from St. John's Wort for severe depression, the same study found no benefit from the use of the drug Zoloft, either. Do not take St. John's Wort with 5-HTP, serotonin re-uptake inhibitors (like Prozac), or with protease inhibitors, as it may affect beneficial liver enzymes.

St. John's Wort: Max-V (Douglas Labs) Each bottle, 60 vegetarian capsules; \$17.20. Suggested use is to take 1 capsule twice daily between meals. Beneficial effects should be realized within 2-4 weeks of starting.



News from the World of Nutritional Supplements for HIV, Hep C, and More

SUPPLEMENT

from New York Buyers' Club, A Nonprofit Co-Op

Spring 2014

WE BE JAMA! REPORT: MULTIVITAMIN + SELENIUM SLOWS PROGRESSION OF EARLY-STAGE HIV

We're tempted to file this story under the heading of "news that we already knew," but it's still good to get a stamp of approval in the form of publication in *Journal of the American Medical Association* (JAMA), one of the top medical journals in the U.S., if not the world.

At NYBC and at our predecessor DAAIR we have long recognized the development of vitamin and mineral deficiencies in HIV, and have long recommended multivitamin/mineral supplements to counter those health-threatening deficiencies. We have also

followed for years the work of Marianna Baum, lead author of the JAMA study, who has focused attention on the mineral selenium, which may have an important role in preventing replication of HIV. So, while this story doesn't come as a complete surprise, it's great to have further support for some long-held practices.

Baum's study was conducted in Botswana, where nearly one in four adults is infected

with HIV. The trial followed about 900 newly infected adults who were not yet taking any HIV medications. These participants were divided into groups that randomly received different combinations of vitamins, the mineral sele-

tamin/selenium combination proved its value in cutting risk of progression, and actually decreased the likelihood that participants would reach the point where antiretroviral meds would be recommended. Other research, such as Dr. Jon Kaiser's study of a multivitamins and antioxidants, has been directed at those who are using antiretroviral meds, and may have developed some symptoms or side effects such as peripheral neuropathy. Kaiser's finding that the multivitamin and antioxidants combination could increase CD4 counts led to the development of **K-PAX**, and also motivated NYBC to offer its **MAC Pack**, a close equivalent of K-PAX formulated by our treatment director (see below).

Taken together, the Baum and Kaiser studies suggest to us the value of long-term supplementation strategies that can slow progression of HIV, oppose the known, damaging deficiencies that are likely to develop with HIV, and help stabilize and even improve health for people with HIV, whether they are taking antiretroviral meds or not.

If you'd like to try NYBC's **MAC-Pack**, or if you'd like to find a multivitamin and selenium combination, please visit our website. You can also call our toll-free number at (800) 650-4983 for further information and advice about supplement strategies for HIV.

These findings are especially relevant for early-stage HIV infection, where the multivitamin and selenium combination proved its value in cutting risk of progression

nium, or a placebo. Over the study's two-year period, the combination of a daily multivitamin plus the mineral selenium proved to be the effective regimen, cutting by about half the risk of reaching the point where ARV therapy would be recommended in Botswana (CD4 count of 200-250).

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ThiolNAC (NYBC) Each bottle, 90 sustained-release tablets. Each tablet contains 500mg of **NAC** and 134mg of **ALA** (\$15.00). Custom manufactured and available exclusively through New York Buyers' Club, ThiolNAC is a combination of two powerful agents: **NAC (N-Acetyl-Cysteine)** and **ALA (Alpha-Lipoic Acid)**. ThiolNAC provides the same dose of NAC and ALA used in Dr. Jon Kaiser's groundbreaking research proving vitamins and antioxidants could boost HIVers CD4 counts (24%, on average!). The formula became the basis for the very popular **K-PAX®**, and now our **MAC Pack** - a nearly identical regimen at less than half the price (vs. **K-PAX Immune Support Formula Professional Strength**). For more about recent findings on NAC and ALA, see the **NYBC Blog**, where you can find many entries devoted to these two amazing supplements!

P5P (Pyridoxal-5-Phosphate, Douglas Labs) \$16.30; significantly less for NYBC



All **MAC Pack** components can be purchased separately, and several combinations are available. See www.NewYorkBuyersClub.org for details.

members). Each bottle, 100 x 50mg tablets of this best-absorbed form of **Vitamin B6**. This is the metabolically active, phosphorylated form of Vitamin B6 that is important for the metabolism of proteins, amino acids, lipids (fats), and carbohydrates.

Methyl B-12 (Methylcobalamin; Jarro Formulas) Each bottle, 100 cherry flavored, sublingual lozenges; \$7.25. Methyl

B12 is better absorbed and retained than other forms of B12, protects nerve tissue and brain cells, and promotes healthy sleep.

Acetylcarnitine (Montiff) 90 capsules, 500mg of acetyl-L-carnitine; \$15.50. This is the preferred form for carnitine supplementation because it is thought to be better absorbed and more efficiently crosses the blood-brain barrier. Several studies indicate that systemic carnitine deficiency can occur in those with HIV/AIDS, and that primary and secondary carnitine deficiency leads to critical metabolic dysfunction. Also used in neuropathy therapy.

Added Protection III (AMNI) Each bottle, 180 tabs (a 30 day supply); \$34.30 (significantly less if you are an NYBC member!) This highly bioavailable formula supplies over 30 basic vitamins, minerals, trace elements and other nutrients, including beta-carotene, vitamin K, and boron. A no-iron formula is also available.



About New York Buyers' Club

We are a nonprofit co-op founded in 2004 on the principle that everyone should have access to affordable, high quality nutritional supplements, and the advice of a trusted friend on their best use. On our website, you can easily become a member and access our stock of over 150 supplements, carefully selected for quality and value for those dealing with HIV, Hep C, and other chronic conditions. Our sliding-scale membership rates are extremely affordable (as low as \$5/year) as are our products. Plus, unlike online clearinghouses or chain stores, we offer individualized advice (via phone or email), drawing upon the decades of collective experience of our staff and members.