REPORT OF THE DEPARTMENT OF
HEALTH REGULATORY BOARDS ON

Anabolic Steroid Misuse Among Minors

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 39

COMMONWEALTH OF VIRGINIA
RICHMOND
1989

COMMONWEALTH of VIRGINIA

Department of Health Regulatory Boards

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December 28, 1988

To: The Honorable Gerald L. Baliles
Governor of the Commonwealth of Virginia

The Members of the General Assembly of Virginia

It is my privilege to present the accompanying report which constitutes the response of the Department of Health Regulatory Boards to the request contained in House Joint Resolution No. 88 of the 1988 Session of the General Assembly of Virginia.

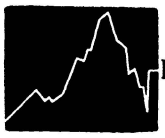
The Department empaneled a Task Force to conduct the study and develop recommendations. This report is the result of the Task Force's work, and the Department wholeheartedly endorses it and respectfully requests that the recommendations receive favorable consideration.

The Department also wishes to formally express appreciation to the individual members of the Task Force who generously contributed their extensive professional talents and skills to conduct this study without compensation. These citizens of our Commonwealth are richly deserving of our gratitude for their valuable service.

Bernard L. Henderson, Jr

REPORT OF THE TASK FORCE ON ANABOLIC STEROID MISUSE AMONG MINORS

To the Director
Virginia Department of Health Regulatory Boards



Department of Health Regulatory Boards

December 1988

REPORT OF THE TASK FORCE ON ANABOLIC STEROID MISUSE AMONG MINORS

TABLE OF CONTENTS

APPENDICES

TASK FORCE ON ANABOLIC STEROID MISUSE AMONG MINORS

Donald Anderson, Ed.D., Chairman Member, Council on Health Regulatory Boards Member, Board of Professional Counselors	Roanoke
Robert F. Baxter, M.D., Ph.D. Member, Board of Medicine	Grundy
Ernest L. Clements, Jr., M.D. Team Physician, University of Richmond	Richmond
John W. Gephart, Assistant Special Agent-in-Charge Virginia Department of State Police Pharmaceutical Drug Diversion Program	Richmond
Richard O. Gifford Athletic Director, Lynchburg Christian Academy	Lynchburg
Christopher W. Hutton, Esquire Commonwealth's Attorney	Hampton
Harvey J. Meltzer, R.Ph., Director of Pharmacy Children's Hospital of the King's Daughter	Norfolk
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GENERAL ASSEMBLY OF VIRGINIA -- 1988 SESSION

HOUSE JOINT RESOLUTION NO. 88

Requesting the Department of Health Regulatory Boards to study the use and misuse of anabolic steroids among minors.

Agreed to by the House of Delegates, February 8, 1988
Agreed to by the Senate, March 9, 1988

WHEREAS, high school athletics have been a long accepted enriching feature of the extracurricular offerings within the system of public education; and

WHEREAS, high school athletics have provided stimulating, productive experiences for young people and provided opportunities whereby self-sacrifice, discipline, respect for others, honesty and team spirit are nurtured; and

WHEREAS, in the urge to attain greater size, increase strength and endurance, and improve their athletic performances, young high school athletes are increasingly resorting to the use of dangerous anabolic steroids; and

WHEREAS, anabolic steroids, "derivations of the male hormone, testosterone, are body-building drugs which promote greater protein production in muscles, and combined with proper nutrition and consistent weight-training, increase weight and muscle size"; and

WHEREAS, anabolic steroids create severe "side effects such as liver cancer, stroke, high blood pressure, sodium and water retention and high cholesterol"; and

WHEREAS, "anabolic steroids are legal when prescribed, but most high school athletes often use fake versions of anabolic steroids in self-prescribed megadoses that are ten times the medically recommended dosage or more"; and

WHEREAS, such drugs on the black market retail at 100 tablets for $25.00 or more and are manufactured illegally in foreign laboratories; and

WHEREAS, many young athletes are willing to accept the risks for the promise of bulging muscles, exceptional strength and the admiration of friends; and

WHEREAS, it is imperative that the use of anabolic steroids be disallowed in order that the lives of our youth may be preserved; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Department of Health Regulatory Boards is requested to study the use and misuse of anabolic steroids among minors.

The Department shall determine the extent of the use and misuse of anabolic steroids among minors and the prevalence of a black market for such drugs in the Commonwealth. It shall also determine ways in which youth and their parents can be apprised of the dangers of such drugs, the extent, if any, to which coaches are aware of or condone such drug use, and recommend ways in which the use of anabolic steroids may be regulated.

The Department of Health Regulatory Boards shall report its findings and recommendations to the Governor and to the 1989 Session of the General Assembly as provided in procedures of the Division of Legislative Automated Systems for processing legislative documents.

REPORT OF THE TASK FORCE ON ANABOLIC STEROID MISUSE AMONG MINORS

I. INTRODUCTION

House Joint Resolution Number 88 of the 1988 Session of the Virginia General Assembly requested the Department of Health Regulatory Boards to study the use and misuse of anabolic steroids among minors. The Department was specifically requested to:

- o determine the extent of the use and misuse of anabolic steroids among minors and the prevalence of a black market for such drugs in the Commonwealth;
- o determine ways in which youth and their parents can be apprised of the dangers of such drugs;
- o determine the extent, if any, to which coaches are aware of or condone anabolic steroid use among minors, and;
- o recommend ways in which the use of anabolic steroids may be regulated.

The Resolution observed that while high school athletics have long been an accepted feature of the extracurricular offerings within the system of public education, competitive stresses have led in recent years to the use of dangerous substances in the effort to improve athletic performance. Among these substances are anabolic steroids, the misuse of which may create harmful short- and long-term effects on the health of the athlete.

Anabolic steroids may be legally prescribed for a small number of accepted medical purposes. However, the demand for these drugs outside the legal framework has led to a black market for the illegal importation of anabolic steroids manufactured abroad and to the underground marketing of counterfeit drugs of unknown composition and potential for harm manufactured in the United States. These facts--coupled with documentation that athletes may self-prescribe and administer (orally or by injection) dosages many times greater than medically recommended--create grave concerns.

Upon receipt of House Joint Resolution No. 88, the Director of the Department of Health Regulatory Boards appointed a special task force to conduct the requested study and to report findings for further consideration. The Task Force on Anabolic Steroid Misuse Among Minors appointed by the Director consists of two members of health professional regulatory boards (Board of Medicine, Board of Professional Counselors), a practitioner of sports medicine, law enforcement officials (a Commonwealth's Attorney, and a representative of the Virginia Department of

State Police), a practicing hospital pharmacist who recently served as a member and Chairman of the Board of Pharmacy, and two school officials (one public and one private) concerned with high school athletics.

This document is the resulting Report of the Task Force on Anabolic Steroid Misuse Among Minors to the Director of the Virginia Department of Health Regulatory Boards.

Process of the Study.

The Task Force held four working meetings and convened an informational hearing on House Joint Resolution No. 88 during the year-long course of its study. In addition, a survey of high school coaches and others concerned with school athletic programs was conducted in conjunction with a statewide conference of coaches and athletic directors. The technical, professional and consumer literature on anabolic steroid use was reviewed, and federal and state legislation bearing on the topic was collected and analyzed.

The Task Force also consulted with officials of the U.S. Customs Service, the Pharmaceutical Drug Diversion Program (a joint effort of the U. S. Drug Enforcement Agency, the Department of Health Regulatory Boards and the Virginia Department of State Police), an informant who previously used and illegally traded in anabolic steroids, and with other relevant resource agencies, organizations and individuals, including Virginia officials planning statewide surveys of drug use by high school students. The special concerns of the chief patron of the House Joint Resolution, Delegate Kenneth R. Plum of the 36th District, were solicited, and consultation with an expert who recently conducted and reported a national survey of anabolic steroid use among adolescents was obtained.

The Task Force is indebted to all those who shared freely their concerns and information related to the objectives of the study during the past year.

Organization of the Report of the Task Force.

This report is organized as follows. First, the literature on anabolic steroids pertinent to the objectives of this study is reviewed. Following this overview, observations on the incidence and prevalence of anabolic steroid misuse among athletes are made, with special reference to available information on use and misuse among minors and to illicit sources of steroids. A review of federal, state and local legislative and educational approaches to the problem is then presented, followed by the conclusions and recommendations of the Task Force. An Appendix contains other documents that may be of interest to the reader.

II. REVIEW OF THE LITERATURE

Within the published literature on anabolic steroid use and misuse are several levels of information of potential interest. At the most technical level are articles and publications relating to the chemistry of drugs, the synthesis of hormonal derivatives, the metabolism of steroids, and other highly specialized concerns. Because the implications of this level of literature for public policy are difficult to discern, the Task Force has not analysed this technical information.

At a more practical level is a growing literature of interest to practicing health professionals, particularly to physicians specializing in sports medicine. Another level consists of articles directed to coaches, athletic directors and others who counsel and direct professional and amateur athletes. A still further tier of publications is directed to the general public, and a final level consists of an underground press targeted to the small minority of athletes interested in obtaining and using anabolic steroids illegally. The Task Force reviewed many articles, books, pamphlets and newsletters representative of these categories, since these materials are of direct interest to policymakers.

Definitions of Anabolic Steroids.

Anabolic-androgenic steroids are synthetic derivatives of male sex hormones, typically testosterone. Anabolic steroids (AS) were developed in an attempt to dissociate androgenic (male characteristic producing) and anabolic (growth producing) characteristics so as to maintain positive effects on strength and the production of lean muscle mass while minimizing effects on the production of secondary male sex characteristics. Attempts to completely dissociate anabolic and androgenic effects have been only partially successful, thus all AS in use carry some risk of production of masculinizing effects (Haupt and Rovere, 1985; American Medical Association, 1988).

There are a number of anabolic steroids currently on the market, and new synthetics are constantly in production. The more common forms of anabolic steroids are listed in Table 1.

Because the number of AS in distribution at any given time varies in type and composition, the National Association of Boards of Pharmacy (NABP,1988) encourages states to delegate to state boards of pharmacy the authority to recognize additional drug compositions through rulemaking procedures governed by state administrative process acts. This procedure is necessary because anabolic steroids, like "designer drugs," may be synthesized and placed into distribution in relatively short periods of time, and the public is placed at risk if recognition of new variations of AS must await legislative action. NAPB proposes a model law to initially define anabolic steroids as follows:

TABLE 1

Generic and Trade Names of Anabolic Steroids in Common Use

ORAL PREPARATIONS:

17-Alpha-methyl derivatives of testosterone

Methyltestosterone
- Android (Brown)
- Metandren (Ciba)
- Oreton (Shering)
- Vigorex (Marin)
- Virilon (Stor)
- Testred (ICN)

Fluoxymesterone
- Android-F (Brown)
- Halotestin (Upjohn)

Methandrostenolone
- Dianabol (Ciba)

Oxandrolone
- Anavar (Searle)

Oxmetholone
- Anadrol-50 (Syntex)
- Adroyd (Parke, Davis)

Stanozol
- Winstrol (Winthrop)

17-Alpha-ethyl derivatives of testosterone

Ethylestrenol
- Maxibolin (Organon)
- Orabolin (Organon)

Norethandrolone
- Nilevar (Searle)

1-Methyl derivatives of testosterone

Methenolone acetate
- Nibal (Squibb)

Mesterolone
- Mestoranum (Schering)

INTRAMUSCULAR PREPARATIONS:

Esters of testosterone

Testosterone propionate
- Oreton propionate (Shering)

Testosterone enanthate
- Delatestryl (Squibb)

Testosterone cypionate
- Depo-Testosterone (Upjohn)

Esters of 19-nortestosterone

Nandrolone decanoate
- Deca-Durabolin (Organon)

Nandrolone phenpropionate
- Durabolin (Organon)

Source: Haupt, Herbert A., M.D., and George D. Rovere, M.D. "Anabolic steroids: A Review of the Literature." The American Journal of Sports Medicine, Vol. 12, No. 6. 1984. Page 470.

The term "anabolic steroid" (should include) any of the following or any isomer, ester, salt, or derivative of the following that acts in the same manner on the human body:

(a) clostebol;
(b) dehydrochlormethyltestosterone;
(c) ethylestrenol;
(d) fluoxymesterone;
(e) human growth hormone;
(f) mesterolone;
(g) methandienone;
(h) methandrostenolone;
(i) methenolone;
(j) methyltestosterone;
(k) nandrolone;
(l) norethandrolone;
(m) oxandrolone;
(n) oxymesterone;
(o) oxymetholone;
(p) stanozolol; and
(q) testosterone.

Medical Uses and Misuse by Athletes.

Anabolic steroids have legitimate medical uses for relatively few conditions, including certain anemias, hereditary angioedema, some cases of breast cancer, and possibly osteoporosis. The more potent androgens of the class are also used to treat male hypogonadism (American Medical Association, 1988).

Reportedly, AS were first used during World War II when Hitler ordered their administration to Storm Troopers in an attempt to increase performance and agressiveness in battle (Haupt and Rovere, 1984; Shipe, 1988). Their first use by athletes is reported to have occured among Russians in 1954. Use by U.S. athletes is believed to have occurred as a response to Russian use in an effort neutralize what was viewed as a Russian competetive advantage. Since the 1950s, AS use by athletes has become increasingly popular. At first, they were reported to be used almost exclusively by weight lifters and heavy throwers, but later usage spread to football players, swimmers, and to other track and field participants.

A focus of controversy has been AS use in international competitions, especially the International Olympic Games and the Pan American Games. In the 1956 Olympics at Melbourne, many athletes were reputed to use methandrostenolone (Dianabol), an oral anabolic steroid with fewer masculinizing side effects than injectable synthetic testosterone. Dianabol was subsequently withdrawn from the market by the manufacutrer.

Athletes have continued to use AS in spite of efforts to curtail such abuse. Steroids were first included on the list of substances banned by the International Olympic Committee at the 1976 summer games in Montreal. Improved methods of detecting steroids in urine resulted in the disqualification of 19 competitors in the 1983 Pan American Games in Caracas, and dozens of other athletes voluntarily withdrew fearing detection. Rigorous drug testing has reportedly led to increased use of testosterone, which while retaining unwanted androgenic effects is more difficult to detect than other synthetic preparations. (Bierly, 1987; Haupt and Rovere, 1984).

Highly publicized reports of drug use among athletes at all levels of competition have forced athletic organizations to consider drug control programs aimed at eliminating performance-enhancing drugs. At the amateur level, mandatory drug testing is required by the United States Olympic Commitee and the National Collegiate Athletic Association. In professional sports, players' associations have successfully blocked attempts to develop drug control programs in baseball and football; most other professional athletic organizations have adopted drug control programs (Wagner, 1987).

Despite these efforts, scandals such as the detection of anabolic steroid use by Ben Johnson at the 1988 Olympic Games in Seoul continue to plague amateur sports. At the level of professional sports, a U.S. Olympic Committee official has asserted that fully one-half of all the players in the National Football League use anabolic steroids. It is predicted that performance-enhancing drug use will remain a controversial issue in both professional and amateur sports over the next several years (Defort, 1988).

Performance-Enhancing and Harmful Side Effects of Anabolic Steroid Use.

At the center of the controversy surrounding anabolic steroid use by athletes are two questions: (1) does the use of steroids, in fact, improve athletic performance; and (2) are the harmful effects of steroids sufficiently serious to deter their use by athletes.

The answer to both these questions depends upon careful studies of the effects of anabolic steroid use <u>as practiced by athletes</u>, and therein lies the difficulty of unequivocal responses to the questions. In the recent past a credibility gap developed between athletes and the medical community due, at least in part, to the dissemination of information by health professionals denying <u>any</u> performance enhancement effects of anabolic steroids. This information was not consistent with the experience of athlete users who reported both subjective and objective improvements in performance.

Given the evidence of harmful effects of steroid use, the professional community understandably advocated public policy to ban steroid use by athletes. Restrictive policies may indeed be warranted, but the rationale for such policy must acknowledge the reality that some performance gains, under certain training conditions may be attributable to steroid use as practiced by athletes.

The Council on Scientific Affairs of the American Medical Association (March, 1988) offers the following statement on performance-enhancing effects of steroid use:

> Although studies of these agents (anabolic steroids) have not shown uniformly increased muscular strength, certain benefits to athletic performance seem probable. Increased body weight, partly due to fluid retention, may include an increase in lean muscle mass. In a continuing program of intensive exercise coupled with a high-protein diet, increased muscular strength may be realized in some individuals. In contrast, aerobic capacity is probably not increased beyond that due to aerobic training. Increased agressiveness is also reported among anabolic steroid users, but the degree to which this influences the intensity of training is unknown. Since small, difficult-to-measure increments in muscular performance or psychological benefit may constitute the difference between winning and losing, particularly at a professional or world-class level, these changes may be perceived to be critical to an athlete.

Similarly, the AMA Council report sheds light on the harmful effects of steroid use, although it is important to emphasize that studies of these effects have focused typically on individuals treated for medical problems with dosage levels much below those common among steroid-using athletes.

> There are clear adverse effects associated with the use of steroids. The doses and patterns of administration utilized by athletes often differ markedly from those used therapeutically. Athletes have been reported to take steroids cyclically from one to several months followed by a drug-free period of up to a year. Doses may be far greater than those considered to be therapeutic, and drugs are sometimes 'stacked' (several agents taken simultaneously). Exogenous androgens affect the reproductive system of healthy men--gonadotropin and testosterone secretion are suppressed and oligospermia and temporary infertility may occur. Gynecomastia is common. (Some) agents are associated with liver abnormalities, including abnormal liver function test results, cholestasis, and, rarely, peliosis hepatis, hepatic adenomas, and hepatocellular

carcinoma. Although hepatic effects have been described and documented most often in patients treated for disease, one case of hepatocellular carcinoma has been reported that involved an athlete who had taken several anabolic steroids to increase skeletal muscle mass. Anabolic steroid ingestion by athletes is also associated with atherogenic blood lipid profile (e.g., elevated levels of low-density lipoprotein cholesterol and decreased levels of high-density lipoprotein cholesterol). An increase in the occurrence of acne may be a problem, along with a possible increase in irritability and aggressiveness.

In women, androgenic hormones produce masculinizing effects (e.g., hirsutism, deepened voice, oily skin, acne, male pattern balding, menstrual irregularities [including amenorrhea], breast atrophy, clitoral hypertrophy, and increased libido. In children, these drugs may accelerate pubertal changes and limit eventual adult height by causing premature skeletal maturation and closure of the epiphyses.

In addition to health effects well documented in the literature, anecdotal reports and accounts of other effects appear commonly in the non-scientific literature. These include reported effects of a therapeutic doses on the user's personality, psychosexual activities, and body image. Rapid and dramatic mood swings, psychotic episodes, increased or decreased libido, violent outbursts, and psychological dependence or addiction have been reported, but these effects are not systematically linked to steroid abuse as the sole agent of causation. It has been argued that violent behavior including rape and murder may have been the result of temporary insanity "caused" by anabolic steroid ingestion (Taylor, 1987; Bierly, 1987; Strass, Liggett and Lanese, 1985; Pope and Katz, 1988).

While these accounts must be placed into perspective, it is likely that some will be verified through scientific investigation. The Task Force believes that given the megadoses typically ingested or injected by athletes, it is clear that the long- and short-term harmful effects of anabolic steroid use more than outweigh any performance-enhancing effects. However, care must be exercised in communication between the medical and athletic communities since outright denial of any performance-enhancing effects will lead inevitably to problems of credibility and to the rejection of any advice to abstain from the use of these drugs.

Media Coverage and the Underground Press.

There is increasing attention by mass media to problems and scandals related to anabolic steroid abuse. While some reporting is balanced and responsible, sensationalistic accounts may actually whet the appetite of young athletes to use steroids. An example of responsible journalism serving the public need for

unbiased information is a series of articles in The Fairfax Journal (Malone and Bell, January 13-15, 1988) which prompted interest in the anabolic steroid problem.

In stark contrast to responsible journalism is an underground press that has arisen to connect potential users with a black market that promotes the illegal sale of legitimate steroid products as well as bogus counterfeits imported from abroad or those manufactured in clandestine domestic laboratories. An example of this literature is included as an Appendix to this report.

The Task Force reviewed a number of underground publications made available by an informant. According to this source, a frequent pathway to illicit steroid sources consists of flyers inserted into shipments of otherwise legal products associated with weight lifting or bodybuilding. Consumers respond to ads for legal products placed in magazines catering to weightlifters and bodybuilders. On receipt of the shipment, flyers advertising suppliers of illegally manufactured or imported steroids are found in the package. Alternatively, one may be placed on mailing lists for newsletters featuring erroneous information on the effects of a variety of steroid products and touting their sale by direct mail order.

Other examples of irresponsibility include endorsements of anabolic steroid use by a small number of professional athletes and other highly visible role models. These endorsements receive much more attention in the media than do balanced accounts of the known risks and modest benefits of anabolic steroid misuse by adolescents.

III. PREVALENCE OF USE AND SOURCES OF SUPPLY

It is not possible to present a reliable estimate of the incidence or prevalence of anabolic steroid abuse by the general community of athletes and bodybuilders. Estimates of the use of steroids by minors--the focus of this study--have only recently become available.

Anabolic steroid use has been documented among both males and females in swimming, distance running, throwing, jumping and multi-activity events, as well as amateur wrestling and the more traditional strength and lifting sports (Yesalis, 1988). Apart from these fields of competition, the use of steroids for physique enhancement alone is reported to have reached epidemic proportions involving an estimated one million Americans (Cowart, 1987).

National Study of Adolescent Anabolic Steroid Users.

Most estimates of steroid abuse among athletes concentrate on an elite populations that, although highly visible, may represent the smallest user group. Yesalis (1988) reports that it is hypothesized, but not documented, that a much larger user group consists of lower level amateur and recreational population who use steroids for physical appearance rather than competitive performance enhancement. To test this hypothesis, Yesalis and his colleagues conducted a nationwide study of the prevalence of steroid use among male high school seniors, finding that nearly seven percent of respondents reported current or previous use of anabolic steroids. When these findings are extrapolated to the national population an estimate of users reaches 1/4 to 1/2 million U. S. adolescents.

Because Yesalis' work represents the only known national study of steroid use among minors, the Task Force consulted personally with him during the study. His discussion of survey findings was striking:

- among the 7 percent of participants reporting current or previous AS use, about 40 percent reported use before age 16;
- 38 percent of adolescent users reported the use of <u>injectable</u> steroids;
- 44 percent of users report "stacking," the use of more than one anabolic steroid at the same time;
- about 40 percent of users admitted using steroids for five or more cycles (defined as an episode of use of six to twelve weeks or more in duration);

- of this group of "hard core" users, most reported unwillingness to discontinue use even in the face of possibly dire consequences such as liver cancer, sterility, and heart disease;

- one-third of adolescent users reported that they did not play a high school sport.

Yesalis' findings are based on a survey sample of 3,600 high school seniors. Among respondents reporting AS use, several groups were discernible. The differing profiles of the groups suggest that educational efforts will need to be targeted specifically to each subpopulation to be effective.

Of additional interest, the survey did not identify significant differences in use rates between rural and urban schools or sunbelt versus other areas, contrary to current anecdotal reports. The only significant difference in use rates was between large and small schools; rates of use were higher in larger schools. Surprisingly, the greatest concentration of multiple cycle users was found in rural nonsunbelt schools, both large and small (Yesalis, et al., 1988).

Survey of Virginia High School Coaches.

To complement information available from the literature on the incidence and prevalence of anabolic steroid abuse, the Task Force used the opportunity of a statewide conference of high school coaches to survey the perceptions of this important audience relative to anabolic steroid abuse.

A questionnaire distributed at statewide coaches' clinics held in Lynchburg in July, 1988 under the auspices of the Virginia High School Coaches' Association was returned by 126 individuals among the nearly 1,000 coaches in attendance. This small return was due to organizational difficulties (specialized clinics scheduled across several days with few opportunities to appeal to all those in attendance) rather than lack of interest by coaches. Because of the size of the responding sample and its nonrandom nature, care should be exercised in interpreting the findings, which are more extensively reported in the Appendix. Certain highlights are of interest:

- less than one percent of the respondents felt steroid abuse among high school students was "epidemic;" about one-third believed that AS use was "rare" (one to five percent of the school population believed to use steroids); 16 percent believed use to be "fairly prevalent" (five to ten percent believed to use);

- nearly all (97 percent) of the responding coaches felt young steroid users were either misinformed about the risks and harmful effects of steroids (43 percent), or were poorly informed about risks and effects (54 percent);

- most respondents (68 percent) reported that they would never condone the use of steroids, but about six percent reported they would condone use "under carefully controlled conditions, and three percent said they would condone use "if benefits outweighed risks;"

- Nearly one-third of respondents, however, believed that other coaches condone steroid use among young athletes;

- Most responding coaches (58 percent) felt that media attention and public concern about steroid use among minors was "appropriate and justified, given the size of the problem;" 17 percent felt this concern was inadequate, and 12 percent felt media attention and public concern was "exaggerated."

The Task Force is not satisfied that enough is know about the incidence and prevalence of anabolic steroid abuse by minors. Several alternatives were considered to obtain more valid and reliable information about use by minors. The use of random drug testing was discarded as too intrusive, costly and complex. Only one laboratory in Virginia--University of Virginia Clinical Laboratories--is currently competent to screen for anabolic steroids now on the market, and the unit cost for screening is $100. While this cost is well below that charged by out-of-state commercial laboratories, it remains a serious obstacle to the procurement of completely reliable data.

The conduct of survey research specific to anabolic steroids was also discussed and discarded as an option available within the time and resources available for this study. Experts at the Virginia Commonwealth University Survey Research Laboratory informed the Task Force that such a study was feasible and could provide a valid store of knowledge. The cost, however, would range from $25,000 to $50,000 depending on sample selection, methodology, and other factors. This option would also require careful coordination with each school district in the Commonwealth to be successful.

A more promising possibility lies in incorporating specific questions about anabolic steroid use in surveys already in the planning stage by the Governor's Drug Abuse Task Force chaired by the Attorney General, the Honorable Mary Sue Terry. According to information provided to the Task Force, a request for proposals for the conduct of this study has been issued, and a contractor should be selected by early 1989. The cooperation of this group has been assured in including anabolic steroids among the drugs studied.

Sources of Supply.

Definitive information on sources of supply of anabolic steroids used by athletes is also difficult to obtain. One expert believes that 20 percent of steroid users obtain their supply legally by prescription while the other 80 percent are

supplied by black market distributors (DeBenedette and Todd, 1986). Others believe the black market supplies from 85 to 100 percent of all steroids used by athletes.

Virginia coaches responding to the Task Force survey on anabolic steroid use by high school athletes indicated that there were multiple sources of supply. They estimated that about three percent of the supply came from prescriptions, with nearly 30 percent supplied by friends of the users. Health club employees and dealers in these clubs accounted for an estimated 27 percent of supply. Unlike other drugs, street dealers accounted for a very small proportion of the supply--less than five percent.

These estimates by coaches were roughly confirmed in testimony at the informational hearing and by the informant interviewed by the Task Force. Health clubs are an important arena in which anabolic steroids are purchased and used. A supply network comprised of peers exists in which anabolic steroids are moved from small buyer to small user, and these transactions occur outside the more usual drug buying and selling networks. At higher levels in the market, however, large-scale purveyors of steroids realize large profits and experience little risk compared to dealers of street drugs such as marijuana, cocaine, crack and narcotics.

The Task Force heard very few references to licensed health care providers as sources of anabolic steroids. According to the informant, physicians, veterinarians and pharmacists are rarely sources for continuing supplies. More common is the purchase of veterinary steroid products from rural feed stores under the ruse of buying the drugs for farm animals.

The existence of an active black market, estimated to provide the great bulk of illegally purchased and sold anabolic steroids, was corroborated through Task Force consultation with officials of the U. S. Customs Service and the Drug Enforcement Agency, as well as by the credible informant who was interviewed by Task Force members and staff. Through the cooperation of U. S. Customs Service officials, staff physically examined counterfeit anabolic steroids shipped into the U.S. from Mexico that were interdicted by Federal authorities. The packaging and printing of labels and containers of these bogus drugs defied identification of their counterfeit nature. The contents of this interdicted shipment are currently under analysis.

According to the Task Force informant, most illegal steroids are shipped from Mexico and Europe. Those shipped from Mexico are predominantly counterfeits of unknown composition. European shipments are often of pharmaceutical quality, obtained readily from countries where distribution is not controlled and illegally shipped or smuggled into the United States. Additional sources include products of unknown content illicitly manufactured in secret laboratories in this country.

The black market for anabolic steroids--exclusive of veterinary products and imported products--is estimated at $100 million annually and is believed to be growing. According to an official of the DEA, there may be as many as 10,000 questionable outlets in the United Sates, perhaps 15 importers, and 500 distributors handling traffic in this country (Cowart, 1987).

IV. FEDERAL, STATE AND PRIVATE CONTROL MECHANISMS

Because of heightened public concern and media attention, federal, state and voluntary measures to curtail the abuse of anabolic steroids by athletes have intensified over the past several years.

Federal Efforts.

To understand legal approaches to regulating steroid use, some knowledge of the system for classifying controlled substances is essential. A federal classification or "schedule" system is in use in all states using five schedules based on the degree of abuse or addiction potential.

Schedule I drugs have high potential for abuse and no accepted medical use, and include hallucinogens and certain opiates such as heroin. Schedule II drugs also have high abuse potential, but have medical uses. This schedule includes methamphetamine, cocaine and opiates such as methadone. Schedule III includes stimulants, depressants, and narcotic drugs such as codeine. Schedules IV and V consist of drugs that have even lower abuse and dependence potential. Some states, including Virginia, add a sixth schedule to classify substances of low potential for abuse that are nonetheless subject to some control. In Virginia and many other states, anabolic steroids are classified as Schedule VI substances.

Controlled substances can be rescheduled at the federal level in one of several ways. Congress can schedule any substance it wishes into any classification. The U.S. Attorney General, acting on findings of the Secretary of Health and Human Services, may schedule or reschedule a substance, but the following factors must be considered (Cowart, 1988):

- the actual or relative potential for abuse;
- scientific evidence of pharmacological effects;
- the current state of knowledge about the drug;
- its history and current pattern of abuse;
- the scope, significance and duration of abuse;
- the risk, if any, to public health;
- its capability to produce psychic or physiological abuse;
- whether the substance is an immediate precursor of an already controlled substance.

Most states also incorporate into law criteria that must be met to schedule or reschedule a drug at the state level. The criteria used in Virginia appear in the Appendix.

Efforts to schedule anabolic steroids at the federal level have been resisted in favor of tighter enforcement of existing laws. In mid-1986, a federal interagency task force comprising the U. S. Justice Department, the Food and Drug Administration and the Federal Bureau of Investigation began a nationwide criminal investigation of black market distribution of steroids and other drugs alleged to enhance athletic performance. Manufacturers and distributors were advised of their responsibility to ensure only legal distribution and requested to monitor and report unusual orders. Indictments have been obtained as a result of this effort (American Medical Association, 1988). Critics of federal enforcement allege that these efforts have served primarily to drive distribution and manufacturing further underground.

State-Level Efforts.

The current study in Virginia is an example of state-level activity stimulated by public concern. In addition to this study requested by the 1988 General Assembly, House Bill 622, also enacted during the 1988 Legislative Session, included anabolic steroids in the category of substances prohibited for sale or other distribution to a minor without a prescription. Violation of the law is punishable as a Class 1 misdemeanor (subject to a fine of $1,000 and/or one year imprisonment).

In other states, recent actions reported by the Food and Drug Administration in May, 1988 include:

- Alabama has placed anabolic steroids in Schedule V;
- The State Medical Board in Arkansas has requested the state drug control authority to investigate all cases of alleged physician misuse of steroid prescription authority;
- California has placed anabolic steroids in Schedule III:
- Colorado defines inappropriate steroid prescription as unprofessional conduct and classifies the first violation as a misdemeanor and subsequent violation as felonies;
- Florida has placed anabolic steroids in Schedule IV;
- Indiana classifies violation of laws governing appropriate anabolic steroid use as a felony;
- New Mexico law classifies intentional distribution or possession with intent to distribute as felonies;

- o Ohio has amended the medical practice act to prohibit physicians from prescribing anabolic steroids for other than legitimate purposes; their use in bodybuilding and athletic performance enhancement is prohibited;

- o Texas law defines illegitimate prescription of anabolic steroids as a felony; and

- o Connecticut, Washington, and Rhode Island are considering control measures to stem abuse.

Additional activity by states was reported to be underway in mid-1988 in Hawaii, Illinois, Louisiana, Massachusetts, New Jersey, New York, North Carolina, and Pennsylvania.

Voluntary Efforts.

In addition to bans on anabolic steroid use placed by an increasing number of voluntary organizations (International Olympics Committee, National Collegiate Athletic Association, and others), athletes and body builders have begun, themselves, to foster drug-free competition. The Task Force was impressed by testimony at its informational hearing by owners of gyms and body building facilities that efforts at self-policing steroid use can be successful. A Richmond entrepreneur has marketed T-shirts and other articles imprinted "Avoid the Roid," and "Roid-Busters," using the vernacular of users to refer to anabolic steroids ("roids").

Other exemplary activity is to be found in local school districts in efforts targeted to young athletes and to coaches, athletic trainers and other athletic leaders. Using printed and audiovisual materials developed by the U.S. Office of Education, the Youth Alcohol and Other Drug Abuse Prevention Project of the Virginia Department of Education--as well as locally developed handouts--a one-day seminar on steroids was conducted for coaches and others by the Fairfax County School System. The Task Force encourages all school districts in Virginia to replicate this program, at a minimum, in the attempt to alert high school athletic leaders to the increasing problem of misuse of anabolic steroids by minors.

Despite these efforts and more structured activity within local school districts and at the federal and state level, there can be no question that anabolic steroid misuse is rising, and that a growing population of users are high school students.

V. EXECUTIVE SUMMARY AND RECOMMENDATIONS

Following a year-long, comprehensive study, the Task Force finds that a serious problem of anabolic steroid misuse by minors exists in Virginia and that legislative and administrative action by the Commonwealth is needed to address this problem.

Although exact data are not available, national estimates of anabolic steroid use by adolescents suggest that seven percent (7%) of male high school seniors use or have used anabolic steroid to enhance athletic performance or personal appearance. Virginia coaches and athletic directors recognize that adolescents in the Commonwealth also use and abuse anabolic steroids and that this misuse is growing. The vast majority of high school students is uninformed or misinformed about the dangers of anabolic steroids, preferring to believe extravagant claims that use of these dangerous drugs is necessary to gain a competitive edge, or an enhanced or idealized bodybuilder image.

Scientific evidence supports the conclusion that some relatively minor gains in specific performance measures may be facilitated by the use of anabolic steroids in combination with rigorous training and careful dietary regimens. These benefits, however, are far outweighed by evidence that anabolic steroid use can cause serious health problems and negative psychological effects. Among these effects are liver damage, cardiovascular disease, increases in blood pressure, cholesterol imbalances and enlarged breasts. Effects on the male reproductive system include reductions in sperm production, decrease in size and tissue changes in the testes, and reductions in the amount of sex hormone output. In females, steroid use may lead to disruptions in ovulation and the menstrual cycle, as well as clitoral enlargement, increased body and facial hair and other secondary male characteristics. Use before maturity may stunt normal physical growth and development in both sexes.

Psychological effects attributed to the use of anabolic steroids include increased or decreased sex drive, mood swings and depression and aggressive, even violent behavior. Many of the adverse physical and psychological effects depend on the amount of steroid used and the length of time steroids are used. There is no method of predicting which individuals are likely to experience these adverse effects.

Athletes and others who use anabolic steroids typically inject or ingest doses ten times or more the dosages approved for legitimate medical purposes. The injection of steroids causes special concerns related to AIDS transmission. "Stacking"--the use of several steroids at one time--is common, and many users attempt to temper negative effects by taking still other drugs, engaging in a kind of "pharmaceutical roulette."

An extensive black market has arisen in Virginia and throughout the nation to supply the increased demand for anabolic steroids by young athletes and bodybuilders. While some drugs available from illicit sources are of pharmaceutical quality, an increasing number of counterfeit drugs are smuggled into the United States from abroad or manufactured in clandestine laboratories in this country. The labeling and packaging of these bogus drugs of unknown composition defies easy detection.

A major source of supply includes employees and dealers who peddle steroids in or near gyms and "body shops" catering to young athletes and bodybuilders. While only a small quantity of anabolic steroids is believed to be supplied by licensed health providers (doctors, pharmacists and veterinarians), occasional diversion does occur and this practice should be subject to severe penalty.

Educational programs to stem the rising misuse of anabolic steroids must be carefully designed, coordinated and, above all, believable to avoid problems with credibility. Evidence exists that adolescent users include several subgroups--competitive athletes, bodybuilders and others interested in physique enhancement, and those who believe steroids will make them healthier--each of which must be targeted in prevention efforts. More research is needed to document the prevalence of anabolic steroid use and to refine the profiles of adolescent users.

Special efforts must be made to inform youth, their parents, and especially coaches and athletic directors of the dangers of anabolic steroid misuse. While most Virginia coaches report that they would never condone steroid use, others believe that other coaches actively or tacitly support the practice. Coaches as well as professional and amateur athletic champions who serve as role models for young sports enthusiasts comprise a special target for education and prevention effort.

At a more profound level, education and prevention efforts must address the "win-at-all-costs" ethic among some misguided young athletes and their coaches, trainers, counselors, and parents, as well as school athletic fans and enthusiasts.

Public alarm about anabolic steroid abuse is driving a number of policy reforms at the federal level and among the states. These include better enforcement, changes in laws to reclassify anabolic steroids and to increase penalties for possession, distribution, diversion and sale, and as well the production and distribution of educational materials.

While it is too early to evaluate the effects of these new programs and to tailor recommendations upon these evaluations, the Task Force is convinced that action is necessary in the absence of perfect information if further damage to Virginia's youth is to be prevented. We encourage the Director of the

Department of Health Regulatory Boards to support the following recommended actions and to initiate procedures necessary for their implementation at the earliest feasible moment:

1. Legislation should be enacted by the 1989 General Assembly to classify the illegal possession, sale, distribution or intent to sell or distribute authentic, or counterfeit, or bogus anabolic steroids as a felony with penalties to consist of fines up to $20,000 and/or imprisonment for one to ten years. This monetary penalty is greater than that specified for Class 5 felonies [Code of Virginia, Sec. 18.1-10(e)] by virtue of the profits accruing to vendors of authentic, counterfeit, and/or anabolic steroids.

2. The Task Force respectfully requests that its services be continued through 1989 to monitor the implementation of the recommendations in this Report and to advise the Director of the Department of Health Regulatory Boards of additional actions that may be required to protect the public health, safety and welfare.

3. The Boards of Medicine, Dentistry, Pharmacy and Veterinary Medicine should be requested to initiate appropriate action to define in statute or regulation the prescription or the filling of a prescription of anabolic steroids for other than legitimate medical purposes as unprofessional conduct and to inform all licensees of this action and of possible consequences of failure to comply.

4. The Virginia Department of Health Regulatory Boards should be requested to document the quantity of anabolic steroids distributed, and the number and purposes of prescriptions written and filled for anabolic steroids within the Commonwealth during the calendar year 1989.

5. The Virginia Board of Pharmacy should be requested to consider the rescheduling of anabolic steroids and to prepare recommendations for rescheduling these substances in Virginia.

6. The Virginia Department of State Police should be requested to develop and coordinate special regulatory and enforcement activity by appropriate State and local government agencies to curtail the use, sale, and exchange of anabolic steroids in and around gyms, health clubs, and bodybuilding salons.

7. The Governor's Drug Abuse Task Force should be requested to survey anabolic steroid use among high school students in the Commonwealth. Particularly important is the credible documentation of the incidence and prevalence of use, sources of supply,

quantity and type of substances used, methods and modes of injection or ingestion, duration of use, and explicit characteristics of users.

8. The Secretary of Health and Human Services and the Secretary of Education of the Commonwealth should be requested jointly to empanel an ad-hoc advisory committee to inventory, develop and coordinate the use of educational and prevention materials on anabolic steroids by local school districts throughout the Commonwealth. Representation on this committee should include all appropriate State agencies, the Virginia High School League, coaches' associations, student athletic organizations, parent and teachers organizations, and other relevant organizations and individuals.

9. The Virginia High School League should be encouraged to adopt and promulgate in the Official Handbook rules to prohibit the use of performance-enhancing drugs and substances by high school athletes and other high school students.

10. Federal and State efforts to locate and destroy clandestine laboratories and distribution networks involved in the illegal manufacturing, distribution and sale of anabolic steroids and of counterfeit or bogus anabolic steroid products should be intensified.

11. At the federal level:

    - The Interagency Task Force on Anabolic Steroids of the U.S. Justice Department, Food and Drug Administration and Federal Bureau of Investigations should be encouraged to intensify and coordinate efforts of the federal and state governments to curtail the availability and use of anabolic steroids by minors;

    - The U. S. Attorney General and the Secretary of Health and Human Services should consider evidence supporting the desirability of scheduling anabolic steroids federally as a controlled substance in an effort to better control and account for the manufacture, distribution and use of anabolic steroids in the United States.

    - The Congress of the United States should be memorialized to ensure increased attention to and visibility of the abuse of anabolic steroids as part of a national, comprehensive effort to address and prevent drug abuse by the nation's youth.

The Task Force appreciates this opportunity to be of service to the Department of Health Regulatory Boards, the Virginia Legislature, and the citizens of the Commonwealth.

APPENDIX A

Survey of Virginia High School Coaches

July, 1988

COMMONWEALTH of VIRGINIA

Department of Health Regulatory Boards

BERNARD L. HENDERSON, JR.
DIRECTOR

1601 ROLLING HILLS DRIVE
RICHMOND, VIRGINIA 23229-5005
(804) 662-9900

Dear Virginia Coach:

The Virginia General Assembly has requested this agency to study the extent of anabolic steroid abuse by minors and to recommend ways to curtail both the supply of and demand for steroids by young athletes. A special Task Force has been appointed to conduct the study and to report findings to the next session of the Virginia Legislature.

Few individuals are in as close contact with young athletes as you are. While this study is just getting underway, we did not wish to miss this special opportunity to alert you to this important activity and to solicit your valuable input. As a first step, the attached questionnaire has been prepared to assess coaches' perceptions of the size and importance of the anabolic steroid issue.

We ask you to take a few moments during this busy conference to complete the questionnaire on a completely anonymous basis. Please return the completed form to the Registration Desk or to a session leader.

You may wish to note also that a hearing on this issue will be held at the Capitol Building in Richmond on August 12 at 10:00 a.m. Your participation in the hearing will be most welcome, or you may submit comments in writing to this address by August 31. Finally, if you wish to be informed of study results or to volunteer to be interviewed or surveyed in more depth, please complete the enclosed card and return it with your questionnaire.

On behalf of the Task Force, I thank you for your cooperation in this most important endeavor.

Sincerely,

Richard D. Morrison, Ph.D.
Research Director for the Study

PLEASE COMPLETE BOTH SIDES AND RETURN TO REGISTRATION DESK

Please check the answer that most closely reflects your status, knowledge, or viewpoint. Unless otherwise directed, please check only one response.

1. I am a 85% male 88% coach 4.7% administrator
   8.7% female 5.5% trainer Other 0.7% (fill in)

   in a 80% public 8.7% middle school 81% high school
   3.1% private other school 3.9% (fill in school type)

   in a 29% city system located in a (an) 34% rural area
   58% county system 34% suburban area
   other system 0.7% (fill in) 15% urban area.

2. I coach/train primarily 64% males aged (check one) 0% under 10
   14% females 6.3% 10 - 14
   21% both sexes 37% 14 - 16
   in the following sports: (fill in up to four) 73% 16 - 18
   (1)_____(2)_____ 3.9% 18 - 21
   (3)_____(4)_____. 0.7% over 21

3. From personal knowledge, or from sources I trust, I believe the following statement best characterizes the use of steroids by minors (under 18):

   40% Extremely rare; no real problem (Fewer than one athlete in 100)
   34% Rare, but a real problem (One to five percent use)
   16% Fairly prevalent; a cause for concern (five to ten percent use)
   0.7% Epidemic proportions, a cause for urgent concern.

4. Media attention and public concern about steroid use among minors is:

   12% Exaggerated; there is no pervasive problem
   58% Appropriate and justified, given the size of the problem
   17% Inadequate, given the size of the problem.

5. The steroids minors use are obtained primarily from:

   3.1% legal medical prescriptions
   28% friends, other athletes
   11% mail order
   4.7% "street" dealers/pushers
   other known sources (specify) 0%
   _____.
   17% dealers who frequent private health clubs
   11% health club employees
   30% don't know any source

PLEASE COMPLETE THE REVERSE SIDE OF THIS QUESTIONNAIRE. THANK YOU.

PLEASE COMPLETE BOTH SIDES OF QUESTIONNAIRE AND RETURN TO REGISTRATION AREA

6. Most young steroid users are:
   - 2.3% well informed about effects and risks
   - 54% poorly informed about effects/risks
   - 43% misinformed about effects and risks

7. I would condone anabolic steroid use by young athletes:

   68% never
   6.3% only under carefully controlled conditions
   3.1% if benefits outweigh risks
   13% irrelevant, not a coach's role.

   What conditions would need to be met for you to condone steroid use?

   _____

8. Do you believe other coaches condone steroid use among young athletes?

   31% Yes 24% No 37% Don't know

9. Please state briefly the primary reasons you believe young athletes use anabolic steroids:

   _____

   _____

10. Please state briefly the athletic or other benefits to be derived from the use of anabolic steroids:

    _____

    _____

11. Please state briefly the <u>short-term side effects</u> from the use of steroids:

    _____

    _____

12. Please state briefly the <u>long-term side effects</u> from the use of steroids:

    _____

    _____

13. Finally, what, if anything, do you feel the Commonwealth should do to curtail the use of anabolic steroids by young athletes? Please address both the "supply" side and "demand" side.

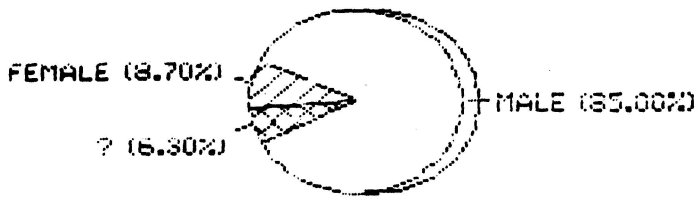
    _____

    _____

    _____

THANK YOU FOR YOUR TIME AND INTEREST. PLEASE RETURN TO REGISTRATION DESK.

GENDER



JULY 1988

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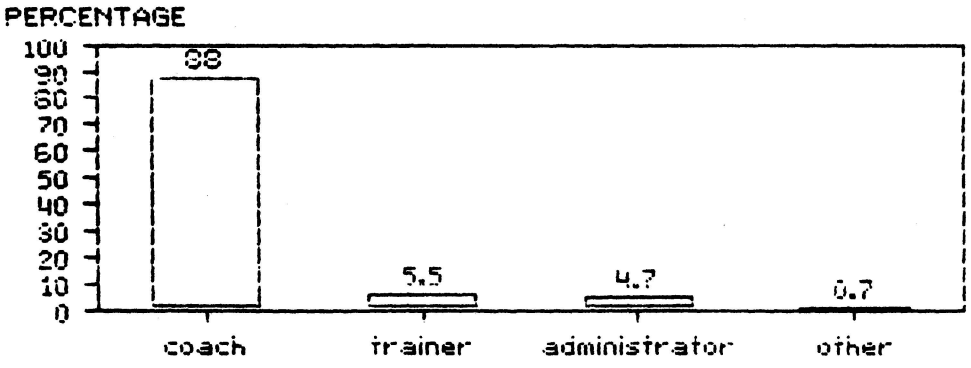

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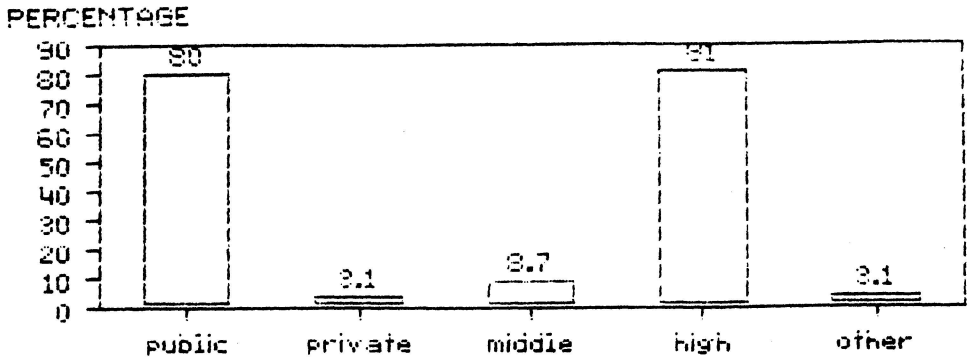
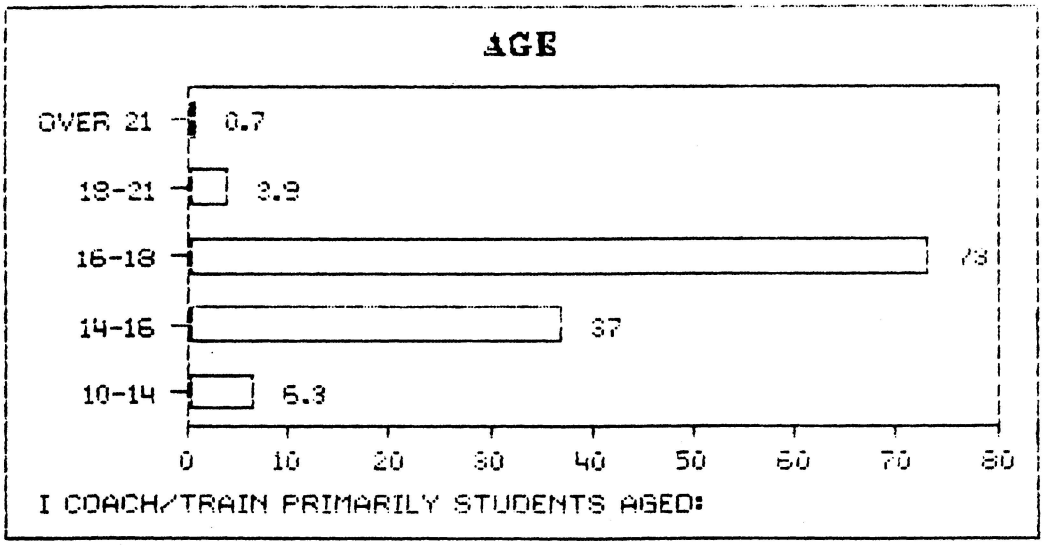
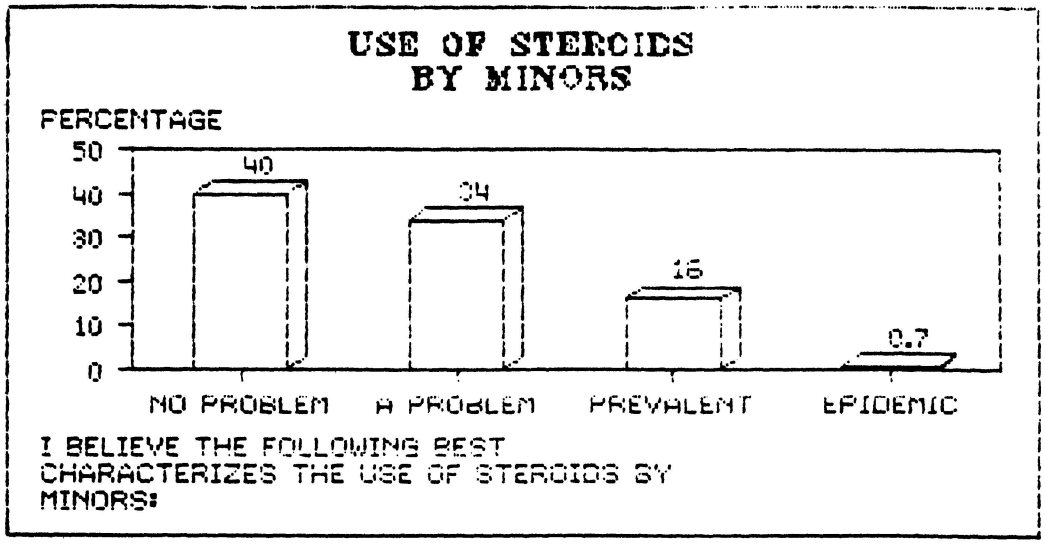
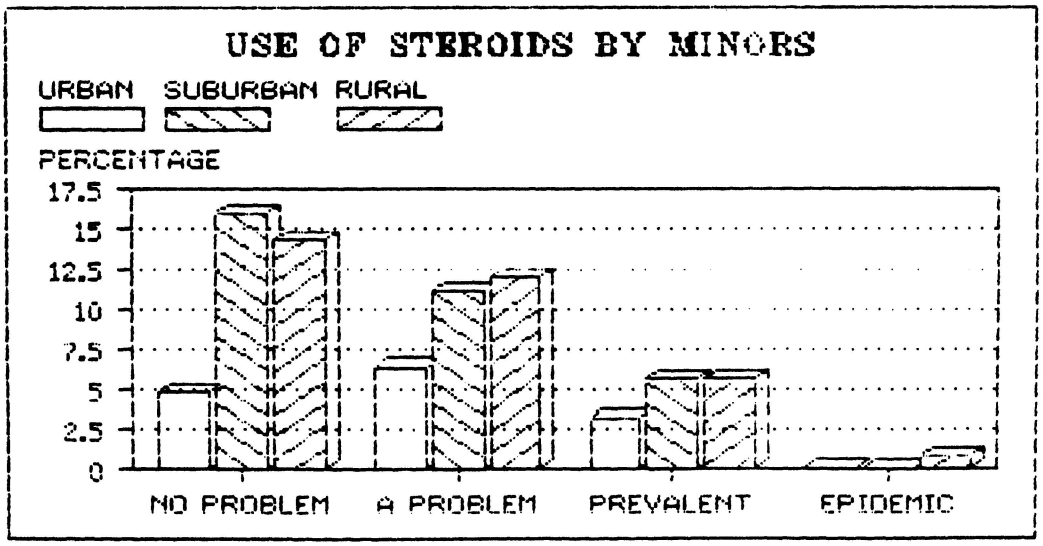
SCHOOLS

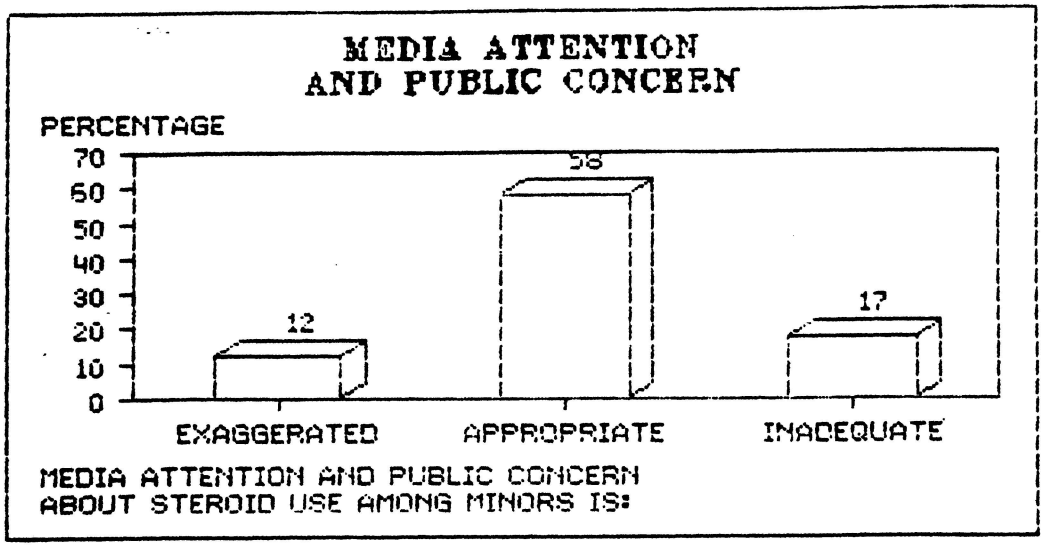


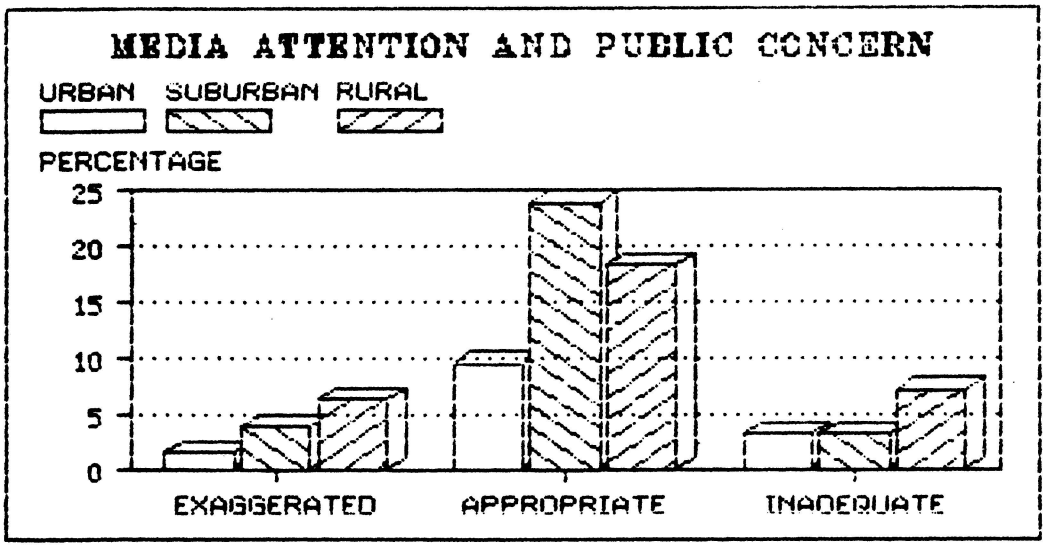
JULY 1988

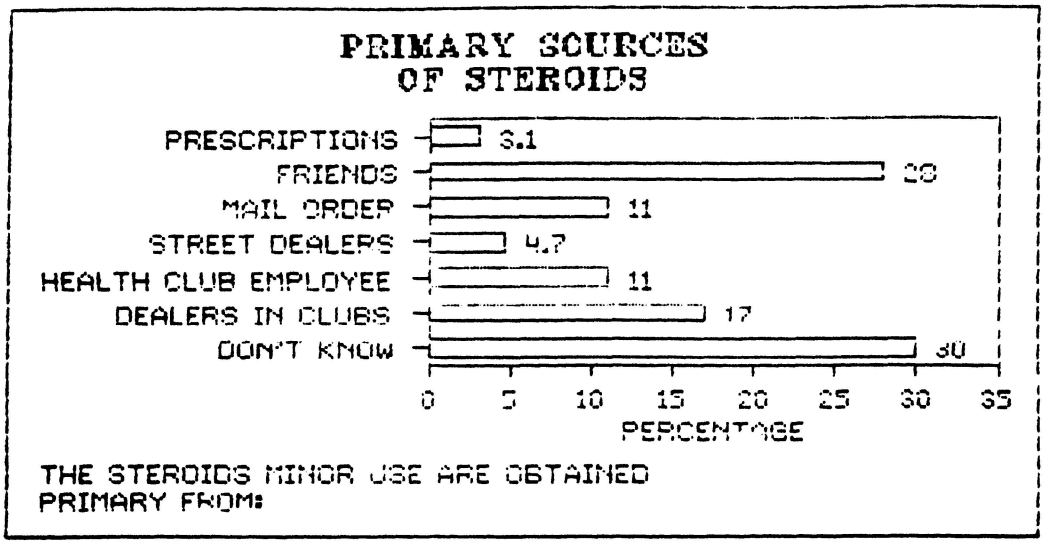


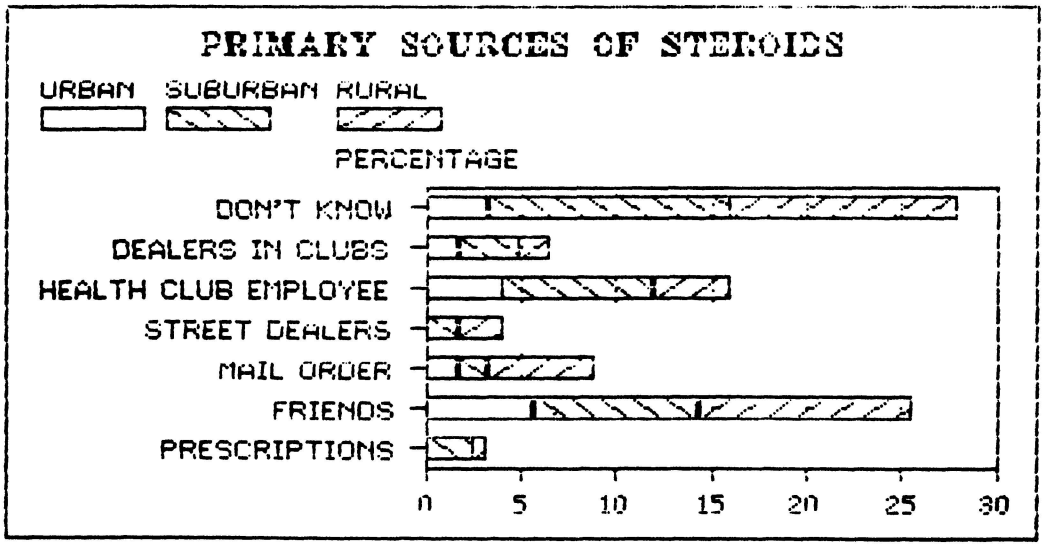

USE OF STEROIDS
BY MINORS
PERCENTAGE
50
40
30
20
10
0
40
34
16
0.7
NO PROBLEM
A PROBLEM
PREVALENT
EPIDEMIC
I BELIEVE THE FOLLOWING BEST
CHARACTERIZES THE USE OF STEROIDS BY
MINORS:

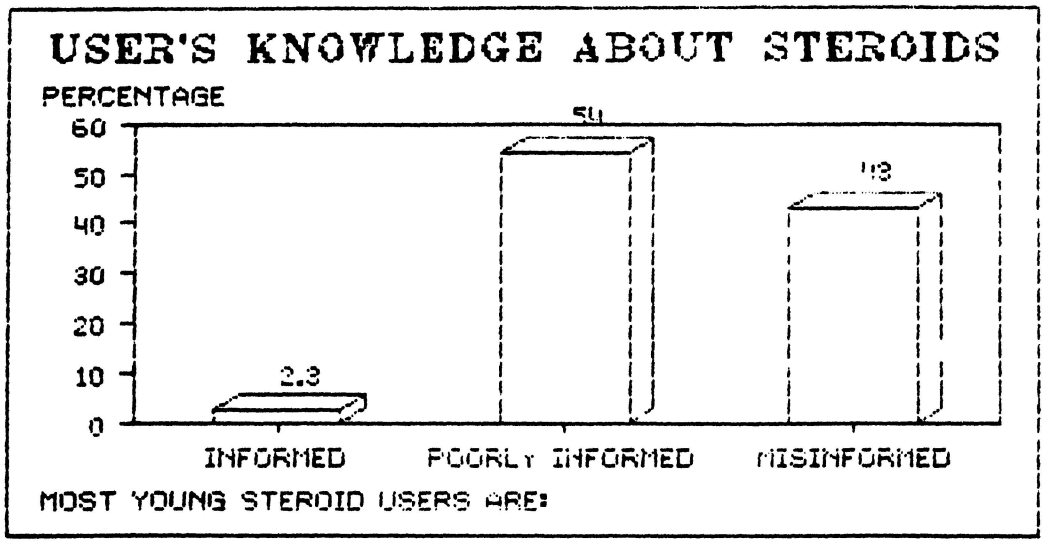

USE OF STEROIDS BY MINORS
URBAN
SUBURBAN
RURAL
PERCENTAGE
17.5
15
12.5
10
7.5
5
2.5
0
NO PROBLEM
A PROBLEM
PREVALENT
EPIDEMIC

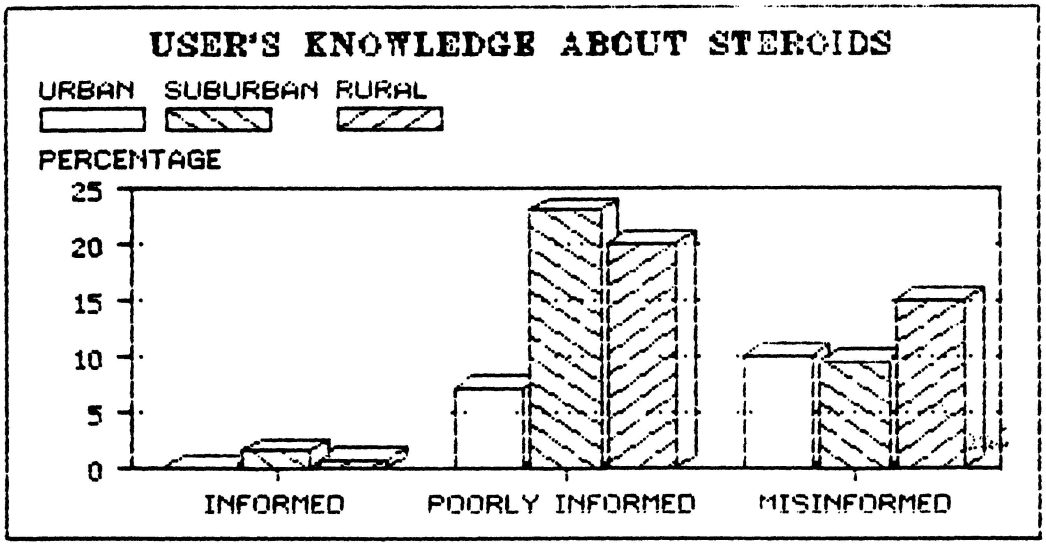

MEDIA ATTENTION
AND PUBLIC CONCERN
PERCENTAGE
70
60
50
40
30
20
10
0
12
58
17
EXAGGERATED
APPROPRIATE
INADEQUATE
MEDIA ATTENTION AND PUBLIC CONCERN
ABOUT STEROID USE AMONG MINORS IS:

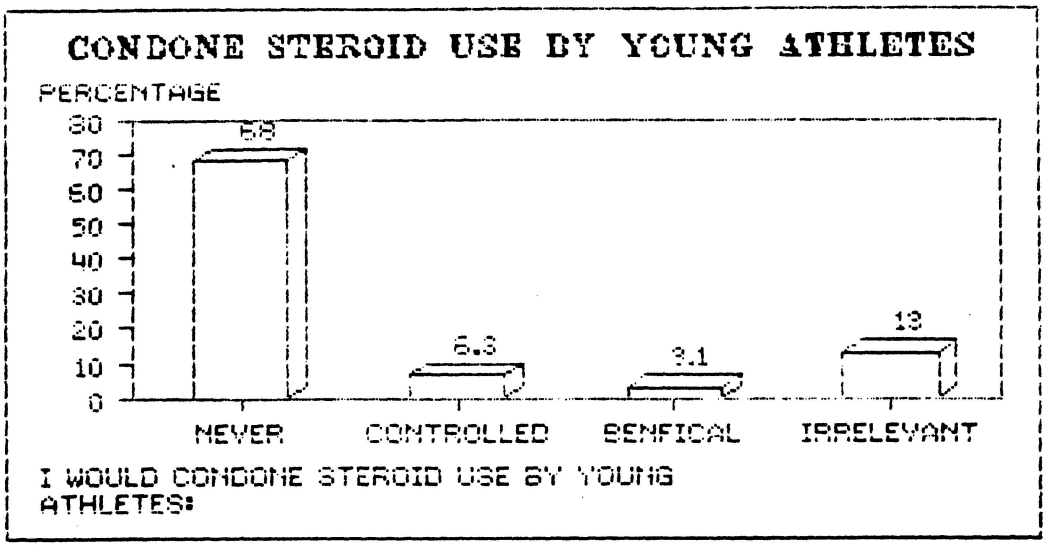

MEDIA ATTENTION AND PUBLIC CONCERN
URBAN
SUBURBAN
RURAL
PERCENTAGE
25
20
15
10
5
0
EXAGGERATED
APPROPRIATE
INADEQUATE

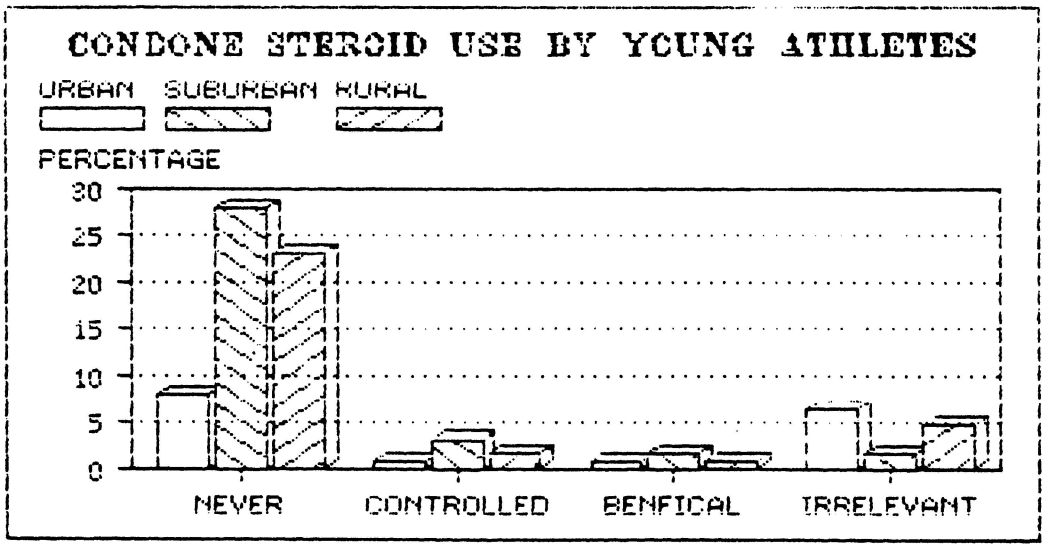

PRIMARY SOURCES
OF STEROIDS
PRESCRIPTIONS
FRIENDS
MAIL ORDER
STREET DEALERS
HEALTH CLUB EMPLOYEE
DEALERS IN CLUBS
DON'T KNOW
3.1
28
11
4.7
11
17
30
0
5
10
15
20
25
30
35
PERCENTAGE
THE STEROIDS MINOR USE ARE OBTAINED
PRIMARY FROM:

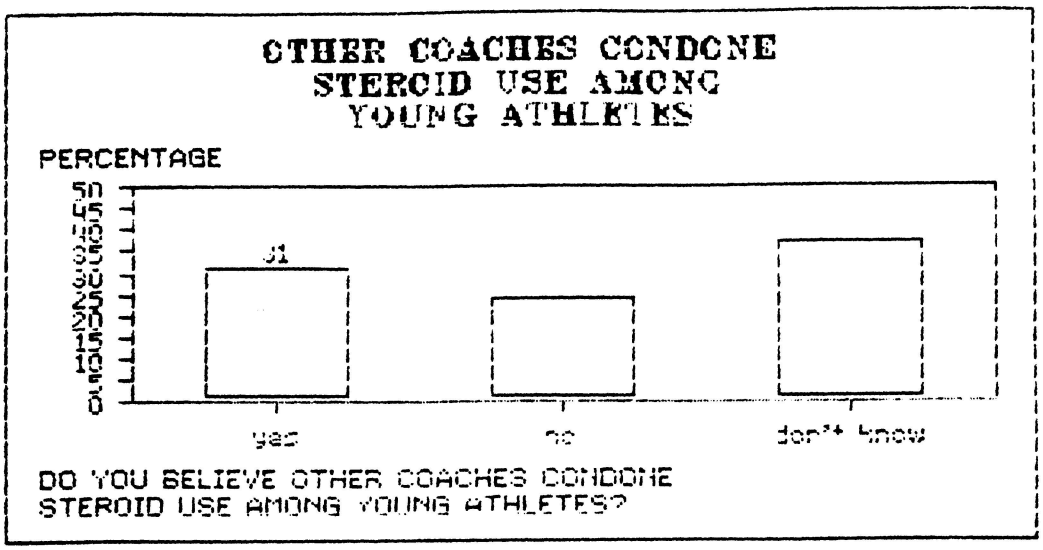

PRIMARY SOURCES OF STEROIDS
URBAN
SUBURBAN
RURAL
PERCENTAGE
DON'T KNOW
DEALERS IN CLUBS
HEALTH CLUB EMPLOYEE
STREET DEALERS
MAIL ORDER
FRIENDS
PRESCRIPTIONS
0
5
10
15
20
25
30

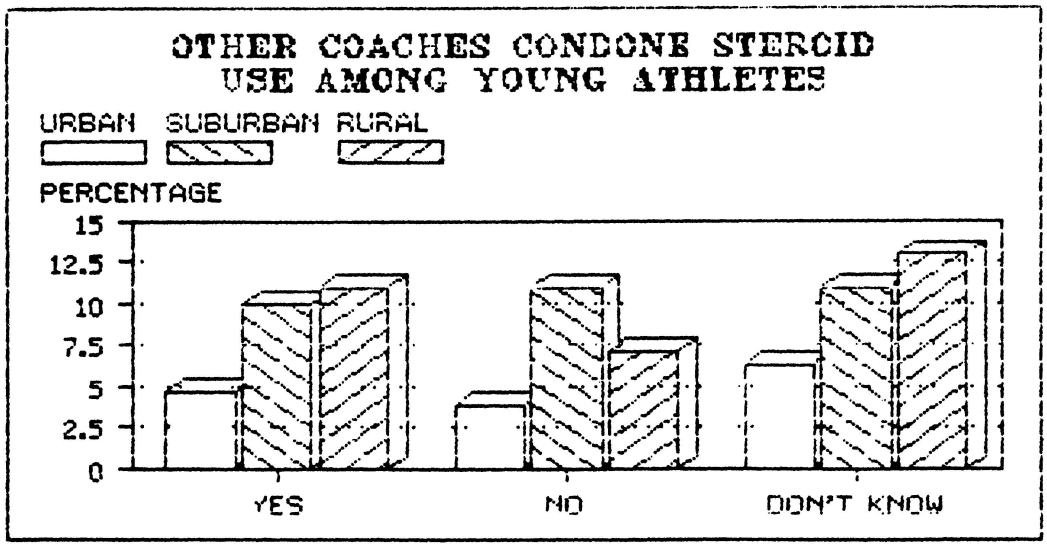

USER'S KNOWLEDGE ABOUT STEROIDS
PERCENTAGE
60
50
40
30
20
10
0
2.3
INFORMED
POORLY INFORMED
MISINFORMED
MOST YOUNG STEROID USERS ARE:


USER'S KNOWLEDGE ABOUT STEROIDS
URBAN
SUBURBAN
RURAL
PERCENTAGE
25
20
15
10
5
0
INFORMED
POORLY INFORMED
MISINFORMED


CONDONE STEROID USE BY YOUNG ATHLETES
PERCENTAGE
80
70
60
50
40
30
20
10
0
68
6.3
3.1
13
NEVER
CONTROLLED
BENFICAL
IRRELEVANT
I WOULD CONDONE STEROID USE BY YOUNG ATHLETES:


CONDONE STEROID USE BY YOUNG ATHLETES
URBAN
SUBURBAN
RURAL
PERCENTAGE
30
25
20
15
10
5
0
NEVER
CONTROLLED
BENFICAL
IRRELEVANT


OTHER COACHES CONDONE
STERCID USE AMONG
YOUNG ATHLETES
PERCENTAGE
51
yes
no
don't know
DO YOU BELIEVE OTHER COACHES CONDONE
STEROID USE AMONG YOUNG ATHLETES?


OTHER COACHES CONDONE STERCID
USE AMONG YOUNG ATHLETES
URBAN
SUBURBAN
RURAL
PERCENTAGE
15
12.5
10
7.5
5
2.5
0
YES
NO
DON'T KNOW

APPENDIX B

Samples of Underground Steroid Handbook (VSR)

USH UPDATE! #2

EQUIPOISE:
A NEW BEST BUY

EQUIPOISE (Boldenone Undecylenate Injection) Squibb 50mg/cc 10cc bottles
Wholesale price: $19.95/10cc
Pharmacy/Veterinary price: $25-$45
Black market price: $45 (average)-$70 (too high)

How do we determine a best buy in anabolic steroids? It isn't just a matter of price. For example, Bolar Pharmaceuticals manufactures a generic Winstrol that costs less than the original. Since we feel that Winstrol tablets are not effective, we believe that neither is any kind of 'buy' at any price. Here are our guidelines as to what constitutes a best buy: 1) The drug has to be legally available for sale in America. It should be available throughout the country, even in rural areas. 2) It should be available all the time. Some drug manufacturers periodically stop production of an anabolic for a few months (i.e. Anavar by Searle) and then introduce it again at a higher price. 3) It should be better than most all the competition in its class in what it is trying to accomplish. 4) It should be reasonably priced. We determine 'reasonable' to mean that it works the same as another drug and is priced lower or it works better than anything else and is the same or only slightly higher in price compared to the competition.

Equipoise is an injectable anabolic in oil suspension manufactured for use by horses. Don't be alarmed. We'll state right out that the most interesting and effective anabolic steroids available in America are approved for veterinary use only. Although some of the more popular and acessable magazine articles either ignore or mention derisively those 'MR ED HORSE DRUGS' the powerlifting world (as they always do) quickly gleaned the value of these agents and immediately put them to use. Right now many powerlifters, especially women, are realizing immense size and strength gains while on Equipoise. Equipoise is almost purely an anabolic agent, it is vanishingly low in androgens. Also, test studies (on horses) show that it does not cause testicular atrophy because it does not lower the gonadatrophin output in the body. Not only can we surmise that this will also be true in humans, but it appears that Equipoise does not aromatize. This is adding more evidence to our pet theory that only androgenic drugs aromatize. To refresh your memory, aromatization of a steroid causes increased estrogen/aldosterone levels in the body (in both men and women) which creates fluid retention and added fat buildup. Equipoise is not toxic to the liver. All in all, a very 'safe' and effective drug.

We feel that it is an excellent size/strength combination drug, a better acting equivalent to Deca Durabolin (and friends) for everybody, especially for women. It goes without saying that Equipoise completely wipes out Methandriol Dipropionate as a best buy (we never thought that MD was such, but many do).

Also, Equipoise has great potential for bodybuilding contest preparation for both men and women. Because it doesn't aromatize, water retention is easier and (because of the reduced need for estrogen/aldosterone antagonists) cheaper to control. Primobolan still could be the best injectable in terms of effectiveness and price for a

contest, as Winstrol V is rather expensive. With the devaluation of the Mexican Peso, Primobolan Depot is quite cheap. Our criteria; however, excludes the Primabolans from the best buy category because of their scarcity throughout the US.

Most male powerlifters are using two to three cc's per week of Equipoise, with women using only half that. Being an oil, it does last much longer than a week, the enclosed literature with the drug seems to point to a three week half life.

The only problem with Equipoise is in how to obtain it. Federal law dictates that it is to be prescribed by a veterinarian (only) for use with horses (only). Technically it is illegal for a regular (non-animal) doctor to prescribe it even if you own a horse. However, the only instance where we know this happened resulted in governmental interagency squabbling and a final resolution of non-prosecution of the parties involved. We have found that Equipoise will be more available to athletes in agricultural areas. In these areas regular pharmacies often stock veterinarian drugs, while in metropolitan areas it is the veterinarian himself who sells the drug to the animal owner. Obviously, horse racetracks are an excellent environment for an industrious athlete to establish a business relationship with an enlightened veterinarian.

If the average price for a bottle of Equipoise is $45, then each 100 mg injection would average $9. Our sources tend to all agree that this 100 mg injection is more effective than a 200 mg injection of Deca Durabolin. In our area a good price for Do-It-Yourself-Deca is $12 per 200 mg. Equipoise, therefore, has earned our 'best buy' rating.

SEE PHOTO on PAGE 4

GENERIC DIANABOLS

RATING FOUR NEW ONES

Ciba has withdrawn Dianabol from the world market. The company's official reason for this decision is that the drug was being prescribed improperly as an appetite stimulant, especially in third world countries. The real reason is that the patent rights had run out on methandrostenolone and many companies were coming out with their own versions of the drug and undercutting Ciba on the wholesale and retail level. Also the public is becoming more aware of steroids and their so called abuse, which means that inevitably lawsuits will evolve against many drug companies selling anabolics, and with Dianabol almost a household name in the sports field, Ciba could have been high on the hit list. Really, Ciba never made a lot of money with Dianabol; it was a smart business move not to compete and stop production of the product.

Fortunately for the athlete the generic Dianabols were available at the time of the withdrawal, so there was no lag in availability. All users were pleasantly surprised at the $10 drop in price for the new generics. We have had conflicting reports from users around the country stating that the new generic Dianabols were 1) the same as, 2) better than, and 3) not as effective as the old Ciba product. We found out that everyone was right.

To our knowledge, there are four suppliers of methandrostenolone. They are: Rugby, Generix, Bioline, and Bolar Pharmaceuticals. Now that doesn't mean that each supplier manufactures its own product. Oh, no. Only Bolar manufactures its own generic Dianabol all the time. The other three drug houses buy from other drug manufacturing houses. Just which house these other three suppliers use never stays the same, but changes from lot to lot according to who has the lowest bid! Usually Rugby, Bioline and Generix buy from one of two manufacturers, Par, located in Upper Saddle River, New Jersey or from Barr,

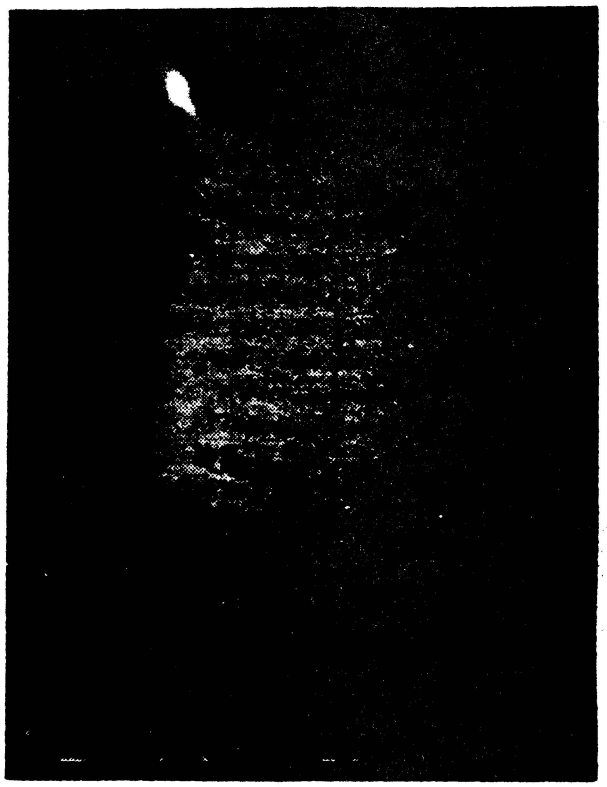
Readers of the USH will find nothing really new in Dr. Kerr's work. That does not mean that it is not a good book. It is quite excellent in its own way. This is the only book about anabolics we know of that is written by a medical doctor. All the rest are not. How does this make a difference? It means that other doctors around the country will tend to believe a practical, logical, and methodical tretise on anabolic steroid use. Even though most all the information about the drugs themselves is the same as in our USH, Dr Kerr's book, for the layman, is the more palatable. It is well printed and bound (with no typos). It has much detail on interpretation of blood and urine tests. It does not make light of the topic with cynical humor and depraved cartoons. It is slick, effective, and relative to the real world drug scene, somewhat conservative. His introduction defending the use of anabolic steroids in athletics is rational, however convoluted his sentence structure becomes at times.

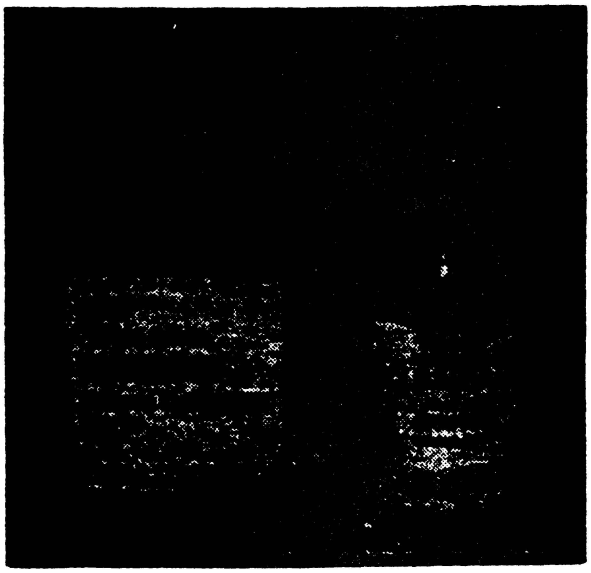
As far as hard core information, many will find this book to be quite eye opening, but readers of the USH and its UPDATES will not. As a first to be read book or primer on anabolic steroids for the conservative, timid, or medical person, this is the best of its kind, especially because it is written by a medical doctor. The book is $12 postpaid and is available by writing Robert Kerr MD, 316 E. Las Tunas Dr., San Gabriel, CA 91776. By the way, Dr. Kerr is a very busy man, please do not telephone him up just to chat.

MISC. DEPT.

We are looking for dealers (independants) for the USH, the USH UPDATE and all other OEM products, including supplements mentioned in the DIET HANDBOOK. As you know, many gym owners are leery of carrying a book about steroids no matter what good business sense it makes. So we want an Underground Dealer Network, individuals who can buy in small lots, don't want to work very hard, and want to make quick money. If any of you are interested, please write to us with the words DEALER INQUIRY on the envelope.

 The USH UPDATE is published bimonthly. Subscription rates are $12 per year (six issues). Single copy price $2.





in Northvale, New Jersey. Originally Rugby used Bolar as its manufacturer but changed with complaints that Bolar's tablets were too soft and didn't show ID imprint numbers clearly enough. All generic drugs should be the same. But they aren't. The best generic Dianabol out is Bolar's. Here's why·

First, the very fact that Bolar makes a soft tablet is very important. As much of the oral anabolics are destroyed in the stomach, it would be advantageous to allow them to dissolve under the tongue (sublingually). Much of the drug is absorbed into the bloodstream this way, bypassing the stomach. Of course, the Bolar tablet was not designed to be a sublingual type, so it won't totally dissolve this way, as for example, methyltestosterone tablets do. But they do dissolve better than Ciba's product and better than either the Par or the Barr tablets.

Secondly, the Bolar generic is a stable product. You always know what you are getting all year round. Barr and Par are really in competition with each other. Each will be trying to offer its product at always the lowest price. Let's discuss how tablets are made. It would be nice if some computer divvied up exact little five mg-manounts of methandrostenolone, each to be made into a tablet. It doesn't happen that way. Usually a higher amount, say 1 gram, is mixed in with a filler/binding agent, usually talc (magnesium oxide). From this mixture, two hundred tablets are made. Voila, you get five mg tablets! The FDA sets standards for accuracy of tablet dosage, and it must be plus or minus 10%. So the possibility exists that your 10 tablet, 50 mg daily dosage of generic Dianabol could be off as much as 5 mg (one whole tablet) either way. So reports of better than, same as, or not as strong as the old Dianabol could all be true.

How do you tell which suppliers' tablets are the most potent? You can't for sure. But you can make educated guesses. You wouldn'y buy from manufacturers competing against each other by low bids. In our mind quality always suffers this way. That's why we choose Bolar, not only do they have the softest tablet, but their product is constant all year long. Because they manufacture and sell direct to pharmacies, eliminating a middleman (but not all of them) they also happen to have the lowest wholesale price, $6.50 per hundred. This undercuts the others only by a couple of dollars, but that translates to $5+ on the retail level. If your doctor or pharmacist needs to know, Bolar is in Copiague, New York 11726.

To summarize, we feel that Bolar Pharmaceuticals Methandrostenolone (generic Dianabol) is the best on the market now and its tablet construction makes it even better than the out of production Ciba Dianabol.

Is it the best buy in oral steroids? It is if you get good results from Dianabol. We still get better results from Anadrol. Three Anadrol tablets per day seem more effective than 10 Dianabol tablets. Ten Bolar tablets should average $1.30 retail. Three Anadrol tablets are about $1.50. We still feel that if Anadrol instills no uncomfortable side effects (it does in many), it is still the best buy in oral anabolics.

BOOK REVIEW:

THE PRACTICAL USE OF ANABOLIC STEROIDS by Robert Kerr MD

We must say that we know Dr. Kerr; he happens to be our doctor. Although this would seem to put us in the position as being non-objective, we truthfully never shared much information with the doctor. He did, however, have a copy of the USH while he was writing his book, 'The Practical Use of Anabolic Steroids'.

USH UPDATE! #3

DHEA:

A WAY TO BEAT THE DRUG-TESTS

DHEA is the abbreviation for the chemical Dehydroepiandrosterone. This chemical has gotten coverage in popular magazines of late (OMNI and GERIATRICS) and is considered to be some new kind of wonder substance. In the years ahead, DHEA will be a very sought after chemical in the strength field, because it can be used to beat the testosterone drug test. Before we get into this aspect, let's tell you some basics about DHEA.

DHEA is a natural substance, both men and women produce it. It is one of the many hormones synthesized by the adrenal cortex. About 40 to 60 mgs. per 24 hours are produced. Normal blood plasma levels are 1.5 mgs. per liter in men and about 1 mg. per liter in women. Production of the hormone starts at about seven to ten years of age in both sexes and the highest secretions are found in age levels of between twenty and thirty years. DHEA was first isolated from urine in 1934.

DHEA can be converted by the body into testosterone. In men, the conversion mostly takes place in the prostate, although a small amount is converted in the testes. In women, the conversion takes place in the ovaries. Unconverted DHEA has a mildly androgenic effect. It is only one seventh to one tenth as androgenic as testosterone. Regular people (non-scientists) got excited about DHEA when a few research studies showed that obese women have a DHEA deficiency. Administration of high doses of DHEA helped in weight reduction. DHEA does more in the body than just turn into testosterone. It inhibits testosterone catabolism. It elevates thyroid output. It also inhibits aldosterone production. To remind you, aldosterone is also synthesized in the adrenal cortex and regulates sodium retention by allowing it to be reabsorbed into the bloodstream from the kidneys. It is aldosterone which is the prime culprit in water retention. Whenever there is a rise of estrogen in the body there usually is a corresponding rise in aldosterone production.

Mostly this is what you have heard about DHEA, all the 'good stuff'. You would think that it would be beneficial to have an abundance of this substance. There are many good uses for DHEA in athletics but we feel that it would be foolish to use it year around. This is because the 'bad stuff' about the hormone would affect athletes more than ordinary people. First, DHEA can aromatize. This of course will mean elevated estrogen levels in the body. Also, DHEA depresses gonadotrophin release in both men and women. So although DHEA can be turned into testosterone and prolongs the life of all testosterone in the body, it will inhibit a natural production of the hormone. In women large levels of DHEA may stop ovulation. Most important though, is DHEA's action of inhibiting cell division and interfering with ATP production. Both these effects are well documented. To put it simply, DHEA will not allow the muscle cells to recover and grow optimally, nor will it allow you to develop increased strength.

Though this data seems to show that DHEA is something to stay away from, the hormone does have some attractive effects. For normal, non-athletic people, especially women, increased androgens, thyroid output, and decreased aldosterone levels will show good weight losses. For bodybuilders, DHEA could be used the last two weeks before the contest to decrease aldosterone production. As we've mentioned before, there are drugs to inhibit the effects of aldosterone (such as Aldactone), but none as yet to stop its production in the adrenal cortex. Right now, DHEA is the best we have. We recently found out that Aldactone is an androgen antagonist, competing with the same binding sites as androgens. Prolonged use of Aldactone can lead to gynocomastia. So, the less Aldactone you need to use, the better. By the way, Schering-Berlin has developed a new derivative of Aldactone that is four times as powerful and is not an androgen antagonist. It's not for sale in the US and probably never will be (legally). We think that this new product is so good that we are trying to get it into the country however we can.

As you can imagine, DHEA is marketed as a dieting aid drug in many countries. It is not available to the general public in America. Some drug manufacturing laboratories (such as Sigma Labs) supplying researchers do offer DHEA and DHEA-Sulphate powder to <u>qualified</u> people engaged in research. Mexico is the closest place to purchase DHEA (and over the counter at that). Schering-Mexico offers it as Binodian, which is 200 mgs. of DHEA mixed with 4 mgs. estrogen (they must have their reasons) preloaded into a syringe. DHEA is also marketed there

INJECTABLE WINSTROL:

why you don't hear about it

WINSTROL V Stanozolol aqueous injection, 50mgs. per cc. Winthrop Labs. Comes in 10cc and 30cc bottles. Price (black market): $25-$35/10cc, $75-$100/30cc

Winstrol V is an injectable form of the regular oral Winstrol tablets. It is a veterinary product, approved for use in dogs, cats, and horses. If you've ever tried to give your pet a pill, you can understand why Wintrop offers Winstrol as an injection. Right now there is a lot of interest in Winstrol V in the US because it is not androgenic, not liver toxic and doesn't aromatize.

On paper, Winstrol looks to be what's known as a very 'sexy' drug. It is water based, which means that the whole dose gets into the system and working relatively fast. Also, being an aqueous suspension, it is easier to control, lasting no more than three days. The usual dosages we've heard of being used have been 2 to 3 cc's every three days. A 3 cc injection would be the same amount as 75 tablets. At a high of $100 per 30 cc's (which is what we paid for it) this would be a $10 shot compared to about $13 of tablets. Taking into consideration that some of the tabletized amount is destroyed in the gastric tract, Winstrol V would appear to be a cost affective choice, especially considering no estrogen antagonists should be needed; remember, it won't aromatize. Finally let's say that the scientific record on Stanozolol is outstanding, with studies showing it to be very safe and effective (on rats, anyway). Powerlifters don't use it much. Bodybuilders (especially some very good international ones) do, including women.

We had heard nothing but good things about Winstrol V from the rumor mill, and although we take a dim view of oral Winstrol, we withheld our opinion until we had some firsthand experience with the injectable. To be truthful, we really <u>wanted</u> it to work and theorized that Winstrol V might be better because one would be getting a very high amount that bypassed the gastric destroyers. Our dosage was 2 cc's every three days for a four week total. The first week and a half included increased protein and calories to see how well Winstrol V would promote weight gain. The next week and a half we reduced the calories to about 2000 per day to see how the drug would do in retaining size and strength while dieting. During the last week we added Anavar (10mgs. daily) as this is a popular voodoo stack. We were on reduced calories while on this stack.

Winstrol V didn't work for us. We didn't gain any muscle weight, we didn't gain strength. Nor did we think that Winstrol V was effective in preventing muscle mass loss while on a diet. The Winstrol/Anavar stack also did not generate any magic for us. We did get a mild increase in appetite. Winstrol V was not effective in healing minor joint injuries, which Deca-Durabolin does quite well (it is used with arthritis patients).

This drug has one very bad effect. As we mentioned earlier, it is not androgenic (nor is Anavar). However: it does supress your own output of testosterone, your natural androgen supply. This low androgenic state in the body brings on mental depression. Since Winstrol doesn't increase strength or aggression, and with this mentally depressive state, we feel that it is totally counterproductive as an anabolic agent. If oral Winstrol works for you (and some bodybuilders, great ones, claim that it is the only oral anabolic which they use) then you will be quite happy on Winstrol V. For the majority of bodybuilders, male and female both, Winstrol V is just not an effective drug.

So far we are at a loss to recommend a good American contest-prep injectable. It should be non-aromatizing (unlike Deca-Durabolin) and it has to really work. It must be highly anabolic, which seems to leave out injectables with low androgen contents like our Winstrol V. This leaves us with two possibles, Equipoise, which hasn't been used for contest prep by enough bodybuilders to state that it definitely won't aromatize, and Methandriol (aqueous) which no one seems to make anymore. We feel that Methandriol Dipripionate (oil-based) is too slow acting to be considered effective. We're looking into the European and Mexican injectables including the Primabolans and Anatrofin. There seems to be good promise in the wacky, wacky world of Italian steroids. Italy has more weird human and veterinary anabolics than any country, but none of it gets into America other than Esycline (aqueous injection) and Anabolicum Vister, the non-aromatizing Dianabol derivative.

The **USH UPDATE1** is published 6 times a year by OEM Publishing, 1716 Main St., Suite 193, Marina Del Rey, CA 90291. Subscriptions are $12 per year. Single copy price is $2.

NEW PARAMETERS

REDEFINING THE STATE OF THE ART

This column represents a radical rethinking of bodybuilding contest preparation drugs. We are looking for an ideal combination, the right stack. In recent years, with a very, very defined contest look being in vogue, most competitors are concerned with water retention. In the majority of cases, the cause of water retention is the aromatization of steroids and the consequent elevated aldosterone levels. There are two methods to combat this. The most tried and true is to use anabolics that don't 'hold water'. The best known drugs which won't aromatize are Anavar, Maxibolan, Winstrol (orals), and Primobolan, Winstrol V, and Deca-Durabolin .Deca does aromatize but many just don't know this). The problem here is that most all these drugs are not androgenic (Deca excepted). Current practice in bodybuilding is to stay away from androgenic drugs before a contest. Although these drugs may have outstanding anabolic to androgenic ratios, the truth is that if a drug is not very androgenic, it will also not be very anabolic. Drugs high in androgens such as Dianabol, Anadrol, and the Testosterones are also highly anabolic, and it is this reason that these drugs work better for most people. After a lot of thinking, we have concluded that somehow androgens do play a very important part in contest preparation. It seems that bodybuilders who get really 'cut' have high androgen levels. For example, blacks males, as a racial trait have higher androgen levels than Caucasians. In bodybuilding circles there is general agreement that blacks are generally more succesful than others at getting 'ripped'. We know that the popular non-aromatizing drugs are low in androgens, and at the same time they are gonadotrophin antagonists, meaning that using these drugs will shut down the body's normal supply of androgens while not supplementing the loss. Androgens have been prescribed in Europe for quite a while to women as anti-depressants. If you have a low androgen level, you probably will become mentally depressed as a result. This is what happens when many people go off anabolic steroids. They will become depressed and this can always be traced to a natural low androgen output as the body readjusts. Inversely, you now see why people feel so good while on androgenic drugs like Dianabol or Injectable Testosterone. We haven't any idea why high androgen levels coincide with successfully reducing bodyfat, water levels in the skin, and all the while still keeping that elusive full look, but we think they are some kind of key.

preparation drugs (because they work so much better anabolically) drugs and combat the increased estrogen and aldosterone levels with antagonists such as Nolvadex, Teslac (for estrogen), and Aldactone (for aldosterone). This method was actually pioneered by us and it works but we now feel it to be too complicated and expensive. Most of these antagonist drugs are hard to get because, being used primarily in high blood pressure or cancer patients, many sports medicine doctors arer hesitant to write a script for them. Nolvadex is over a dollar a tablet and most men use at least six per day for any kind of result. Aldactone is a known androgen antagonist, competing for the same binding sites.

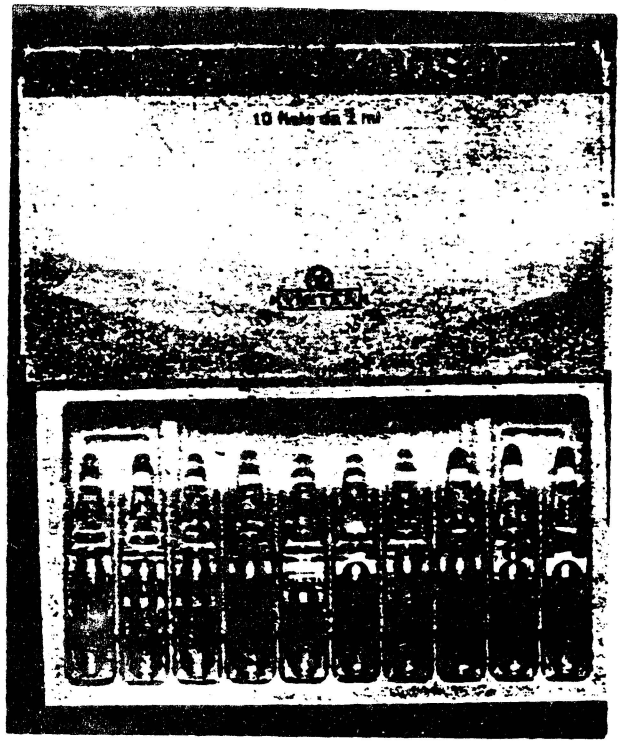
What is the ideal solution? It would be to use highly androgenic drugs with an even higher anabolic content, ones that also wouldn't aromatize. In America, there is only one drug that fits this qualification. The generic name for it is fluoxymesterone. You know it by the brand names Halotestin and Android-F. We know, we really brushed this one aside in the original USH. This drug is usually prescribed as an androgen; it is nine times as androgenic as methyltestosterone. It also is **20 times as anabolic!** It does not shut down production of natural testosterone. It has been shown in most studies not to aromatize, although the product literature indirectly claims that it does. The product insert warns that gynecomastia could be a side effect, which means that the drug will aromatize. Realize thought that all androgens sold in America have the same such warning. We believe the research studies and take the position that this drug won't aromatize. We would like to hear from anyone using fluoxymesterone and encountering gynecomastia or water retention. This drug is really a wild card, guys. If it truly doesn't aromatize it could be the solution, even for women (in smaller amounts). The problem with fluoxymesterone is that it is rather toxic to the liver. By the way, in the original research on the drug done in the late 50's and early 60's, fluoxymesterone was determined to be very similar in action to Bolasterone.

There are many good proven steroids in Europe which are highly anabolic, with a good androgen content and definitely will not aromatize. They are Turinabol (East Germany), Anabolicum Vister (Italy), and Proviron (Germany and Mexico). These may prove to be THE best contest drugs for bodybuilding, and for low weight classes in powerlifting. In the updates to follow we will have additional information on these drugs, and are arranging them to be available more readily here in this country.

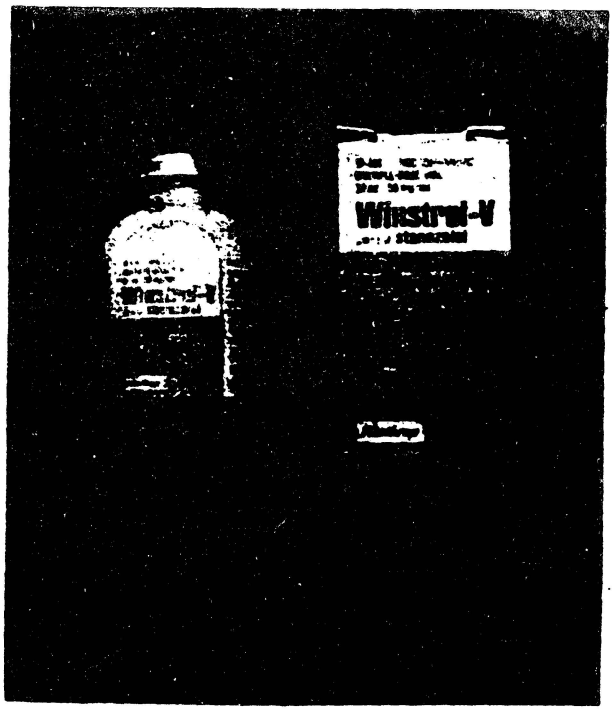
under the brand name Dinistenile, tablet and injection, with doses of 10 mgs. either way. That's it for Mexico. Italy has four kinds of DHEA, all injections, under the names Astenile, Deandros, Mentalornon, and 17-Chetovis. We have been using the 17-Chetovis (Vister, 50mgs. per cc) but hear that it is no longer being made. DHEA was at one time marketed in Britain by Organon under the name Diandrone.

Now that you have a background, let's tell you the really exciting thing about DHEA. As you may know, the world powerlifting federation now requires drug testing at all international meets, and will not recognize any record attempts without a blood test. Also the AAU has decreed that all national bodybuilding contests for 1983 will require blood tests from all competitors. Beating the blood tests has now become a very important part of competition. You know our stand, we like anabolic steroids. We feel that most people who vehemently detest them are ignorant. We don't like these new rules. These decisions are not so bad in AAU bodybuilding because if you don't like them, you can compete in the NPC. But in powerlifting, there is no where to go. We assume that lifters will try to cheat on the new rules, so to give <u>everyone</u> the advantage we will do our best to show you the best ways to cheat on them. Testosterone is a very difficult thing to test for. The most reliable test for this hormone that will be used in the next few years is, yes you guessed it, checking DHEA levels, which drop to below normal when supplemental testosterone is in the system. Let's say right now that at this point we are not THE WORD. We think that by adding large amounts of DHEA to your system, you can beat the test for testosterone. We don't yet have a sure formula of how much, when, or how long. But we're working on it. In a few months time we should have THE definitive method for beating the test. Right now you can use DHEA for the known benefits that it gives, especially the aldosterone inhibiting one. Just don't take it for long periods of time.

We did take it for a long time, six weeks. Our dosage was 50mgs. injected every other day. Not much to report, folks. No strength increase, no significant size increase, but a very slight fat loss without a calorie decrease. DHEA can also be taken orally, but the small amount of research done on oral dosages seems to show that only high (100-400mgs.) amounts show any effect. The DHEA powders supplied by Sigma Labs is prohibitively expensive for such oral use. Our policy is to usually stay away from discussing drugs which can't be readily gotten in America. But DHEA will soon become so important that we feel you should know about it now.



This is injectable DHEA sold in Italy by Vister.



The suspension is white and precipitates quickly.

WHAT'S COMING IN #4

We've put off the needle survey for another issue. Issue #4 will deal with Anabolicum Vister, Proviron (the non-aromatizing androgen from Schering), and Ciba-Geigy's injectable Dianabol. Also, we'll have a short preview of an exciting new Growth Hormone stimulator, better and cheaper than amino acids and which has an

DOUBLE ISSUE: SUMMER–FALL 1983 $4

USH UPDATE! #4/5

addendum to THE UNDERGROUND STEROID HANDBOOK

INJECTABLE DIANABOL

DIANABOL Injection CIBA-GEIGY Mexicana 25mg/ml 10, 50, 100 ml per vial

This drug officially doesn't exist. Ciba-Geigy America wrote us a letter dated May 4th stating, "Ciba Geigy has never produced an injectable form of this drug, nor are aware of any country where such a form is available." Injectable Dianabol is a veterinary drug available in Mexico. You probably will not find it at a regular Mexican pharmacy, and this is why it is relatively new to the body building and powerlifting world. Usually, whatever can be bought at a Tijuana drugstore is what you'll see on the black market here in the states. You have to dig a little harder to find injectable Dianabol.

The packaging is quite unique and our photo does not do it justice. This particular Dianabol, and let us remind you that it is the only Dianabol that Ciba-Geigy still produces, is in a dark brown bottle with a brilliant yellow label. Conservative it's not. You might find it odd that the dosage of the injectable is only 25mg per ml. Usually veterinary products will try to get higher dosages per cc. The essential point here is (and this will become very important later on) that you can dissolve no more than 25 mgs of Dianabol powder in one cc of oil. We know of people who have tried various methods of getting more to dissolve, such as using different types of oils, heating, or adding alcohol. But 25 milligrams per milliliter is the limit.

As you can imagine, Injectable Dianabol is an excellent steroid. Chemically there is no difference from the oral form, so even though the drug is not going through the gastric tract, the molecule is still 17 alpha alkylated. You would think that as an injectable it would be advantageous to eliminate this unnecessary source of liver toxicity, but other Dianabol imitators have tried to do this with a resultantly less effective drug (Anabolicum Vister is such an attempt). What is so outstanding about Injectable Dianabol is that virtually none of the drug is initially destroyed; you will be getting the full dosage that you inject. This, of course, cannot be said about oral Dianabols. Some amount always gets destroyed in the gastric tract before it is introduced into the bloodstream.

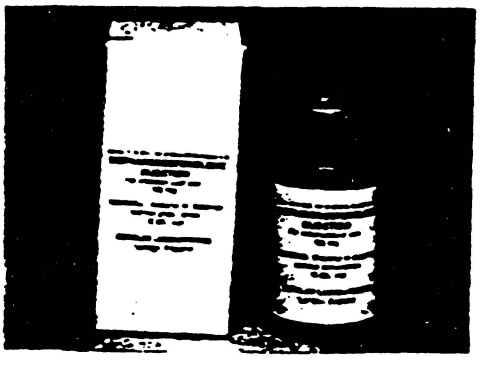
The problem, though, with the injectable is that no one really knows how quickly it gets into your system from the injection site, nor does anyone know when the dosage is completely dissipated from the site. We do know that it is quickly broken down and metabolized, just like regular oral Dianabol. Most people taking the injectable use it as if it were Testosterone Propionate, which means we've seen dosages of 2 to 3 cc's three times a week. Ideally, one would inject the drug daily, using at least 2 cc's. Let's talk about why this isn't realistic.

No matter how good Injectable Dianabol is, we don't think that you'll see widespread use of it, mostly because of its practical drawbacks. First, it is only available in Mexico, and not at the regular pharmacy, unless you can somehow get the pharmacist to order it. You could smuggle it across the border yourself, but most people will be buying from a black market source who of course will price it above the Mexican cost. The average black market cost of Injectable Dianabol is $15 to $22 per 10 cc bottle. This would mean that you would be paying $30 to $44 for 500 mgs., as opposed to paying (black market) about $30 for 500 mgs, 100 tabs of the oral; and a legitimate pharmacy is charging only $15 for a 100 tablet bottle. Also, since you would be injecting two to three cc's every other day (DAILY would be best), along with whatever else you might be injecting (and face it, most of you will probably be be using another injectable, probably testosterone cypionate). This means a lot of needles during the week and a few uncomfortable lumps from the large amounts injected into the area. For the majority of you Injectable Dianabol will be a play drug. It is expensive, inconvenient, and definitely will be more painful than swallowing a few tablets every day.

However; someone asked us the other day what we thought the single most effective steroid was for size and we really couldn't come up with anything better, milligram for milligram, than Injectable Dianabol.

St Louis Fake

Well folks it had to happen. What we have uncovered is a fake Injectable Dianabol. This drug is coming out of the St. Louis area and we have a good idea who is pulling this stunt, but won't name him because we don't have proof positive. Let's just say that he's snookered people this way before. From the photograph you can see that we supposedly have methandrostenolone Injection, 100 mg per ml in a multiple use 10cc vial. The black market price for this item is $55. When someone first described to us what he had, a little [illegible]zzed inside our heads when we heard that the dosage was 100mg per ml. As we mentioned before, Ciba Geigy's Injectable is only 25mg per ml for good reason. It is impossible to dissolve more than 25 mgs in one cc of oil. The manufacturer of the drug is stated on the package to be Ceralar Labs in London, England. So we called up our British citizen friend who is, we think, the authority about steroids in England. We learned a very interesting thing about generic Dianabols in England. The generic name in the US is as you know, methandrostenolone, and this is the name given on the packaging of Ceralar's generic version. However; in England (and many other European countries) generic Dianabol is only known as methandienone. The English Data Sheet Compendium, their version of the Physician's Desk Reference, always, without exception, lists Dianabol as methandienone. As a matter of fact, the Data Sheet Compendium does not have a listing for Ceralar Laboratories. Neither does London Telephone Directory Assistance. The facts are these: We have a supposed English generic Dianabol injection from a non-existent London drug company, using a name for the drug only recognizable to Americans, with a dosage that just physically cannot be dissolved in the amounts stated. As you can see from the photo, the label is very, very plain. The lettering, in fact, is not a style usually associated with English drugs.



So what do we have here? Our guess (and we're good guessers) is that people are paying $55 for a 10cc bottle of testosterone propionate. Of all the injectables one might be able to pass off as Injectable Dianabol, Propionate to us seems the logical choice. It gives a noticable increase in size and strength, is short acting, and is cheap.

Practical experience and firsthand use shows that Proviron does not increase size or strength. So what would we use it for? Here at OEM we've been looking at a safe androgen that women can use. It would be an androgen to use during contest preparation to attain a harder look. It would be a steroid to use in conjunction with STH therapy, instilling in women an androgenic environment that allows the STH to work better. It should not interfere with hormonal balances too badly. So far, Proviron fits the bill. Proviron has been used for years in Europe on women (it is also available in a 10 mg tablet) mostly as an anti - depressant. Androgens have been known to elevate mood. American doctors are reluctant to use this kind of therapy on women.

Most women do not exhibit masculinization even on 75 mgs per day. Our experience with women bodybuilders has been about nil. The few who have used Proviron (50 mgs per day) state that they noticed a harder look while in contest shape. And of course, Proviron stacked with Nolvadex is a very safe and sane way to get women to break through fat loss sticking points when they get down to 10% bodyfat and want to get lower.

So our opinion is that Proviron will definitely help many women bodybuilders. Men who are quite sensitive to most other androgens may want to give Proviron a try. Until the current excitement about the drug subsides, you'll find it very expensive. The cheapest prices are on the UK product. We paid about $15 for a 50 tablet bottle. The Mexican version is foil wrapped, like Primabolan tablets.

Updating Equipoise

This is just a short followup on Equipoise. We've had a few reports of steroid fever at the beginning of Equipoise use. Steroid fever is exactly what you would think, feverlike symptoms within a day of starting a particular steroid. The symptoms go away in a few days. Most people getting steroid fever from Equipoise do so from immediately taking what is considered a normal amount, about one to two cc's per shot. If you start with a small amount, say about one half a cc, then go to one, then one and a half to whatever you finally want to use, you probably won't get steroid fever. Women would want to start with one quarter of a cc.

Equipoise has not shown itself to be a size drug, but most people (men and women both) do report an increase in strength. Also a reduction of fat has been consistently reported. We still believe that Equipoise is a good contest prep drug. It does not have the widespread use and consistent good results which the Primabolans have acquired over the years. It is just too new to the bodybuilding world. Most bodybuilders cannot get Primabolan. Equipoise will give the same recuperative increase as Deca Durabolin (and the better, faster acting Durabolin) along with a greater strength increase and possibly a reduction of fat.

Also please note: we mentioned that the Equipoise / Fluoxymesterone stack did not inhibit the pituitary. We stand corrected, as Fluoxymesterone will dramatically shut down your natural testosterone supply. For those of you who don't react well to fluoxymesterone, some of our test subjects have been quite happy with an Equipoise / Drolban stack.

Genetic STH

We've found out a little bit on the status of Genetic Growth Hormone. The company which is making it now and planning to commercially introduce it in June, 1984 is GENENTEC, located in San Francisco. This is the same company that makes the genetically engineered human insulin. The new STH will be called **PROTROPIN.** There is a disappointing problem. Genentec has no marketing or distribution facilities. They allow another drug company which does to sell their product under the latter's name. Genentec has picked the Eli Lilly company to market both their new products. What this means is a price on genetic STH much higher than everyone is expecting. Yes, it will sell for less than Crescormon, which has the lowest commercial wholesale price of $84 per 4 IU vial. But it will only be a few dollars less; a comparable amount of Protropin will wholesale in the high $50 range.

Sigma Laboratories in St. Louis, which supplies esoteric drugs and chemicals only to qualified serious researchers (unfortunately, they think that we are neither), has offered for a while a genetic human growth hormone. The catalog number is S#4255 and the price is $55 for 4 IU's.

We realize that this issue, although we combined it with #5, is late and a few of you have written in asking why. In the past, we have been . been disappointed with the print quality of all our publications. As you may have guessed, we compose all our work on a computer, print it out, paste it up ourselves, then bring it to the offset printer. We do this because it is the cheapest way to print things (and usually the fastest). We had been renting computer time for each project. However; as of last month we have purchased our own computer with software that we feel will give us better control over the print quality and word spacing. The changeover made us lose a few months. Our new setup is much faster and convenient. The only way that this update can improve (i.e. becoming more frequen and larger) is by upping our subscriptio and dealer sales. We only print 50 Updates. We have paid subscription numbering a few hundred, and we sell few hundred more to our dealers. Jus remember all this the next time yc lend your copy to a friend, c photocopy one of our issues. Each one less copy sold. Convince yo friends to get their own subscription It may seem to them selfish on yo part, but the result will be a bett Update.

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USH UPDATE! #6 FALL

to THE UNDERGROUND STEROID HANDBOOK

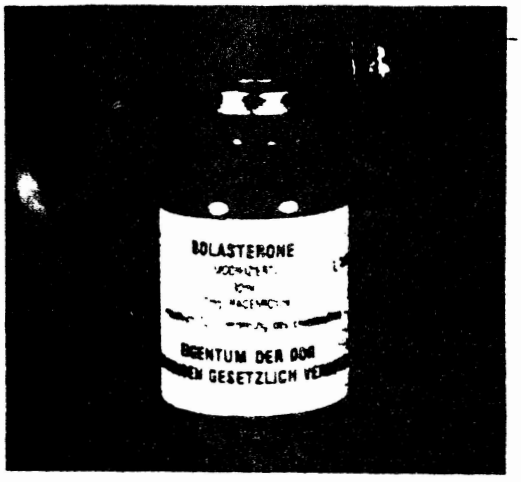
BOLASTERONE - MONKEY GH

TES-10 / Bolasterone

When we first wrote the USH two years ago, we jokingly predicted that you would be seeing Bolasterone for sale in America soon. Early this summer Jeff Feliciano put everyone in a tither with his article in the August issue of Muscle Digest about the appearance in America of an East German modified version of Bolasterone, claiming unbelievable results with its use. Now that the hoopla has subsided a bit let's discuss what we do and don't know about Bolasterone.

Originally Upjohn marketed Bolasterone in both an oral and injectable version for a few months in the 1950's. Both Callusterone and Myagen (the brand names) were voluntarily withdrawn from American markets because of possible liver toxicity. The new Modified Bolasterone is supposedly a more powerful version made for the East German government and somehow smuggled out of the country. For some unknown reason it went by the name of TES-10 when it originally appeared in the states. I don't know who is directly behind the supposed import of the drug, but the whole operation is in northern California. I could be more specific here but the main 'go between' requests that I be this vague. The spokesman for the importer(s) seems quite knowledgable and learned. He claims that he has increased his bodyweight a good sixty pounds with the use of Bolasterone, Methandriol, Decadurabolin and insulin(!). Jeff Feliciano mentioned to me that from what he has seen this is sixty very dense, quality pounds of muscle.

Prices vary widely and seem to be going down lately. I've seen a high retail of $325. A very low retail as of November is $225. Wholesale prices vary with quantity bought and does drop slightly below $200 if the wholesale dealer buys a large amount. Wholesale for small quantities can be as high as $225 per bottle. The bottle holds



30 cc's of what appears to be beach sand in salad oil. The importers recommend refrigeration of the drug between injections. The recommended needle size is 20 gauge and the recommended dosage is 1 cc, which is 10 mgs. every day. Duration of effective use can be as long as 90 days before the drugs seems to stop working.

So now that we have these preliminaries out of the way, let's talk about what I've found out about this whole subject. First, no one knows what this drug really is (except for the 'importers'). A few people in the country have tried to analyze the drug. You have to realize that to positively identify what a drug is takes a very smart chemist and a lot of money. All we know is that each 'batch' of Bolasterone analyzed appears to be different from the last. From loose clinical observations it also appears that each new lot introduced for sale is more effective than the earlier ones. Also although this drug supposedly comes from East Germany, the bottle it is packaged in is definitely American. In fact the code numbers stamped into the glass on the bottom of the bottle are similar to the ones on Winstrol V and Equipoise bottles (30 cc size). The bottles of all three also look the same.

So we don't really know if our Bolasterone truly originates from East Germany. This

older and continual steroid user do not seem to happen on the recommended 10mg per day dosage of Bolasterone. Most all the Bolasterone use has been with male bodybuilders. I don't know of any powerlifters using it. Nor do I know of any women using it although I would predict that it would be quite effective for them.

About price. Most dealers I talked to only make an average of $50 on a bottle of Bolasterone. I think this is a reasonable (actually on the low side) profit for a $200 plus cash outlay. I wouldn't recommend paying over $275 for a bottle. Is it worth the money? Let's put it this way. Whatever muscle mass you gain should be solid, dense muscle, without the usual edema and fat gain from steroids which work well but also aromatize. It is a more cost effective drug than Anavar. It certainly isn't a best buy, but it is money better spent than, for example, STH.

As you may know, Bolasterone is the first of a number of drugs being 'imported' from East Germany. There is also Quinolone, Dihydrolone, and Dimethazine. These are all supposed more powerful anabolic agents than Bolasterone. I am beginning an investigation of Quinolone and should have some findings in the next Update.

Home Brew RGH

Once again OEM has uncovered a fake. This time it's Rhesus Monkey Growth Hormone. Because of our overly enthusiastic report on Human Growth Hormone a year ago, and followed up by Dr. Robert Kerr's musings in Muscle Digest many athletes have the hots for HGH. As you know, both Crescormon and Asellacrin are priced at about $1000 for a three week supply (using 4 IU'S every 48 hours). With so many people using HGH over the last year I have noticed an 80% failure rate. This means that 80% of all people using HGH get no effect from it. Also the remaining 20% do not seem to be getting the dramatic effects we had hoped for.

From 'somewhere in Florida' there appeared on the black market Rhesus Monkey Growth Hormone. It is supposed to be much more powerful than regular growth hormone, and only costing $200 for ten days worth (2 cc's every 48 hours). The dealers in this drug hinted that this was the drug that Arnold and Robby took that made them great.

This drug is not pharmaceutical quality. It comes in an unlabelled brown bottle with a needle puncture already in the rubber stopper. The growth hormone is not freeze dried and looks like red semi-liquid gelatin. I arranged to have a color picture published in Joe Weider's FLEX magazine (December issue) so if you want a good look at the drug, that's where you can find it. The drug is supposed to be refrigerated, but it is usually shipped via UPS second day air at room temperature. Retail prices are between $150 and $200 per 10cc vial.

Although the major retailer claimed that it worked fantastically for gaining size, everyone I had talked to who had actually used the drug got nothing from it. I used a bottle for ten days time and felt nothing. Two other male bodybuilders who I watched closely got zilch effects also. At that point I was ready just to conclude that Rhesus GH was as much of a gamble as HGH, just less expensive. It never occurred to me that I might have a fake on my hands because the dealer that I obtained the drug from has usually been scrupulous in times past.

Then two interesting conversations took place within a few days of each other. The first was with one of the original bodybuilders who during the early 1970's has Rhesus Monkey Growth Hormone made for him. He mentioned how it was always carefully shipped packed in dry ice. Then he mentioned that he was sold some that came out of Tampa, Florida, and it looked different than the drug he was familiar with. This bodybuilder claims that the Tampa drug analyzed out to be Injectable Vitamin B-12 mixed with a small amount of Deca-Durabolin. So I mixed up a batch of bogus RGH. I used 8cc's of B-12 and mixed in 2 cc's of Deca-Durabolin, shook it up in the bottle and just about fell through the floor. What I had looked **exactly** like each of the 10 or so bottles of Black Market Rhesus Monkey Growth Hormone that had passed through the Los Angeles area! If this wasn't enough within a day after all this I received a call from a very ethical and discreet dealer in the midwest asking about a certain person from Tampa, Floria (I think I had better not name him) who was selling RGH for $50 a vial!

So here's what we have. An unlabeled, unrefrigerated, reconstituted bottle of a reddish substance that already has a needle mark through the cap. A supposed bogus RGH from the early seventies originating in

doesn't concern me all that much, as I am most interested in a drug's effectiveness. This time around I did not personally use Bolasterone mostly because my glutes had too many painful lumps and bruises from a series of previous injections. The thought of a 20 gauge needle every day for a month was what made me pass this one up for the time being. Instead I kept close watch on a friend who used it and also did a lot of calling around the country interviewing mostly the dealers who were in contact with other Bolasterone users. You'd think that a dealer in the drug would have a vested interest in exaggerating Bolasterone's effectiveness, but after two years in this quirky business I know who the straight shooters are.

Most people on Bolasterone were not happy with what it did. No bad side effects have been reported, but also no one I know of responded as fantastically as the mystery subject Jeff Feliciano describes in Muscle Digest. However; the friend I watched closely did gain a nice solid twenty pounds of muscle in about six weeks. Before you ooh and aah over this I must say that this bodybuilder is a very easy gainer who does not use steroids all that much and when he does he uses very small dosages. He might well have gained an equal amount of weight on another 'powerful' steroid such as Anadrol or Dianabol.

So you have two stories about Bolasterone. One that it is the greatest thing since sliced bread; the other that it is only about average. What are we to make of all this? I think Bolasterone is an above average steroid. It will work quite well for people who rarely use steroids during the year. It will give very good results to people who have limited themselves to the weaker steroids such as the Durabolins, Winstrol, Maxibolan, etc. If you are a user of large dosages of Dianabol, Anadrol, Testosterone and the like, immediately switching to Bolasterone will not give you any gains, The importer(s) spokesman conjectured that these people will not have their steroid receptor sites working well enough to accept the Bolasterone molecule. Possibly better results would be gotten after a two month layoff from this group of drugs. There are some nice things about Bolasterone which I think make it a worthwile and cost effective drug to use. In the small dosages (10mg daily) used, I've seen no bad side effects. Estrogen levels do not elevate, nor does blood pressure.

its use. As steroid users get older the ol standby's like Dianabol, Anadrol, an Testosterone increasingly create more o the problems I've just mentioned. So would class Bolasterone as an above averag drug, about equal in weight gaining powe as Anadrol but without the marke aromatization that leads to high bloo pressure and sloppy temporary weight gain which Anadrol is noted for.

Now about those twenty gauge needle there is a way around that. The reasc twenty gauge is specified is that th Bolasterone crystals are insoluble even oil and they usually will not pass throug anything smaller than 20 gauge. Here how to beat this problem. We've had goc success out in Southern California drawing room tempertature Bolasterone int a syringe via a 20 gauge needle. Once the syringe, we have put on a 22 guage ar then run the syringe-needle under hot ta water for a minute or so. Before injectic the syringe is shaken so that the crysta don't settle. While injecting th Bolasterone through this 22 gauge need sometimes the crystals jam up so that yc cannot depress the plunger of the syring At this point we backed the plunger off bit to free up the needle and the continued the injection. A particular obstinate injection will need this back o procedure done a few times to get all th crystals to pass through the 22 gaug needle. Since the crystals are large ar could cause irritation and lumps at th injection site, we as a matter of course ac one cc of Wydase (an injection diffusin agent) to the 1 cc of Bolasterone.

I have gotten a few calls asking abou stacking Bolasterone with any othe steroid. The nice thing about the drug that it works well alone. However; peopl knowledgable about its effects add Dec Durabolin as a general recuperative an joint pain remedy agent. Also Methandri makes Bolasterone (and almost any othe steroid) work better. The reasons as why Methandriol works will be discussed another Update.

To summarize all this, I don't know wheth our East German Modified Bolasterone really domestic or imported. It appears be a unique above average drug who advantages ar e chiefly that side effec common to other good gaining steroi which are increasingly bothersome to t

Tampa, Florida. Everyone using this substance reporting no gains. A black market drug that retails for $200 and can wholesale for as low as $50. This $50 cost must include the cost of many rhesus monkey pituitaries, laboratory processing fees plus profit. We have an exact look alike made from B-12 and Deca Durabolin. I think that we have a fake. You know, at least with Bolasteron, whatever it really turns out to be, the drug works.

BOLFORTAN Injection 50mgs/cc 1 cc ampules Lanniker Heilmittel, Austria

I'll make this short. Bolfortan is an aqueous testosterone nicotinate. The nicotinate added to the steroid molecule makes it last longer than regular testosterone aqueous, although being water based, this form of testosterone gets into the system rather quickly. Testosterone Nicotinate has a half-life somewhere between Testosterone Propionate and Testosterone Enanthate.

The only reason I am talking about Bolfortan is because some uneducated individuals are making outrageous claims about the drug, chiefly that it makes your extremity muscles (arms and legs) grow. This claim is based in the faulty assumption that since the testosterone is bound to niacin (that's right, niacin, not nicotine) and niacin stimulates blood circulation to peripheral parts of the body, then the testosterone will act on your arms and legs. The error here is that you would need a large amount of niacin to accomplish this, much more than the very small amount bound in 50 mgs of testosterone.

This is a very hard testosterone to use, as the testosterone crystals are rather large and freeze up even in a 22 gauge needle. In fact you'll need a 20 gauge just to draw this water based drug into the syringe. So if you are one to use testosterone, this may be something to play around with. But really, Bolfortan is nothing special.

USH UPDATE #6-FALL'83 is produced by OEM Publishing 2801B Ocean Park #25 Santa Monica CA 90405. Single copy price is $2. 6 issue subscriptions are $12.

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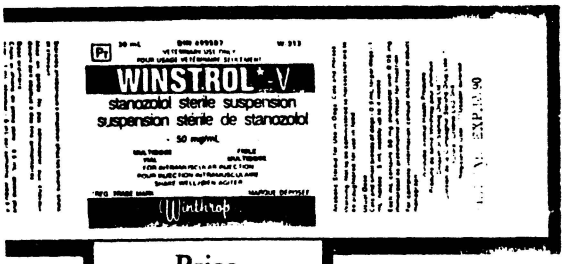

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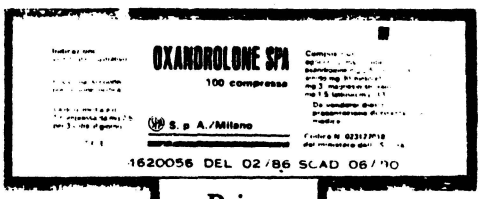

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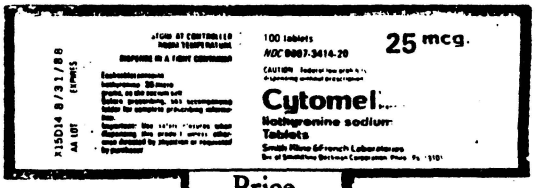

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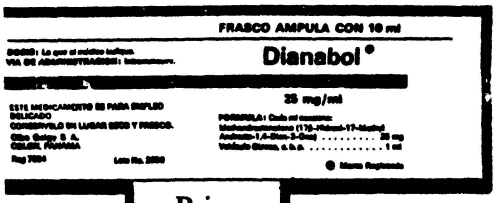

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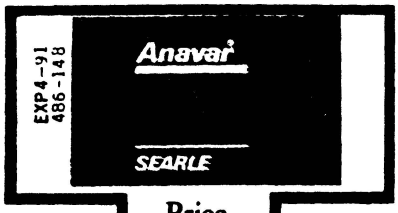

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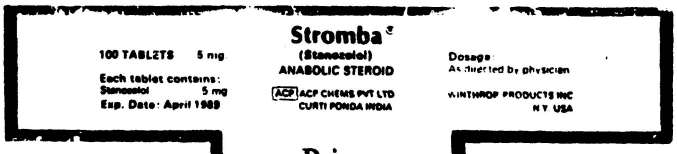

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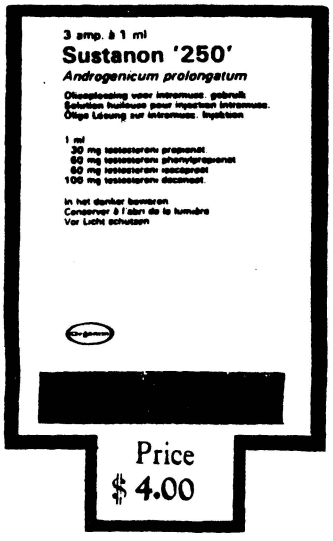

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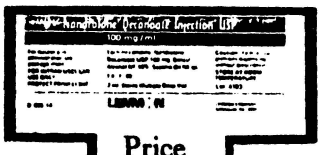

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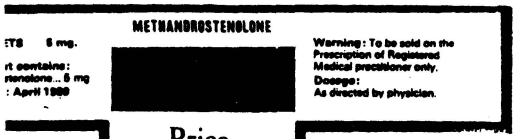

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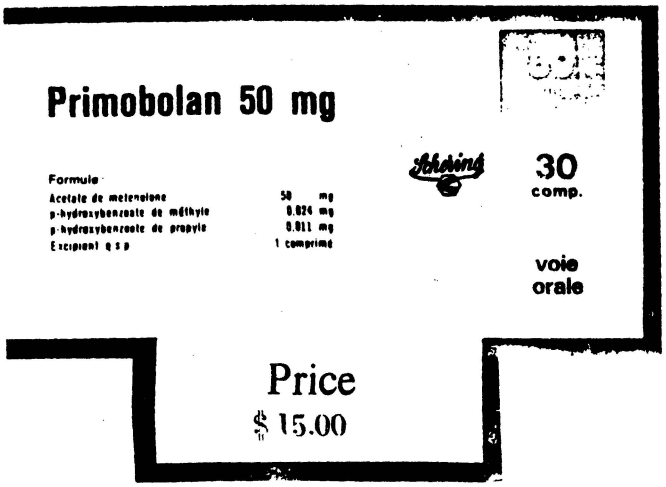

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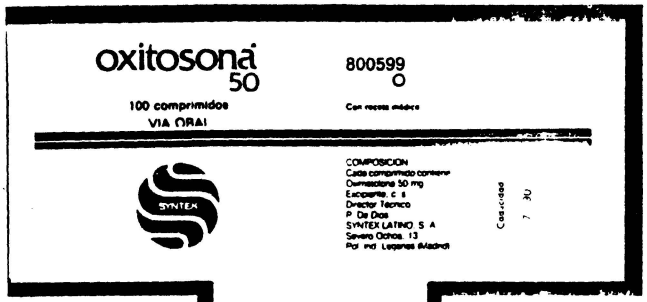
Price
$ 3.50



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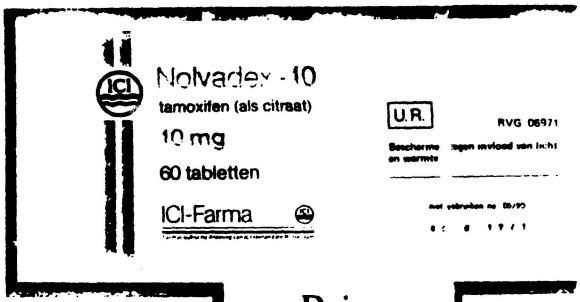

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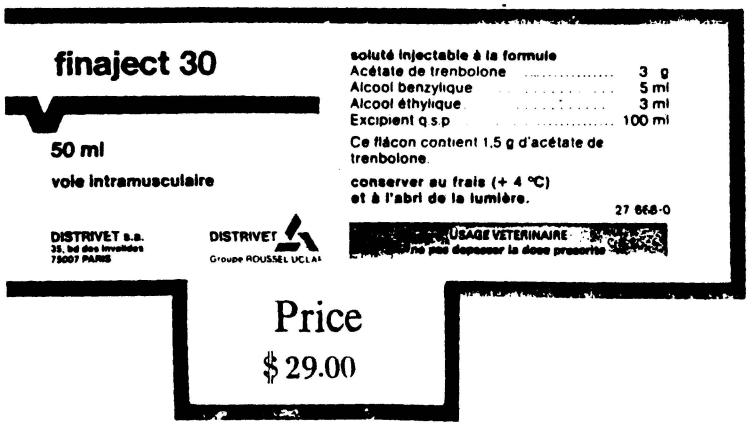

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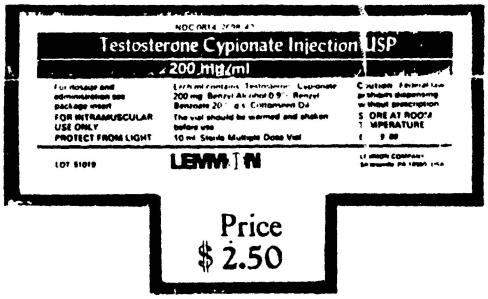

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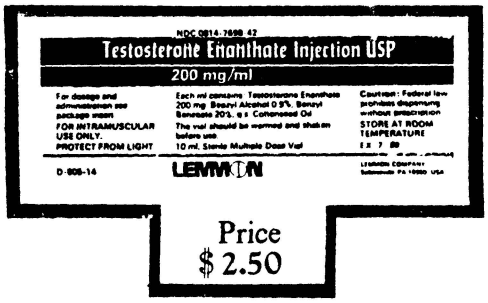

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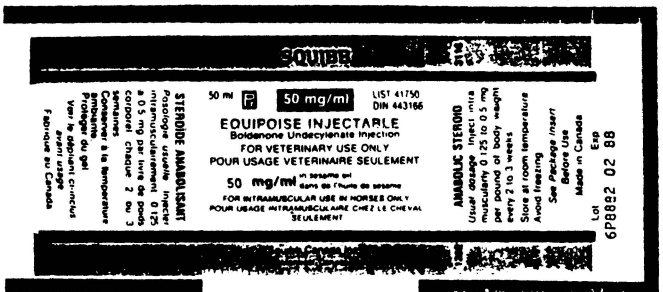

Price
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Price
$ 10.00

APPENDIX C

Standard and Schedues: Drug Control Act of Virginia

(Code of Virginia, Sec. 54-524.84:1-14)

Article 6.

Standards and Schedules.

§§ 54-524.79 through 54-524.84: Repealed by Acts 1972, c. 798.

Article 6.1.

Standards and Schedules.

§ 54-524.84:1. Board to administer article and may add, delete or reschedule substances; rulings; Board to conform to federal law with respect to controlled substances; exemption. — (a) The Board shall administer this article and may add substances to or delete or reschedule all substances enumerated in the schedules in §§ 54-524.84:4, 54-524.84:6, 54-524.84:8, 54-524.84:10 or 54-524.84:12 pursuant to the procedures of Chapter 1.1 (§ 9-6.1 et seq.) of Title 9 of this Code. In making a determination regarding a substance, the Board shall consider the following:

(1) The actual or relative potential for abuse;

(2) The scientific evidence of its pharmacological effect, if known;

(3) The state of current scientific knowledge regarding the substance;

(4) The history and current pattern of abuse;

(5) The scope, duration, and significance of abuse;

(6) The risk to the public health;

(7) The potential of the substance to produce psychic or physiological dependence liability; and

(8) Whether the substance is an immediate precursor of a substance already controlled under this article.

(b) After considering the factors enumerated in subsection (a) the Board shall make findings with respect thereto and issue a rule controlling the substance if it finds the substance has a potential for abuse.

(c) If the Board designates a substance as an immediate precursor, substances which are precursors of the controlled precursor shall not be subject to control solely because they are precursors of the controlled precursor.

(d) If any substance is designated, rescheduled, or deleted as a controlled substance under federal law and notice thereof is given to the Board, the Board may similarly control the substance under this chapter after the expiration of one hundred twenty days from publication in the Federal Register of final order designating a substance as a controlled substance or rescheduling or deleting a substance without following the provisions specified in subsections (a) and (b) of this section.

(e) Authority to control under this section does not extend to distilled spirits, wine, malt beverages, or tobacco as those terms are defined or used in Title 4 (§ 4-1 et seq.) of this Code.

(f) The Board shall exempt any nonnarcotic substance from a schedule if such substance may, under the provisions of the federal Food, Drug and Cosmetic Act (21 U.S.C. 301 et seq.) or State law, be lawfully sold over the counter without a prescription. (1972, c. 798; 1976, c. 614.)

Editor's note. — Chapter 1.1 (§ 9-6.1 et seq.) of Title 9, referred to in the introductory paragraph of subsection (a), was repealed by Acts 1975, c. 503. For present provisions covering the subject matter of the repealed chapter, see Chapter 1.1:1 (§ 9-6.14:1 et seq.) of Title 9.

Law Review. — For survey of Virginia law on criminal law for the year 1971-1972, see 58 Va. L. Rev. 1206 (1972).

The statutory scheme for the scheduling of controlled substances is almost word-for-word identical to that contained in the Controlled Substances Act, which has uniformly met the rational basis test under equal protection and due process scrutiny. Wolkind v. Selph, 495 F. Supp. 507 (E.D. Va. 1980), aff'd, 649 F.2d 865 (4th Cir. 1981).

Exclusion of alcohol and tobacco not unconstitutional. — Given the policy of legislative freedom in confronting social problems, the exclusion of alcohol and tobacco from this section does not render the scheme unconstitutional as applied to the inclusion of marijuana within its classification and the resulting different legislative treatment of these substances. Wolkind v. Selph, 495 F. Supp. 507 (E.D. Va. 1980), aff'd, 649 F.2d 865 (4th Cir. 1981).

Unlawful distribution of cocaine is conduct potentially dangerous to human life. Heacock v. Commonwealth, 228 Va. 397, 323 S.E.2d 90 (1984).

C. Any of the following opium derivatives, their salts, isomers and salts of isomers, unless specifically excepted, whenever the existence of these salts, isomers and salts of isomers is possible within the specific chemical designation:

Acetorphine;
Acetyldihydrocodeine;
Benzylmorphine;
Codeine methylbromide;
Codeine-N-Oxide;
Cyprenorphine;
Desomorphine;
Dihydromorphine;
Drotebanol;
Etorphine;
Heroin;
Hydromorphinol;
Methyldesorphine;
Methyldihydromorphine;
Morphine methylbromide;
Morphine methylsulfonate;
Morphine-N-Oxide;
Myrophine;
Nicocodeine;
Nicomorphine;
Normorphine;
Phoclodine;
Thebacon.

D. *Hallucinogenic substances.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation, which contains any quantity of the following hallucinogenic substances, or which contains any of its salts, isomers, and salts of isomers, whenever the existence of such salts, isomers, and salts of isomers is possible within the specific chemical designation (for purposes of this paragraph only, the term "isomer" includes the optical, position, and geometric isomers):

3,4-methylenedioxy amphetamine;
5-methoxy-3,4-methylenedioxy amphetamine;
3,4,5-trimethoxy amphetamine;
Bufotenine;
Diethyltryptamine;
Dimethyltryptamine;
4-methyl-2,5-dimethoxyamphetamine;
Ibogaine;
Lysergic acid diethylamide;
Mescaline;
Parahexyl (some trade or other names: 3-Hexyl-1-hydroxy-7, 8, 9, 10-tetrahydro-6, 6, 9-trimethyl-6H-dibenzo [b,d] pyran; Synhexyl);
Peyote;
N-ethyl-3-piperidyl benzilate;
N-methyl-3-piperidyl benzilate;
Psilocybin;
Psilocyn;
Tetrahydrocannabinols, except as present in marijuana and dronabinol in sesame oil and encapsulated in a soft gelatin capsule in a drug product approved by the U. S. Food and Drug Administration;
Hashish oil (Some trade or other names: hash oil; liquid marijuana; liquid hashish);
2,5-dimethoxyamphetamine (Some trade or other names: 2,5-dimethoxy-a-methylphenethylamine; 2,5-DMA);
4-bromo-2,5-dimethoxyamphetamine (Some trade or other names: 4-bromo-2,5-dimethoxy-a-methylphenethylamine; 4-bromo-2,5-DMA);
4-methoxyamphetamine (Some trade or other names: 4-methoxy-a-methyl-phenethylamine; paramethoxyamphetamine; PMA);
N-ethyl analog of phencyclidine;
Pyrrolidine analog of phencyclidine;
Thiophene analog of phencyclidine;

C. Any of the following opium derivatives, their salts, isomers and salts of isomers, unless specifically excepted, whenever the existence of these salts, isomers and salts of isomers is possible within the specific chemical designation:

Acetorphine;
Acetyldihydrocodeine;
Benzylmorphine;
Codeine methylbromide;
Codeine-N-Oxide;
Cyprenorphine;
Desomorphine;
Dihydromorphine;
Drotebanol;
Etorphine;
Heroin;
Hydromorphinol;
Methyldesorphine;
Methyldihydromorphine;
Morphine methylbromide;
Morphine methylsulfonate;
Morphine-N-Oxide;
Myrophine;
Nicocodeine;
Nicomorphine;
Normorphine;
Phoclodine;
Thebacon.

D. *Hallucinogenic substances.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation, which contains any quantity of the following hallucinogenic substances, or which contains any of its salts, isomers, and salts of isomers, whenever the existence of such salts, isomers, and salts of isomers is possible within the specific chemical designation (for purposes of this paragraph only, the term "isomer" includes the optical, position, and geometric isomers):

3,4-methylenedioxy amphetamine;
5-methoxy-3,4-methylenedioxy amphetamine;
3,4,5-trimethoxy amphetamine;
Bufotenine;
Diethyltryptamine;
Dimethyltryptamine;
4-methyl-2,5-dimethoxyamphetamine;
Ibogaine;
Lysergic acid diethylamide;
Mescaline;
Parahexyl (some trade or other names: 3-Hexyl-1-hydroxy-7, 8, 9, 10-tetrahydro-6, 6, 9-trimethyl-6H-dibenzo [b,d] pyran; Synhexyl);
Peyote;
N-ethyl-3-piperidyl benzilate;
N-methyl-3-piperidyl benzilate;
Psilocybin;
Psilocyn;
Tetrahydrocannabinols, except as present in marijuana and dronabinol in sesame oil and encapsulated in a soft gelatin capsule in a drug product approved by the U. S. Food and Drug Administration;
Hashish oil (Some trade or other names: hash oil; liquid marijuana; liquid hashish);
2,5-dimethoxyamphetamine (Some trade or other names: 2,5-dimethoxy-a-methylphenethylamine; 2,5-DMA);
4-bromo-2,5-dimethoxyamphetamine (Some trade or other names: 4-bromo-2,5-dimethoxy-a-methylphenethylamine; 4-bromo-2,5-DMA);
4-methoxyamphetamine (Some trade or other names: 4-methoxy-a-methyl-phenethylamine; paramethoxyamphetamine; PMA);
N-ethyl analog of phencyclidine;
Pyrrolidine analog of phencyclidine;
Thiophene analog of phencyclidine;

E. *Depressants.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation which contains any quantity of the following substances having a depressant effect on the central nervous system, including its salts, isomers and salts of isomers whenever the existence of such salts, isomers and salts of isomers is possible within the specific chemical designation:

Mecloqualone;

Methaqualone.

F. *Stimulants.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation which contains any quantity of the following substances having a stimulant effect on the central nervous system, including its salts, isomers and salts of isomers:

Fenethylline;

Ethylamphetamine.

G. Any material, compound, mixture or preparation containing any quantity of the following substances:

3-methylfentany- (N-[3-methyl-1-(2-phenyethyl)-4-piperidyl]-N-phenylpropanamide), its optical and geometric isomers, salts, and salts of isomers;

3,4-methylenedioxymethamphetamine (MDMA), its optical, positional and geometric isomers, salts and salts of isomers;

1-methyl-4-phenyl-4-propionoxypiperidine (MPPP), its optical isomers, salts and salts of isomers;

1-(2-phenylethyl)-4-phenyl-4-acetyloxypiperidine (PEPAP), its optical isomers, salts and salts of isomers;

N-[1-(1-methyl-2-phenyl)ethyl-4-piperidyl]-N-phenylacetamide (acetyl-alpha-methylfentanyl), its optical isomers, salts and salts of isomers;

N-[1-(1-methyl-2-2-thienyl)ethyl-4-piperidyl]-N-phenylpropanamide (alpha-methylthiofentanyl), its optical isomers, salts and salts of isomers;

N-[1-benzyl-4-piperidyl]-N-phenylpropanamide (benzylfentanyl), its optical isomers, salts and salts of isomers;

N-[1-(2-hydroxy-2-phenyl)ethyl-4-piperidyl]-N-phenylpropanamide (beta-hydroxyfentanyl), its optical isomers, salts and salts of isomers;

N-[3-methyl-1-(2-hydroxy-2-phenyl) ethyl-4-piperidyl]-N-phenylpropanamide (beta-hydroxy-3-methylfentanyl), its optical and geometric isomers, salts and salts of isomers;

N-[3-methyl-1-(2-2-thienyl)ethyl-4-piperidyl]-N-phenylpropanamide (3-methylthiofentanyl), its optical and geometric isomers, salts and salts of isomers;

N-[1-(2-thienyl)methyl-4-piperidyl]-N-phenylpropanamide (thenylfentanyl), its optical isomers, salts and salts of isomers;

N-[1-(2-2-thienyl) ethyl-4-piperidyl]-N-phenylpropanamide (thiofentanyl), its optical isomers, salts and salts of isomers. (1972, c. 798; 1973, c. 479; 1976, c. 614; 1977, c. 302; 1979, cc. 387, 435; 1982, c. 505; 1984, cc. 186, 192; 1986, c. 463.)

The 1986 amendment rewrote this section.

Law Review. — For an article on the legal history of American marihuana prohibition, see 56 Va. L. Rev. 971 (1970). For survey of Virginia law on criminal law for the year 1978-1979, see 66 Va. L. Rev. 241 (1980).

§ 54-524.84:5. Placement of substance in Schedule II. — The Board shall place a substance in Schedule II if it finds that:

(1) The substance has high potential for abuse;

(2) The substance has currently accepted medical use in treatment in the United States, or currently accepted medical use with severe restrictions; and

(3) The abuse of the substance may lead to severe psychic or physical dependence. (1972, c. 798.)

When the classification of cocaine as a Schedule II drug is viewed in the light of the overall legislative purpose of preventing the use of substances with a high potential for abuse, and which may lead to severe psychic or physical dependence, the classification is not irrational nor arbitrary so as to violate due process. Wolkind v. Selph, 495 F. Supp. 507 (E.D. Va. 1980), aff'd, 649 F.2d 865 (4th Cir. 1981).

Unlawful distribution of cocaine is conduct potentially dangerous to human life. Heacock v. Commonwealth, 228 Va. 397, 323 S.E.2d 90 (1984).

§ 54-524.84:6. Schedule II. — A. The controlled substances listed in this section are included in Schedule II.

B. Any of the following substances, except those narcotic drugs listed in other schedules, whether produced directly or indirectly by extraction from substances of vegetable origin, or independently by means of chemical synthesis, or by combination of extraction and chemical synthesis:

1. Opium and opiate, and any salt, compound, derivative, or preparation of opium or opiate, excluding apomorphine, dextrorphan, nalbuphine, nalmefene, naloxone naltrexone and their respective salts, but including the following:

Raw opium;
Opium extracts;
Opium fluid extracts;
Powdered opium;
Granulated opium;
Tincture of opium;
Codeine;
Ethylmorphine;
Etorphine hydrochloride;
Hydrocodone;
Hydromorphone;
Metopon;
Morphine;
Oxycodone;
Oxymorphone;
Thebaine.

2. Any salt, compound, isomer, derivative, or preparation thereof which is chemically equivalent or identical with any of the substances referred to in paragraph (1), but not including the isoquinoline alkaloids of opium.

3. Opium poppy and poppy straw.

4. Coca leaves and any salt, compound, derivative, or preparation of coca leaves, and any salt, compound, derivative, or preparation thereof which is chemically equivalent or identical with any of these substances, but not including decocainized coca leaves or extractions which do not contain cocaine or ecgonine; cocaine or any salt or isomer thereof.

5. Concentrate of poppy straw, the crude extract of poppy straw in either liquid, solid or powder form, which contains the phenanthrene alkaloids of the opium poppy.

C. Any of the following opiates, including their isomers, esters, ethers, salts, and salts of isomers, whenever the existence of these isomers, esters, ethers and salts is possible within the specific chemical designation:

Alphaprodine;
Anileridine;
Bezitramide;
Bulk dextropropoxyphene (nondosage forms);
Dihydrocodeine;
Diphenoxylate;
Fentanyl;
Isomethadone;
Levomethorphan;
Levorphanol;
Metazocine;
Methadone;
Methadone — Intermediate, 4-cyano-2-dimethylamino-4, 4-diphenyl butane;
Moramide — Intermediate, 2-methyl-3-morpholino-1, 1-diphenyl-propane-carboxylic acid;
Pethidine;
Pethidine — Intermediate — A, 4-cyano-1-methyl-4-phenylpiperidine;
Pethidine — Intermediate — B, ethyl-4-phenylpiperidine-4-carboxylate;
Pethidine — Intermediate — C, 1-methyl-4-phenylpiperidine-4-carboxylic acid;
Phenazocine;
Piminodine;

Racemethorphan;
Racemorphan.

D. *Stimulants.* — Any material, compound, mixture or preparation which contains any quantity of the following substances having a potential for abuse associated with a stimulant effect on the central nervous system:

Amphetamine, its salts, optical isomers, and salts of its optical isomers;
Phenmetrazine and its salts;
Any substance which contains any quantity of methamphetamine, including its salts, isomers, and salts of isomers;
Methylphenidate.

E. *Depressants.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a depressant effect on the central nervous system, including its salts, isomers, and salts of isomers whenever the existence of such salts, isomers, and salts of isomers is possible within the specific chemical designation:

Amobarbital;
Secobarbital;
Pentobarbital;
Phencyclidine.

F. *Hallucinogenic substances.* — Any of the following hallucinogenic substances:

Dronabinol (synthetic) in sesame oil and encapsulated in a soft gelatin capsule in a drug product approved by the U. S. Food and Drug Administration.

G. *Immediate precursors.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances which are immediate precursors to amphetamine and methamphetamine or phencyclidine:

Phenylacetone;
1-phenylcyclohexylamine;
1-piperidinocyclohexanecarbonitrile. (1972, c. 798; 1976, c. 614; 1977, c. 302; 1978, c. 833; 1979, c. 387; 1981, c. 30; 1984, c. 192; 1986, c. 463.)

Cross reference. — As to classification of methaqualone, which was formerly listed in subdivision (e)(1) of this section, see § 54-824.84:4(e)(2).

The 1986 amendment rewrote this section.

§ 54-524.84:7. Placement of substance in Schedule III. — The Board shall place a substance in Schedule III if it finds that:

(1) The substance has a potential for abuse less than the substances listed in Schedules I and II;

(2) The substance has currently accepted medical use in treatment in the United States; and

(3) Abuse of the substance may lead to moderate or low physical dependence or high psychological dependence. (1972, c. 798.)

§ 54-524.84:8. Schedule III. — (a) The controlled substances listed in this section are included in Schedule III.

(b) Unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a depressant effect on the central nervous system:

(1) Any substance which contains any quantity of a derivative of barbituric acid, or any salt of a derivative of barbituric acid, except those substances which are specifically listed in other schedules;

(1a) Any compound, mixture or preparation containing amobarbital, secobarbital, or pentobarbital or any salt of amobarbital, secobarbital, or pentobarbital and one or more other active medicinal ingredients which are not listed in Schedules II through V;

(1b) Any suppository dosage form containing amobarbital, secobarbital, or pentobarbital or any salt of amobarbital, secobarbital, or pentobarbital and approved by the Food and Drug Administration for marketing only as a suppository;
(2) Chlorhexadol;
(3) Glutethimide;
(4) Lysergic acid;
(5) Lysergic acid amide;
(6) Methyprylon;
(7), (7a) [Repealed.]
(8) Sulfondiethylmethane;
(9) Sulfonethylmethane;
(10) Sulfonmethane.
(c) Nalorphine.
(d) Narcotic drugs. — Any material, compound, mixture, or preparation containing limited quantities of any of the following narcotic drugs, or any salts thereof:
(1) Not more than 1.8 grams of codeine, or any of its salts, per 100 milliliters or not more than 90 milligrams per dosage unit, with an equal or greater quantity of an isoquinoline alkaloid of opium;
(2) Not more than 1.8 grams of codeine, or any of its salts, per 100 milliliters or not more than 90 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
(3) Not more than 300 milligrams of dihydrocodeinone, or any of its salts, per 100 milliliters or not more than 15 milligrams per dosage unit, with a fourfold or greater quantity of an isoquinoline alkaloid of opium;
(4) Not more than 300 milligrams of dihydrocodeinone, or any of its salts, per 100 milliliters or not more than 15 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
(5) Not more than 1.8 grams of dihydrocodeine, or any of its salts, per 100 milliliters or not more than 90 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
(6) Not more than 300 milligrams of ethylmorphine, or any of its salts, per 100 milliliters or not more than 15 milligrams per dosage unit, with one or more ingredients in recognized therapeutic amounts;
(7) Not more than 500 milligrams of opium per 100 milliliters or per 100 grams, or not more than 25 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
(8) Not more than 50 milligrams of morphine, or any of its salts, per 100 milliliters or per 100 grams with one or more active, nonnarcotic ingredients in recognized therapeutic amounts.
(d1) Stimulants. — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a stimulant effect on the central nervous system, including its salts, isomers (whether optical, position, or geometric), and salts of such isomers whenever the existence of such salts, isomers, and salts of isomers is possible within the specific chemical designation:
1. Benzphetamine;
2. Chlorphentermine;
3. Clortermine;
4. [Repealed.]

5. Phendimetrazine.
(e) The Board may except by rule any compound, mixture, or preparation containing any stimulation or depressant substance listed in subsection (b) from the application of all or any part of this chapter if the compound, mixture, or preparation contains one or more active medicinal ingredients not having a stimulant or depressant effect on the central nervous system, and if the admixtures are included therein in combinations, quantity, proportion, or concentration that vitiate the potential for abuse of the substances which have a stimulant or depressant effect on the central nervous system. (1972, c. 798; 1976, c. 614; 1977, c. 302; 1979, c. 387; 1982, c. 505.)

§ 54-524.84:9. Placement of substance in Schedule IV. — The Board shall place a substance in Schedule IV if it finds that:

(1) The substance has a low potential for abuse relative to substances in Schedule III;

(2) The substance has currently accepted medical use in treatment in the United States; and

(3) Abuse of the substance may lead to limited physical dependence or psychological dependence relative to the substances in Schedule III. (1972, c. 798.)

§ 54-524.84:10. Schedule IV. — A. The controlled substances listed in this section are included in Schedule IV; unless specifically excepted or listed in another schedule.

B. Any material, compound, mixture, or preparation which contains any quantity of the following substances having a potential for abuse associated with a depressant effect on the central nervous system:

Alprazolam;
Barbital;
Bromazepam;
Camazepam;
Chloral betaine;
Chloral hydrate;
Clorazepate;
Chlordiazepoxide;
Clobazam;
Clonazepam;
Clorazepate;
Clotiazepam;
Cloxazolam;
Delorazepam;
Diazepam;
Estazolam;
Ethchlorvynol;
Ethinamate;
Ethyl loflazepate;
Fludiazepam;
Flunitrazepam;
Flurazepam;
Halazepam;
Haloxazolam;
Ketazolam;
Loprazolam;
Lorazepam;
Lormetazepam;
Mebutamate;

Medazepam;
Methohexital;
Meprobamate;
Methylphenobarbital;
Nimetazapam;
Nitrazepam;
Nordiazepam;
Oxazepam;
Oxazolam;
Paraldehyde;
Pentazocine;
Petrichloral;
Phenobarbital;
Pinazepam;
Prazepam;
Temazepam;
Tetrazepam;
Triazolam.

C. Any compound, mixture or preparation which contains any quantity of the following substances including any salts or isomers thereof:

Fenfluramine.

D. *Stimulants.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a stimulant effect on the central nervous system, including its salts, isomers (whether optical, position, or geometric), and salts of such isomers whenever the existence of such salts, isomers, and salts of isomers is possible within the specific chemical designation:

Diethylpropion;

Mazindol;

Phentermine;

Pemoline (including organometallic complexes and chelates thereof);

Pipradrol;

SPA (-)-1-dimethylamino-1,2-diphenylethane.

E. *Narcotic drugs.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation containing any of the following narcotic drugs, or their salts calculated as the free anhydrous base or alkaloid, in limited quantities as set forth below:

Dextropropoxyphene (alpha-(+)-4-dimethylamino-1,2-diphenyl-3-methyl2-propionoxybutane;

Not more than one milligram of difenoxin and not less than twenty-five micrograms of atropine sulfate per dosage unit.

F. The Board may except by rule any compound, mixture, or preparation containing any depressant substance listed in subsection B from the application of all or any part of this chapter if the compound, mixture, or preparation contains one or more active medicinal ingredients not having a depressant effect on the central nervous system, and if the admixtures are included therein in combinations, quantity, proportion, or concentration that vitiate the potential for abuse of the substances which have a depressant effect on the central nervous system. (1972, c. 798; 1976, c. 614; 1977, c. 302; 1978, c. 705; 1979, c. 387; 1982, c. 505; 1986, c. 463.)

The 1986 amendment rewrote this section.

§ 54-524.84:11. Placement of substance in Schedule V. — The Board shall place a substance in Schedule V if it finds that:

(1) The substance has low potential for abuse relative to the controlled substances listed in Schedule IV;

(2) The substance has currently accepted medical use in treatment in the United States; and

(3) The substance has limited physical dependence or psychological dependence liability relative to the controlled substances listed in Schedule IV. (1972, c. 798.)

§ 54-524.84:12. Schedule V. — A. The controlled substances listed in this section are included in Schedule V.

B. *Narcotic drugs.* — Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation containing any of the following narcotic drugs and their salts, as set forth below:

Buprenorphine.

C. Any compound, mixture, or preparation containing limited quantities of any of the following narcotic drugs, which also contains one or more nonnarcotic active medicinal ingredients in sufficient proportion to confer upon the compound, mixture, or preparation, valuable medicinal qualities other than those possessed by the narcotic drug alone:

Not more than 200 milligrams of codeine, or any of its salts, per 100 milliliters or per 100 grams;

Not more than 100 milligrams of dihydrocodeine, or any of its salts, per 100 milliliters or per 100 grams;

Not more than 100 milligrams of ethylmorphine, or any of its salts, per 100 milliliters or per 100 grams;

Not more than 2.5 milligrams of diphenoxylate and not less than twenty-five micrograms of atropine sulfate per dosage unit;

Not more than 100 milligrams of opium per 100 milliliters or per 100 grams;

Not more than 0.5 milligrams of difenoxin and not less than twenty-five micrograms of atropine sulfate per dosage unit.

D. The Board may except by regulation any compound, mixture or preparation containing any depressant substance listed in subsection C from the application of all or any part of this chapter and such substances so excepted may be dispensed pursuant to § 54-524.75. (1972, c. 798; 1976, c. 614; 1977, c. 302; 1979, c. 387; 1984, c. 186; 1986, c. 463.)

The 1986 amendment rewrote [illegible]

§ 54-524.84:13. **Schedule VI.** — The following classes of drugs and devices shall be controlled by Schedule VI:

(a) Any compound, mixture, or preparation containing any stimulant or depressant drug exempted from Schedules III, IV or V and designated by the Board as subject to this section.

(b) Every drug, not included in Schedules I, II, III, IV or V, or device, which because of its toxicity or other potentiality for harmful effect, or the method of its use, or the collateral measures necessary to its use, is not generally recognized among experts qualified by scientific training and experience to evaluate its safety and efficacy as safe for use except by or under the supervision of a practitioner licensed by law to prescribe or administer such drug or device.

(c) Any drug, not included in Schedules I, II, III, IV or V, or device, required by federal law to bear on its label the legend: "Caution: Federal Law Prohibits Dispensing Without Prescription" or which bears the legend "Caution: Federal Law Restricts This Device To Sales By Or Use On The Order Of A Physician" or which bears the legend: "Caution: Federal Law Restricts This Drug To Use By Or On The Order Of A Veterinarian." (1972, c. 798; 1976, c. 614; 1977, c. 302.)

§ 54-524.84:14. **Designer drugs.** — Any drug not listed on Schedule I or II in this chapter, which is privately compounded, with the specific intent to circumvent the provisions of this chapter, to emulate or simulate the effects of another drug or class of drugs listed on Schedules I or II in this chapter through chemical changes such as the addition, subtraction or rearranging of a radical or the addition, subtraction or rearranging of a substituent, shall be considered to be listed on the same schedule as the drug or class of drugs which it imitates in the same manner as any isomer, ester, ether, salts of isomers, esters and ethers of such drug or class of drugs. (1987, c. 447.)

Effective date. — This section is effective Mar. 25, 1987.

APPENDIX D

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