NAVAL MEDICAL RESEARCH UNIT DAYTON

SURVEY OF STIMULANT USE IN U.S. AIR FORCE SPECIAL TACTICS OPERATION

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14. ABSTRACT

The current needs of the US Air Force often demand that personnel work during extensive periods of sleep loss. To maintain alertness, Air Force Special Operations Command (AFSOC) Battlefield Airmen may consume various alertness aids. However, no data exist reporting the extent of use of over-the-counter (OTC) stimulants or go-pills in this population; therefore, a survey was administered. Data from this study were collected from five sites where members of the Air Force Special Tactics (ST) were stationed. The sample (n = 73) included a large number of personnel who had been deployed and from enlisted members as well as officers. The responses to this survey indicated that most AFSOC Battlefield Airmen consume at least one stimulant drink per day, with few personnel consuming more than 3 drinks per day, usually in theater rather than in garrison. The number of respondents who indicated use of prescription go-pills was very small. Most personnel who used go-pills in garrison had taken it once, possibly the test dose, whereas repeated usage was more evident in theater. Only 4 respondents reported using an OTC substance with a prescription stimulant in theater. These results of the survey may aid medical officers prescribing stimulants in theater.

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1.0 SUMMARY

The current needs of the US Air Force often demand that airmen and warfighters work under extreme conditions, including extensive periods of sleep loss. To maintain alertness during these critical periods, Air Force Special Operations Command (AFSOC) Battlefield Airmen may consume various alertness and performance enhancers. Despite the belief that there is wide-spread use of these alertness aids, no data exist reporting the extent of use of over-the-counter (OTC) stimulants or go-pills, or the combined use of OTC stimulants and go-pills, in the AFSOC population. The objective of this survey was to assess the pattern of use, reasons, and effects of using OTC stimulants (e.g., caffeine) and go-pills (e.g., modafinil) in AFSOC Battlefield Airmen.

Data from this study was collected from five sites where members of the Air Force Special Tactics (ST) were stationed. The sample (n = 74) included a large number of personnel who had been deployed and thus provided good insight into use of stimulants and go-pills by ST airmen in theater as well as in garrison. Further, responses were collected from both enlisted members of AFSOC (89%) as well as officers (11%); respondents' ages ranged from 18 to over 40 years.

The responses to this survey indicated that most AFSOC Battlefield Airmen consume at least one stimulant drink (e.g., coffee, Red Bull, etc.) per day, with few personnel consuming more than 3 drinks per day. As would be expected, the majority of respondents who reported consuming more than 3 stimulant drinks per day indicated that they did so in theater, rather than in garrison. It is this subset of the population which poses concern to leadership and medical officers.

In contrast to the use of stimulant drinks, the number of respondents who indicated use of prescription go-pills was very small, particularly when the test dose is not taken into account. Few respondents reported using either dextroamphetamine or modafinil. Among personnel who reported using either drug in the past year, most who used go-pills in garrison had only taken it once, suggesting that this might have been a test dose, whereas repeated usage was more evident while in theater. Of those who had used both, most indicated they thought dextroamphetamine was more effective than modafinil, although modafinil was effective.

Only 4 respondents reported using an OTC substance with a prescription stimulant in theater. The basic reason given for combining the two was for added energy needed from both substances. The majority of the respondents indicated positive effects from combining the go-pills with OTC drinks, such as increased alertness and energy. Some less desirable effects were also reported, such as nausea, dehydration, and increased heart rate, though the severity of these effects was not documented.

In summary, the majority of respondents indicated consuming some type of OTC drink about once a day; only a small subset of the sample reported combining OTC and prescription stimulants. As with any survey data, caution should be taken when interpreting the results. Some respondents may not have answered honestly since parts of the survey were reviewed by operational psychologists known by the respondents. However, the perceived need to be less honest may have been lower for the stimulant survey than for the more sensitive questions (e.g., questions about Post-Traumatic Stress Disorder, alcohol use, etc.) included as part of the stress questionnaire. Personally identifiable information was not included on the survey, so responses were confidential. In addition, respondents may have been limited by their reliance on memory to answer questions about the frequency of stimulant use. Thus, the results of the present survey

may help form a general idea of the frequency and type of stimulant consumption, but further research is needed to better document the frequency and patterns of fatigue countermeasure use. Leadership and medical officers concerned with the potential harmful effects of the combination of OTC stimulants with go-pills may still have cause to remain vigilant of airmen who are prescribed stimulants in theater since the effects of this combination are yet unknown.

2.0 INTRODUCTION

Currently, Air Force Special Operations Command (AFSOC) Battlefield Airmen are required to operate under extreme conditions, including heat, high altitude, and long hours of wakefulness. When inadequate sleep becomes unavoidable, alertness aids are used to help maintain performance. However, no documentation of the extent of use by AFSOC Battlefield Airmen has been provided. Anecdotal reports indicate that Battlefield Airmen consume over-the-counter (OTC) stimulants (e.g., coffee, energy drinks), and may be using these concomitantly with approved prescription alertness aids such as modafinil. The effects from the combined use of modafinil with OTC stimulants such as caffeine are unknown; the combination may enhance alertness and performance, may do nothing beyond the single use of modafinil, or may create health and/or performance problems due to overstimulation. Documentation of the nature and frequency of use of both prescription as well as OTC stimulants will help determine whether further research into the performance effects of the combined use of stimulants is needed.

3.0 BACKGROUND

In the U.S. military, specifically special operations units, personnel are often required to engage in 24/7 operations. Such operations are difficult to sustain because it is challenging to fully staff shifts with well-rested personnel around the clock for 7 days a week. As a result, prolonged work bouts are common, shorter-than-normal sleep periods are unavoidable, and fatigue from both of these factors threatens to impact operational readiness. This is particularly a problem for units that must be on alert 24 hours per day for extended periods of time, and often must operate in exceptionally harsh conditions that are completely devoid of adequate sleep/rest opportunities. It is well established that sustained wakefulness and the resulting cumulative sleep debt increase the likelihood that personnel will briefly (and uncontrollably) nod off on the job, even during demanding tasks (1). The longer personnel remain awake, the more likely these "sleep attacks" become. In addition, sleepiness takes a heavy toll on reaction time, motivation, attention, memory, endurance, and judgment (2).

Although predictions about the exact effects of fatigue are difficult to make, most researchers agree that fatigue-related performance and alertness decrements follow a reliable time course. Canadian researchers have reported that certain mental abilities decline about 30 percent after 1 night without sleep and 60 percent after 2 nights without sleep (3). Similarly, scientists at the Walter Reed Army Institute of Research estimate that soldiers lose about 25 percent of their ability to perform useful mental work for every 24 hours without sleep (4). A Norwegian field study found the fighting capability of soldiers dropped 80% after 4 consecutive days of sleep loss (5). Thus, it is clear that fatigue is a significant problem in sustained military operations.

To address the fatigue problem, the U.S. Air Force initiated various countermeasures such as duty hour limitations, improved sleep environment, and hypnotics to induce sleep when time permitted (6). However, despite these formal efforts to reduce fatigue, a high number of military personnel use OTC stimulants (7). Since there are times when prescription stimulants, or "go-pills," are made available to maintain alertness and performance during certain missions, the medical community has expressed concern over the safety and efficacy of the possible combination of prescribed and OTC stimulants.

The present survey addressed the questions and concerns of AFSOC commanders and medical staff who have observed the high intake of OTC stimulants by AFSOC personnel. Prior to objectively measuring the effects of combining OTC stimulants with "go-pills," a survey was developed to determine which types of prescribed and OTC stimulants AFSOC personnel are consuming, as well as the frequency of use. Therefore, this questionnaire documented the amount and type of stimulants used by AFSOC personnel. The data from this study was used to plan the laboratory study to objectively measure the effects of the consumption of multiple stimulants. The study protocol was approved by the U.S. Air Force Research Laboratory Institutional Review Board. The sponsor for this study is the Air Force Medical Support Agency Office of Medical Modernization (AFMSA/SG9) under the Defense Health Program (DHP).

4.0 METHODS

The stimulant use survey was part of a larger study to assess the Air Force Special Tactics (ST) personnel's psychological stress symptoms, coping/resilience behaviors utilized during deployment, as well as their input and recommendations regarding resources and strategies to sustain the psychological wellbeing and performance in the ST career field. Data were collected through group administration of surveys followed by an individual interview with ST operators. The research participants completed the stimulant use survey along with the other surveys of the study prior to the structured clinical interview. A copy of the stimulant use survey is located in Appendix A. The interview consisted of a structured clinical interview and solicitation of operators' input and recommendations. Completion of the survey and interview took approximately 30-60 minutes in its entirety. The details of the entire interview will be reported in a technical report to be completed at a later date.

Volunteers from five ST units completed the survey. Units represented are from Hurlburt Field, FL; Pope Field , NC; Joint Base Lewis-McChorde, WA; Louisville, KY, Air National Guard; and Portland, OR, Air National Guard. Two operational psychologists administered the survey.

5.0 RESULTS

5.1 Demographic Information

A total of 74 participants filled out the survey. Respondents did not answer every question, and thus the total number of responses to a given question may vary. The majority of the respondents ranged in age from 25 to 39 years, occupied the military ranks from E5 to E9, and had been deployed at least once. Detailed demographic information is shown in Table 1.

Table 1. Demographic Information

		N
Age	18-24	16
	25-29	30
	30-39	21
	40 or Older	7
Military Rank	E1-E3	3
	E4	17
	E5-E9	45
	Officer	8
Deployment	Never Deployed	13
	Deployed	58

5.2 OTC Stimulant Use

Table 2 shows the frequency of energy drink and caffeine consumption. The majority of survey respondents indicated that they consumed energy drinks occasionally (1 to 6 drinks per week) in garrison and regularly (1 to 2 drinks per day) in theater. Caffeine in a drink form was consumed rarely (less than 1 per week) to regularly (1 to 2 drinks per day) in garrison and occasionally (1 to 6 drinks per week) to regularly (1 to 2 drinks per day) in theater. Caffeine in pill or gum forms was very rarely consumed in either garrison or theater.

Respondents were queried concerning the perceived effects of energy drinks and caffeine on their overall performance and alertness (Table 3). Most of the respondents indicated that effectiveness ranged from “a little effective” to “very effective,” with only a few respondents indicating “not effective at all” or “extremely effective.”

Table 2. Frequency of Energy Drink/Workout Supplements and Caffeine Consumption (Number in Parentheses Indicates the Sample Size)

		Frequency of Consumption				
		Never	Rarely (less than 1 per week)	Occasionally (1-6 per week)	Regularly (1-2 per day)	Frequently (more than 3 per day)
Energy Drink	G (73)	18	10	30	14	1
	T (58)	9	7	17	20	5
Caffeine (Drink)	G (73)	4	16	19	30	4
	T (56)	5	3	13	29	6
Caffeine (Pill/Gum)	G (73)	69	4	0	0	0
	T (56)	43	8	4	1	0

"G" = garrison; "T" = theater

Table 3. Effects of Energy Drink and Caffeine Consumption on Performance and Alertness (Number in Parentheses Indicates the Sample Size)

	Performance/Alertness					
	Not Effective at All	A Little Effective	Moderately Effective	Very Effective	Extremely Effective	Have not Used
Energy Drink (73)	4	10	27	21	2	9
Caffeine (72)	4	19	27	18	2	2

Table 4 summarizes the questions concerned with various physical and mental effects resulting from consumption of energy drinks and caffeine. The most common effects reported by the respondents were increased physical endurance, increased heart rate, increased mental alertness, and increased mental endurance.

Table 5 shows the factors that influenced the respondents' decision to consume energy drinks and caffeine. The most common responses included an increase in mental energy, physical energy, and enjoyment of the taste.

Table 4. Effects of Energy Drinks and Caffeine Consumption on Physical and Psychological States (*n = 73)*

	Energy Drink	Caffeine
Dehydration	11	18
Nausea	2	1
Dizziness	3	2
Headaches	9	8
Increased Physical Endurance	31	24
Increased Heart Rate	32	18
Heart Arrhythmia	0	0
Increased Physical Strength	16	5
Trouble Staying Asleep	6	6
Trouble Falling Asleep	21	21
Increased Mental Alertness	51	-
Improved Creativity	16	15
Increased Mental Endurance	35	43
Nervousness	4	3
Additional	8	3

Table 5. Factors that Influenced the Decision to Take Energy or Caffeine Drinks (*n* = 73)

	Energy Drink	Caffeine
They make me healthier/give me better nutrition	2	2
They increase my mental energy	38	44
They increase my physical energy	43	35
My friends use them/recommend them	6	2
Mass availability/easy to buy (other beverages limited)	14	12
My leadership encourages me/us to use them	0	0
I enjoy the taste	34	36
Other	10	6

Figures 1 and 2 show various brands of energy drinks and workout supplements used by respondents in garrison and theater. Based on the sample of 73 respondents, the most commonly-used drink in garrison was *Monster; Red Bull* was the second most common. In theater, the most commonly-used drink was *RIP IT* by 7 fold.

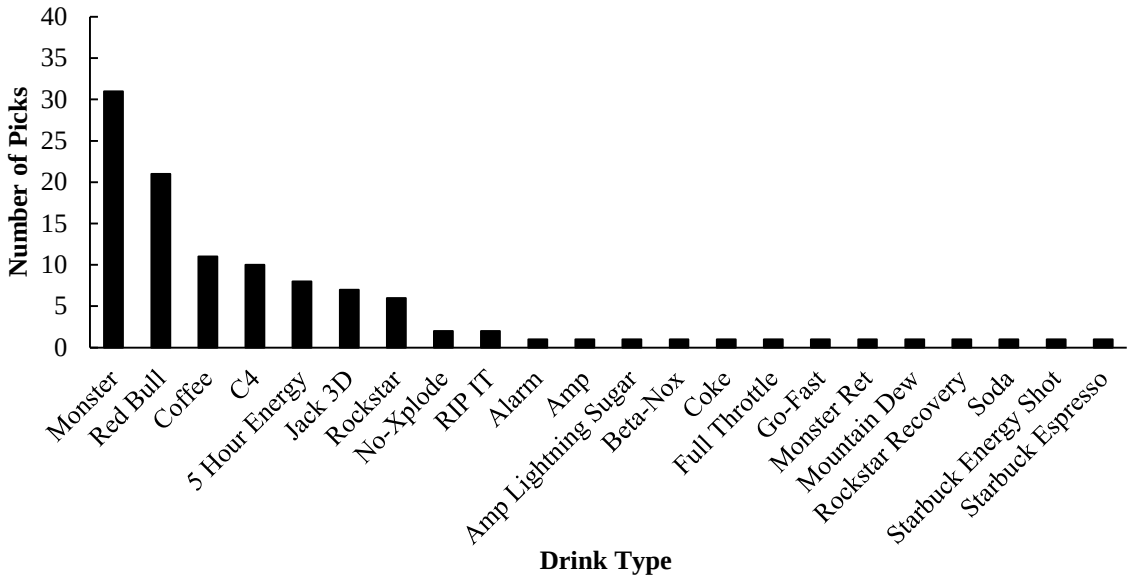

Figure 1. Distribution of Usage for Energy and Performance Drinks Used in Garrison

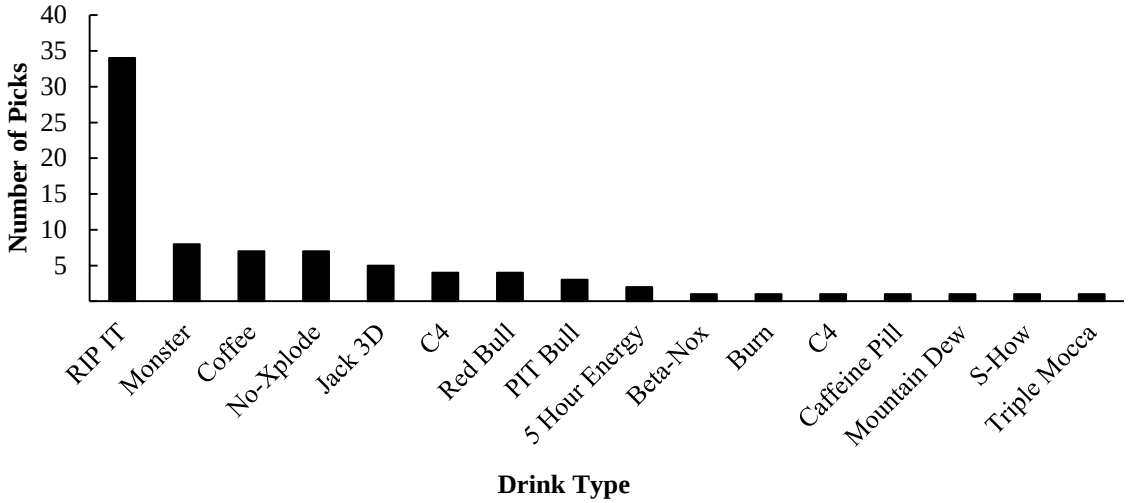

Figure 2. Distribution of Usage for Energy and Performance Drinks Used in Theater

5.3 Prescription Stimulant Use

The frequency and type of prescription stimulants (i.e., dextroamphetamine and modafinil) used by the survey respondents are presented in Table 6. Most of the respondents indicated that they never used prescription stimulants in either garrison or theater beyond the one-time test dose required prior to use in theater. Out of all the respondents answering the question, 36 indicated they had taken go-pills at least once in garrison and 12 indicated that they had taken a go-pill in theater at least once. Of those indicating the type of go-pill they used in

garrison, 14 used dextroamphetamine and 22 used modafinil. Of the 12 respondents indicating go-pill use in theater, 4 used dextroamphetamine and 8 used modafinil.

Table 6. Frequency of Go-pill Consumption (Number in Parentheses Indicates the Sample Size)

		Frequency of Consumption Over the Past Year				
		Never	Once	2-4 Times	5-7 Times	More than 7 Times
Dextroamphetamine	G (69)	55	14	0	0	0
	T (54)	50	0	2	2	0
Modafinil	G (68)	46	20	2	0	0
	T (54)	46	4	0	3	1

"G" = garrison; "T" = theater

Respondents were queried concerning the effects of go-pills on their performance and alertness; the results are presented in Table 7. Based on the responses from these individuals concerning the effectiveness of these two alertness aids, dextroamphetamine appeared to be more effective than modafinil, although both were effective.

Table 7. Effects of Dextroamphetamine and Modafinil Consumption on Performance or Alertness (Number in Parentheses Indicates the Sample Size)

	Performance/Alertness					
	Not Effective at All	A Little Effective	Moderately Effective	Very Effective	Extremely Effective	Have not Used
Dextroamphetamine (69)	4	0	2	6	7	50
Modafinil (68)	5	2	6	7	4	44

5.4 Combined OTC and Prescription Stimulant Use

Very few respondents indicated they consumed energy drinks or caffeine and go-pills together. Only 1 out of 72 used go-pills with caffeine and none combined go-pills with energy drinks in garrison; 4 out of 53 used go-pills with energy drinks in theater and 4 out of 52 used go-pills with caffeine. The data are presented in Table 8.

Table 8. Frequency of Go-pill Consumption with Energy Drinks or Caffeine (Number in Parentheses Indicates the Sample Size)

	Usage	
	G	T
Go-pill with Energy Drink	0 (73)	4 (53)
Go-pill with Caffeine	1 (72)	4 (52)

"G" = garrison; "T" = theater

Respondents were queried concerning the perceived performance and alertness effects of combining energy drinks or caffeine with go-pills (Table 9). Most of the respondents indicated that they have not used OTC and prescription stimulants together. However, those who had combined these two substances reported few beneficial effects when go-pills were combined with an energy drink, but greater effectiveness when combined with caffeine.

Table 9. Effects of Combining a Go-pill with Energy Drink or Caffeine on Performance or Alertness (Number in Parentheses Indicates the Sample Size)

	Performance/Alertness					
	Not Effective at All	A Little Effective	Moderately Effective	Very Effective	Extremely Effective	Have not Used
Go-pill with Energy Drink (68)	4	0	1	1	1	61
Go-pill with Caffeine (67)	3	0	3	1	0	60

When queried about specific physical or psychological effects from the combination of caffeine and go-pills, the respondents indicated some positive effects such as increased mental and/or physical performance and increased creativity. The results are presented in Table 10.

The respondents listed several reasons for combining go-pills with energy drinks or caffeine: “need energy from both” (2 out of 72), “go-pill is insufficient” (1 out of 73), and “other” (1 out of 73). *RIP IT* and *Monster* were the two most commonly-reported drinks used by this small sample.

Table 10. Effects of Go-pill with Caffeine Consumption on Physical and Psychological States (n = 73)

	Go-pill with Caffeine
Dehydration	2
Nausea	1
Dizziness	1
Headaches	0
Increased Physical Endurance	2
Increased Heart Rate	2
Heart Arrhythmia	0
Increased Physical Strength	1
Trouble Staying Asleep	0
Trouble Falling Asleep	1
Increased Mental Alertness	3
Improved Creativity	3
Increased Mental Endurance	3
Nervousness	0
Additional	3

6.0 DISCUSSION

Use of OTC stimulants and prescribed go-pills among AFSOC Battlefield Airmen is generally accepted as a necessity in supporting 24/7 missions. However, to date no study has examined the frequency of use or the subjective effects of alertness aids, either individually or concurrently, within the AFSOC personnel. Thus, the objective of this survey was to assess the patterns and reasons of use, as well as any potential side effects, of using OTC stimulants (e.g., caffeine) and go-pills (e.g., modafinil) within this population

The sample included both enlisted personnel and officers, and a wide range of ages was represented. Further, the majority of the respondents had been deployed. Thus, although ranks and age groups were not represented equally, the sample did include a variety of demographics, suggesting moderate generalizability to AFSOC Battlefield Airmen as a whole.

Most of the respondents reported consuming approximately one caffeine or energy drink per day, with few using either caffeine gum or pills. Among those who consumed energy drinks, the most commonly used drinks were *Rip It*, *Monster*, and *Red Bull*. Few participants reported consuming more than three caffeine or energy drinks per day, and this level of consumption was more common in theater rather than in garrison.

Use of prescription go-pills was comparatively small, with most personnel who reported using either dextroamphetamine or modafinil within the past year indicating that they had only consumed the drug once, which was likely a test dose. Among those airmen who reported using both, most indicated they thought dextroamphetamine was more effective than modafinil, although modafinil was still beneficial.

Finally, the simultaneous use of both OTC stimulants and prescribed alertness aids was only reported by 4 respondents in theater. The primary reason for combining the two types of stimulants was for the added energy gained from both substances. The most commonly reported benefits from combining go-pills with OTC drinks were increased mental alertness and increased mental endurance. Conversely, the most common negative effects reported were dehydration, increased heart rate, and dizziness. Though the severity of these effects was not documented, these are the types of detrimental effects that are of greatest concern to leadership and medical officers.

7.0 CONCLUSIONS

In summary, the number of AFSOC Battlefield Airmen who indicated either frequent consumption of OTC stimulants or repeated use of prescription stimulants was small, and less than 6 percent of respondents reported combining the two types of alertness aids.
As with any survey data, caution should be taken when interpreting the results. Some respondents may not have answered honestly since parts of the survey were reviewed by operational psychologists familiar to the respondents. However, the stimulant survey was administered separately from the more sensitive questions included as part of the stress questionnaire. Thus, although the combined use of OTC stimulants with prescribed go-pills was not widely reported, other personnel may not have felt comfortable with indicating that they had combined different stimulants, or they may have combined them without realizing it. In addition, respondents may have been limited by their reliance on memory to answer questions about the frequency of stimulant use. Thus, empirical research is necessary to examine the added efficacy or detrimental side effects resulting from the combination of OTC stimulants with go-pills, the results of which may be useful to inform leadership and medical officers of any potential concerns regarding Battlefield Airmen who have access to both kinds of alertness aids.

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Appendix A – Stimulant Survey

1. How often do you consume energy drinks such as Red Bull, Viper, Shock, Pit Bull, etc., or workout supplements such as No-xplode, Jack3d, Green Stinger, etc? (Please circle)

In Garrison
a. Never
b. Rarely (less than 1 per week)
c. Occasionally (1-6 per week)
d. Regularly (1-2 per day)
e. Frequently (more than 3 per day)

In Theater
a. Never
b. Rarely (less than 1 per week)
c. Occasionally (1-6 per week)
d. Regularly (1-2 per day)
e. Frequently (more than 3 per day)

2. Please rank-order your top three brands. If you only drink one or two brands, only name one or two.

In Garrison
Brand most frequently consumed
_____
2nd _____
3rd _____

In Theater
Brand most frequently consumed
_____
2nd _____
3rd _____

3. Please fill in what you have experienced as a result of consuming energy or performance drinks. (You may check more than one)

- ○ Increased mental alertness
- ○ Dehydration
- ○ Nausea
- ○ Dizziness
- ○ Headaches
- ○ Increased physical endurance
- ○ Improved creativity
- ○ Increased heart rate
- ○ Increased mental endurance
- ○ Heart arrhythmia (to your knowledge)
- ○ Increased physical strength
- ○ Nervousness
- ○ Trouble staying asleep
- ○ Trouble falling asleep
- ○ Additional (please state) _____

4. Please fill in any factor that has influenced your decision to consume energy or performance drinks. (You may check more than one).

- ○ They make me healthier/give me better nutrition
- ○ They increase my mental energy
- ○ They increase my physical energy
- ○ My friends use them/recommend them
- ○ Mass availability/easy to buy (other beverages limited)
- ○ My leadersship encourages me/us to use them
- ○ I enjoy the taste
- ○ Other (please state) _____

5. Do you consume *caffeine*, either in a drink (coffee, soda, tea, etc.) or pill or gum (Vivarin, StayAlert, etc)?

In Garrison
a. Yes, a drink
b. Yes, a pill/gum
c. Yes, both a drink and a pill/gum
d. No

In Theater
a. Yes, a drink
b. Yes, a pill/gum
c. Yes, both a drink and a pill/gum
d. No

6. How often do you consume *caffeine* in a drink such as coffee, soda or tea?

In Garrison
a. Never
b. Rarely (less than 1 per week)
c. Occasionally (1-6 per week)
d. Regularly (1-2 per day)
e. Frequently (more than 3 per day)

In Theater
a. Never
b. Rarely (less than 1 per week)
c. Occasionally (1-6 per week)
d. Regularly (1-2 per day)
e. Frequently (more than 3 per day)

7. How often do you consume *caffeine* in a pill or gum?

In Garrison
a. Never
b. Rarely (less than 1 per week)
c. Occasionally (1-6 per week)
d. Regularly (1-2 per day)
e. Frequently (more than 3 per day)

In Theater
a. Never
b. Rarely (less than 1 per week)
c. Occasionally (1-6 per week)
d. Regularly (1-2 per day)
e. Frequently (more than 3 per day)

8. Please fill in what you have experienced as a result of consuming *caffeinated drinks or pills/gum*. (You may check more than one)Increased mental alertness

- ○ Dehydration
- ○ Nausea
- ○ Dizziness
- ○ Headaches
- ○ Increased physical endurance
- ○ Improved creativity
- ○ Increased heart rate
- ○ Increased mental endurance
- ○ Heart arrhythmia (to your knowledge)
- ○ Increased physical strength
- ○ Nervousness
- ○ Trouble staying asleep
- ○ Trouble falling asleep
- ○ Additional (please state) _____

9. Please fill in any factor that has influenced your decision to consume *caffeine*. (You may check more than one)

- ○ They make me healthier/give me better nutrition
- ○ They increase my mental energy
- ○ They increase my physical energy
- ○ My friends use them/recommend them
- ○ Mass availability/easy to buy (other beverages limited)
- ○ My leader encourages me/us to use them
- ○ I enjoy the taste
- ○ Other (please state) _____

10. Have you ever taken a go-pill prescribed by your physician?

In Garrison
a. Yes
b. No

In Theater
a. Yes
b. No

11. What go-pills have you used?

In Garrison
a. Dexedrine (dextroamphetamine)
b. Provigil (modafinil, the new go-pill)
c. I did not take a go-pill

In Theater
a. Dexedrine (dextroamphetamine)
b. Provigil (modafinil, the new go-pill)
c. I did not take a go-pill

12. What go-pills do you currently use?

In Garrison
a. Dexedrine (dextroamphetamine)
b. Provigil (modafinil, the new go-pill)
c. I did not take a go-pill

In Theater
a. Dexedrine (dextroamphetamine)
b. Provigil (modafinil, the new go-pill)
c. I did not take a go-pill

13. How often have you used dextroamphetamine?

In Garrison
a. Never
b. Once
c. 2-4 times over the past year
d. 5-7 times over the past year
e. More than 7 times over the past year

In Theater
a. Never
b. Once a week
c. 2-5 times a week
d. Once a month
e. 2-5 times a month
f. More than 5 times a month

14. How often have you used modafinil?

In Garrison
a. Never
b. Once
c. 2-4 times over the past year
d. 5-7 times over the past year
f. More than 7 times over the past year

In Theater
a. Never
b. Once a week
c. 2-5 times a week
d. Once a month
e. 2-5 times a month
f. More than 5 times a month

15. Have you ever taken a performance drink with a go-pill?

In Garrison
a. Yes
b. No (go to #17)

In Theater
a. Yes
b. No (go to #17)

16. What performance drink did you use with a go-pill?

In Garrison
Most frequent _____
2nd most frequent _____
3rd most frequent _____

In Theater
Most frequent _____
2nd most frequent _____
3rd most frequent _____

17. Have you ever taken a caffeinated substance (drink, pill, gum) with a go-pill?

In Garrison
a. Yes
b. No (go to #21)

In Theater
c. Yes
d. No (go to #21)

18. What type caffeinated substance did you use with a go-pill?

In Garrison
a. Coffee, tea, chocolate
b. Pill or gum

In Theater
a. Coffee, tea, chocolate
b. Pill or gum

19. Please fill in what you have experienced as a result of consuming caffeinated drinks or pills with a go-pill. (You may check more than one)

- ○ Increased mental alertness
- ○ Dehydration
- ○ Nausea
- ○ Dizziness
- ○ Headaches
- ○ Increased physical endurance
- ○ Improved creativity
- ○ Increased heart rate
- ○ Increased mental endurance
- ○ Heart arrhythmia (to your knowledge)
- ○ Increased physical strength
- ○ Nervousness
- ○ Trouble staying asleep
- ○ Trouble falling asleep
- ○ Additional (please state) _____

20. Why did you combine the go-pill with another product?

- ○ Needed the energy from both
- ○ The caffeine/performance drink does not help me
- ○ The go-pill does not help me
- ○ Other (please state) _____

21. On a scale of 1 to 5, how effective would you rate caffeine on your performance/alertness?

1. Not effective at all
2. A little effective
3. Moderately effective
4. Very effective
5. Extremely effective
6. Have not used

22. On a scale of 1 to 5, how effective would you rate performance drinks on your performance/alertness?

1. Not effective at all
2. A little effective
3. Moderately effective
4. Very effective
5. Extremely effective
6. Have not used

23. On a scale of 1 to 5, how effective would you rate Dexedrine on your performance/alertness?

1. Not effective at all
2. A little effective
3. Moderately effective
4. Very effective
5. Extremely effective
6. Have not used

24. On a scale of 1 to 5, how effective would you rate modafinil on your performance/alertness?
    1. Not effective at all
    2. A little effective
    3. Moderately effective
    4. Very effective
    5. Extremely effective
    6. Have not used

25. If you combined caffeine with a go-pill, how much did it affect your performance/alertness?
    1. Not at all
    2. A little
    3. Moderately
    4. Very
    5. Extremely
    6. Have not combined

26. If you combined performance drinks with a go-pill, how much did it affect your performance/alertness?
    1. Not at all
    2. A little
    3. Moderately
    4. Very
    5. Extremely
    6. Have not combined