A determination of the discriminatory power of high school seniors to evaluate commercial advertisements in popular periodicals upon the authenticity of their health value claims

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A DETERMINATION OF THE DISCRIMINATORY POWER OF HIGH SCHOOL SENIORS
TO EVALUATE COMMERCIAL ADVERTISEMENTS IN POPULAR PERIODICALS UPON THE
AUTHENTICITY OF THEIR HEALTH VALUE CLAIMS

Submitted by

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The problem.-- The purpose of this study was to determine the discriminatory power of high school seniors in evaluating commercial advertisements in popular periodicals for health products, services, or aids upon the authenticity of their health value claims. In undertaking this aim it was necessary: (1) to construct and evaluate an instrument for determining the discriminatory power of high school seniors to evaluate the authenticity of health claims in advertisements from popular periodicals; and (2) to compare the ratings of chance selected high school seniors with those of juries of experts in the evaluation of the advertisements.

Definition of terms.-- For the purpose of this study, discriminatory power is the ability to critically analyze and evaluate the authenticity of health claims of commercial advertisements in popular periodicals; that is, the power to distinguish between factual claims and fanciful fabrications. Health claims refer to the health values attributed to a product, service, or aid in these advertisements. Authenticity describes the degree of accuracy of health claims made in the advertisements as judged by juries of experts through the process of consensus. Popular periodicals are understood to mean magazines of high circulation.
Importance of the problem.-- Commercial advertising pervades the American culture today. In our highly industrialized mass production-distribution economy, a variety of mass media strive for the attention of the American consumer, extolling to him the virtues of an almost inexhaustible assortment of products and services.

These appeals are often reinforced to suggest, directly or indirectly, a need on the part of the buyer for a particular commodity. Indeed, the impression may be left—as is hoped by many advertisers—that whatever is being offered is, in fact, indispensable to whomever the advertisement is directed. This may or may not be the case.

The claims of advertisers often rest on their product's alleged contribution to developing or promoting characteristics associated with good health, e.g., vitality, beauty, peace of mind, desirability. They may focus attention on the aid offered in preventing or minimizing a state of ill health. However, these claims may be more fanciful than factual. Their authenticity is often difficult to ascertain. Not only may a product or service advertised as a health aid not live up to its claims, but it may be of little or no value to the user if not actually harmful to his well-being.

Critical eyes, ears, and intellect are required for a discriminating evaluation of the authenticity of health claims contained in commercial advertisements in newspapers, periodicals, radio, television, billboards, etc. This presupposes some knowledge or training. Ultimately, the consumer himself is responsible for his own protection against distorted and groundless health claims in whatever form he encounters them.

Determining the discriminatory power of high school seniors to critically analyze and evaluate periodical advertisements for health products, services, or aids can serve as a guide in the planning and organization of health instruction programs, which potentially can offer much in the development of consumer-wise, health-educated citizens who can distinguish between the facts and fancies of this "advertising age."

Scope of the study. -- The instrument was administered to 881 seniors attending six public high schools and one parochial high school in an industrial metropolitan area of Western Pennsylvania. This sample includes seniors from the four public high schools in the city, the largest parochial high school in the city, and two of the three public high schools serving the suburbs.

The study encompassed advertisements which purported to contribute not only to the reader's physical health, but also to his social,

emotional, and mental well-being. Periodicals reviewed for advertisements were those which comprised the top one-third of the list of 125 leading U. S. consumer magazines according to circulation in the World Almanac for 1959.1/

The completion of this investigation entailed a progression through the following steps: (1) the collection of the commercial advertisements for health products, services, or aids from current popular periodicals; (2) the categorization of these advertisements under topical areas to facilitate their evaluation and validation by juries of experts; (3) the determination, by the juries of experts, of the degree of authenticity of the advertisements upon the basis of the health claims contained therein; (4) the construction of an instrument that met specific criteria; (5) a trial application of this instrument; (6) the evaluation of the instrument on the basis of the pilot study and its ultimate administration to the 881 high school seniors; and (7) a statistical analysis of the findings to determine the ability of these students to critically analyze and evaluate the health claims of commercial advertisements in popular periodicals.

Delimitation of the study.-- This study is limited to the following conditions: (1) the evaluation of the advertisements was exclusively upon the basis of the authenticity of expressed health value claims; and (2) the advertisements utilized in the study were

collected solely from current issues—between December, 1958 and November, 1959—of 38 periodicals out of the 42 that made up the top one-third of the World Almanac's 1959 listing of leading U. S. consumer magazines. 1/ Copies of two periodicals reviewed, Scouting and TV Guide, did not yield advertisements that could be used in this study. Of the two remaining magazines, Household 2/ discontinued publication with the November 1958, issue. Everywoman's 3/ was combined with Family Circle as of June 1958, and is now known as Everywoman's Family Circle.

Basic assumptions made.--This investigation was undertaken with the following assumptions serving as guides to its development: (1) that the health claims of commercial advertisements in popular periodicals represent different degrees of authenticity; and (2) that a study of the ability of these high school seniors to critically analyze and evaluate the authenticity of health claims of commercial advertisements in popular periodicals may be of value to health educators in secondary schools and on the college level.

Restatement of the problem.--The essence of this study is included in the answers it attempts to provide to the following questions:

1/Tbid.


1. Are the high school seniors in all the schools included in the study able to evaluate critically commercial advertisements in popular periodicals for health products, services, or aids upon the authenticity of the health claims contained therein?

2. Are there significant differences among the students of the different schools in evaluating the advertisements?

3. To what extent do student evaluations of the advertisements disagree with the judgment of the juries of experts?

4. Are there significant differences in ability to evaluate the advertisements among students who have had different degrees of formal instruction in health or hygiene courses in secondary schools?

5. What differences, if any, exist in the discriminatory power between boys and girls to evaluate commercial advertisements in popular periodicals for health products, services, or aids?

6. Is the instrument valid and reliable?
CHAPTER II
REVIEW OF RELATED LITERATURE

Introduction.--Advertising, as a form of persuasion—or propaganda if you will—has received considerable attention in both the popular and professional literature. Its uses have been summarily pointed out and praised and its abuses vigorously attacked. Most recently great controversy has centered on the use and morality of the "depth approach" in advertising in which the knowledge of social scientists, e.g., psychologist, sociologist, anthropologist, is utilized in the process of motivation research. Martineau¹ and Packard² view this matter from diverse "angles of vision." These general references provided acquaintance with advertising as a business within the American social structure.³

Though it is not within the scope of this study to debate the ethics of the techniques of advertising, as a cultural phenomenon of major proportions, advertising needs to be understood as a form of

propaganda. With a term so glibly bandied about as is "propaganda," however, it would be meaningless to say only that "Advertising is propaganda," unless a concept of propaganda followed. Doob\(^1\) states, "No matter how propaganda is defined, it is clear at the outset that the term refers to an attempt by somebody to influence somebody else." Carrying this further, Lee\(^2\) says, "In short, the word 'propaganda' . . . is a colorless label for efforts at purposeful mass persuasion."

As such, as a colorless label for efforts at purposeful mass persuasion, propaganda \textit{per se} is neither good nor bad, true nor false; in any particular case, with whatever criteria are applied, it can be described by any of the aforementioned terms or with other adjectives which signify degrees of difference in between opposing extremes. In effect, propaganda is only a "short-cut" means of persuasion toward ends which may not only be evil or undesirable, but noble and righteous as well.\(^3\) The word propaganda in itself is neutral.

Control of false and misleading advertising by the Federal government came with the enactment of the Federal Trade Commission Act of 1914, which was passed to eliminate unfair trade practices. Though the law did not define all these "unfair" practices, the Commission

early decided that they included false and misleading advertising. In this regard, "The first two formal cases decided by the Commission prohibited false and misleading advertising, finding that such practices constituted such an 'unfair method of competition' as to be violative of Section 5."1/

In the years that followed, the need for additional legislation to safeguard consumers, as well as competitors, from deceptive advertising became apparent, especially in regard to foods, drugs, cosmetics, and health "devices." This legislation came to fruition with the passage, in 1938, of the Wheeler-Lea Amendments to the original Act of 1914, which widened the Commission's authority against false and misleading advertising in the public interest.

Among noteworthy changes introduced by the Wheeler-Lea Amendment was the declaration that "unfair or deceptive acts or practices in commerce" are unlawful; these words being added to the original Act's declaration in Section 5 that "unfair methods of competition in commerce" are illegal.2/ Thus, it now became unnecessary to establish injury to competition before false and misleading advertising could be restrained. Section 15 defined a "false advertisement" as "an advertisement, other

1/Charles A. Sweeny, "Federal Trade Commission Control of False Advertising of Foods, Drugs and Cosmetics" (Remarks made before the annual meeting of the Division of Food, Drug and Cosmetic Law, American Bar Association, New York City, July 12, 1957), p.1. (Mimeographed.)

than labeling, which is misleading in a material respect; \[\ldots\] \[1\]

The 1958 Annual Report of the Federal Trade Commission, in describing the scope of authority of the Commission, also concisely summarized these points:

The Wheeler-Lea Act amendments also conferred special authority upon the Commission for the control of false advertising of foods, drugs, cosmetics and curative or corrective devices. \[\ldots\] When necessary for protection of the public interest, the Commission is authorized to obtain temporary injunctions against the false advertising of foods, drugs, cosmetics or curative devices, pending completion of the cease and desist order proceedings. Where the commodity advertised is injurious to health, or where the advertising is with intent to defraud or mislead, criminal prosecution may also be had with maximum penalties of a $5,000 fine and 6 months' imprisonment, or double this fine and imprisonment in case of second offenses. The Commission is authorized to certify the facts to the Attorney General for prosecution whenever it has reason to believe any person, partnership or corporation is liable under the criminal provision. \[2\]

Other Federal agencies providing legal protection for the consumer against deceptive practices, who cooperate closely with the Federal Trade Commission, include the Food and Drug Administration and the Post Office Department. The Food and Drug Administration is responsible for protecting the consumer from false or misleading labeling of foods, drugs, cosmetics, and devices in interstate commerce. It also guards against impurities in these products. The Post Office Department prevents the dissemination of certain fraudulent materials through the mails. However, jurisdiction over false and

1/Federal Trade Commission Act, Sec. 15.

misleading advertisements lies with the Federal Trade Commission.

Law enforcement--if an essential avenue of action in the area of dishonest advertising--is only one approach to the problem, however. One reason for this is succinctly given by Lindsay with an example to make the case lucidly clear.

Complete enforcement of the law is difficult. . . . Sale of the offending product or its advertising may continue for years before legal action calls a halt. To illustrate, 14 years have been spent in scientific investigation and litigation on the advertising claims for a liver pill. Following an opinion of the Circuit Court of Appeals in October 1956, the Federal Trade Commission ordered the makers of these pills to cease their false advertising because the pills have 'no therapeutic effect beyond that of an ordinary laxative.' 1/

Today the Federal Trade Commission seeks voluntary compliance to the statutes it administers in order to discourage litigation proceedings if possible and secure immediate changes in advertising which is materially misleading. 2/

Private agencies such as better business bureaus and various consumers' organizations are also concerned with maintaining integrity in advertising. Yet, in the final analysis, the consumer must be prepared to safeguard his own well-being by intelligent selection of products and services which affect his health. To this end, this study was undertaken, with the purpose of determining the ability of high school seniors--many at the point of terminal formal education--to critically


analyze and evaluate the authenticity of health claims of commercial
advertisements in popular periodicals.

A number of studies, related in purpose and method to this inves-
tigation, were found in a review of the indexed literature. This re-
search and its pertinent findings will herewith be described in the
remainder of this chapter.

Beliefs of certain women consumers regarding health claims in
advertising.-- Using a check-list with 50 acknowledged health claims
from magazine, newspaper, and outdoor advertising, Edgerton\(^1\) sought
the following responses from 1,000 women consumers of different age
groups and educational levels: (1) I believe it, (2) I do not believe
it, (3) I think it is true but am not sure, or (4) I do not know.
She did this in order to determine whether health claims of adver-
tsements are believed by women consumers irrespective of the validity
of those claims. Among her findings and conclusions were the
following:

1. Acceptance of--meaning here belief in-- health claims of
   advertisements decreased with increased education.

2. College graduates appeared to be skeptical of all adver-
tising claims in general.

3. Women under 25 years of age believed fewer of the health
   claims than women over 25 years old.

\(^1\)Avis E. Edgerton, "Health Claims in Advertising with Special
Reference to Beliefs of Certain Women Consumers" (Unpublished Ph.D.
dissertation, School of Education, New York University, 1938).
4. Little difference was denoted between other age groupings, however, indicating that age alone did not seem to be an influencing factor in the degree to which women consumers subscribed to these claims.

5. The level of education attained made a significant difference in the affirmative and negative answers given by each education group, suggesting that schooling is a factor in influencing belief in health claims of advertisements. Disbelief in advertising claims increased with schooling.

Further, in order to determine whether these women consumers could distinguish between truth and falsity in the claims, the investigator compared their answers on the same check-list with the accepted answers of authorities. Here she found and concluded that:

1. Items of the check-list were not answered correctly by from 15 per cent to 69 per cent of the women, with a mean percentage of 49.8.

2. About one-half of the women consumers subscribed to the health claims of advertisements which authorities considered invalid.

3. There is a general inability among women consumers to distinguish between true and false health claims in advertisements.
Reliability of evaluations by high school girls of advertisements of health products. — In 1941, Carle\(^1\) conducted a study with 50 high school girls between 15 and 17 years of age inclusively in order to measure the reliability of evaluations made by them of eight advertisements for health products from frequently read magazines. The students evaluated the advertisements twice, with a two week interval between the first and second evaluations. The same procedure was followed both times.

Ten criteria were used for evaluating the advertisements. Statements made in the advertisements were considered in terms of: quality, quantity, price, health value, use, warnings, merit, nature of contents, claims, and emotional appeal. The students were requested to judge every advertisement's statements on the basis of these ten values, checking with each criterion one of the following: (1) obviously true, (2) probably true, (3) fairly true, (4) probably false, or (5) obviously false. Points assigned for criteria scored ranged from five for obviously true statements, to one for obviously false statements. An advertisement which did not include any information in regard to a particular criterion was given a score of "zero" for that criterion, the students having been asked to leave it blank in their evaluations.

The reliability of the girls' evaluations was measured by determining the differences between the means of the first and second evaluations in relation to: the total ratings for each advertisement (average difference .87 points), and the total scores computed for all the advertisements by criteria (average difference .94 points). Also, coefficients of reliability were computed by the Product Moment Method on the basis of the sum of the ratings for all the criteria on both evaluations. The average reliability coefficient for all the criteria was found to be .634. The investigator concluded that marked reliability could be demonstrated between subsequent evaluations of advertisements for health products by high school girls.

Validity of health information gained through radio advertising. -- In order to evaluate health information gained from radio advertising, Duncan \(^1\) submitted 236 statements--drawn from radio commercials between February 1, 1941 and February 1, 1942--to four groups of people of different educational and professional levels. In addition to determining the validity of these appeals, the investigator sought out the extent to which each of the four groups of judges accepted the health information conveyed through radio advertising to listeners. Twenty health specialists and technicians; 10 teachers of health education; 18 university graduate students; and 30 lay persons were

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asked to evaluate the 236 statements, which were organized into two forms, by the following scale: (1) false, (2) possibly false, (3) do not know - cannot determine, (4) possibly true, or (5) true. The statements were classified into four groups of products, those concerning: (a) health of skin, hair, and teeth; (b) health of respiratory organs; (c) digestive, assimilative, and excretory functions; and (d) pain relief and general health. Ratings of the various groups were calculated, compared statistically, and analyzed in terms of the study's aims. The ratings of the health specialists and technicians (experts) were accepted as the basis for passing on the validity of the statements. The researcher's important findings and conclusions included the following:

1. Among the groups evaluating the statements, the experts rated fewer to be true than the other groups of judges. They rated only 6.36% of the statements as true, compared to the 41.53% of the lay persons. Health education teachers found 6.78% to be true, the unselected graduate students 11.86%.

2. Statements were rated as of doubtful validity by the groups as follows: graduate students, 63.14%; experts, 58.45%; lay persons, 51.27%; and health teachers, 40.68%.

3. Statements were determined to be false as follows: teachers of health education, 52.54%; experts, 35.16%; graduate students, 25.00%; and lay persons 7.20%.
4. Statements made about the products included in the study in radio commercials were considered mainly to be either false or of doubtful validity by the experts and graduate students.

5. Radio advertising claims for products purporting to improve digestion and elimination showed the highest degree of validity, those dealing with the care of the skin, hair, and teeth the lowest.

6. Acceptance of radio advertising claims decreased with the rise of educational and socio-economic levels.

7. The ratings of the radio advertising claims by the experts and health teachers showed less variability than the other judges, indicating greater uniformity of evaluation and background; also suggesting, perhaps, a better background for judging.

The variability of the ratings by the different groups who judged the statements, measured in terms of average deviation (A. D.), was as follows: (1) lay persons, 1.000; (2) graduate students, .853; health teachers, .757; and experts, .745. Thus, the experts and health teachers not only rated the statements lower than the other groups of judges, but were also more uniform in their ratings.

Analysis of radio health broadcasts.-- Stevens analyzed 103 health broadcasts received in California between September 1942 and

June 1943, for the purpose of determining "if such broadcasts are acceptable or not acceptable according to medical and other authoritative sources."\footnote{1}{Ibid., p. 25.} For the most part, the broadcasts were recorded with a dictaphone directly from a radio and transcribed into print. Copies of a few broadcasts were obtained from radio stations and sponsors. Also, some scripts were obtained from printed sources such as magazines and bulletins.

The broadcasts were categorized by sponsor into one of the following four groups: (1) broadcasts sponsored by commercial organizations, (2) broadcasts sponsored by individuals, (3) broadcasts sponsored by professional and public health groups, or (4) broadcasts sponsored by miscellaneous groups.

The health broadcasts were analyzed in terms of their authenticity and informative quality according to prevailing medical and research findings. These findings were summarized, documented, and classified by subject matter in the study. A broadcast could be rated as acceptable, not acceptable, or a borderline case, which is neither of the former. On the following page is a summary of the analyzed broadcasts, which is reproduced from the Stevens study.\footnote{2}{Ibid., p. 431.}

Among the pertinent conclusions reached by the researcher were the following:

\footnote{1}{Ibid., p. 25.}
\footnote{2}{Ibid., p. 431.}
Table 1.
Stevens' Summary of Analyzed Broadcasts

<table>
<thead>
<tr>
<th>Group sponsoring the broadcasts</th>
<th>Number of broadcasts analyzed</th>
<th>Number rated acceptable</th>
<th>Number rated not acceptable</th>
<th>Number rated as borderline cases (neither acceptable or not acceptable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial. . .</td>
<td>84</td>
<td>9</td>
<td>70</td>
<td>5</td>
</tr>
<tr>
<td>Individuals . .</td>
<td>8</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Professional and Public Health. .</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous . .</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Totals . . .</td>
<td>103</td>
<td>17</td>
<td>76</td>
<td>10</td>
</tr>
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</table>
1. Health claims made by commercial organizations on radio in the United States were generally rated as not acceptable in quality of information presented and authenticity when compared to authoritative medical and research findings.

2. Many products advertised on radio were considered worthless in relation to their capacity to improve health as claimed. However, it was rare to find one that could be considered as extremely dangerous.

3. Health broadcasts sponsored by individuals were found to be unreliable sources of information.

4. Broadcasts by public and professional health groups could be relied upon to be acceptable health broadcasts.

A national program of health education through the adult level to provide enough information to listeners, so that they could better analyze and evaluate health broadcasts, was one recommendation made in the investigation that has particular significance to this study.

Summary.-- Advertising is essentially an art and science of persuasion. It is a form of propaganda, which in itself is nothing more than a short-cut means of trying to influence someone. Propaganda per se has been described as being "colorless" or "neutral." Thus, advertising--considered as a type of propaganda--is a "many-splendored" cultural phenomenon. With whatever criteria are applied to it, it can
be described in terms of a multitude of colors and shades or odors and potencies.

Control over false and misleading advertising, to protect both consumers and competitors, comes under the jurisdiction of the Federal Trade Commission on the national level. The Commission's authority in this pursuit stems largely from the Wheeler-Lea Amendment to the Federal Trade Commission Act, which the Commission enforces. It is now the Commission's policy to seek voluntary compliance to the statutes it administers through the identification of guides for industries, as well as for its own staff, in relation to the law's requirements. This approach is taken with the hope that advertising which is materially misleading will be quickly removed or changed to avoid legal action whenever possible. However, the Commission, with the assistance of the Attorney General, is empowered to institute criminal prosecutions against violators of the law if necessary under the Wheeler-Lea Act amendments.

The review of related research revealed that health claims made in radio commercials were generally considered false or of doubtful validity by a jury of experts in one investigation. Another study indicated that the authenticity and quality of information presented in health claims, made by commercial organizations on radio, were not acceptable when compared to medical and other authoritative sources. A general inability among women consumers to distinguish between true and false health claims in advertisements from magazines, newspapers, and outdoor advertising has been denoted. Also, two
evaluations of eight magazine advertisements of health products, by a group of high school girls, resulted in a demonstration of marked—if not high—reliability between the evaluations. The average reliability coefficient for all ten criteria used in the study was found to be .634 by the Product Moment Method, which was considered reasonably good in view of the nature of the study.

The studies reviewed all stimulate awareness of the need for critical evaluation of health claims in advertisements. With an ever increasing advertising bill in the United States—it is now estimated at about $11 billion annually—1—a continuing need would seem to exist for comprehensive research dealing with educational implications of health advertising in the various mass media. It is hoped this study will meet part of this need, fostering critical analysis of health claims in advertisements of today's popular periodicals.

CHAPTER III

PROCEDURE

Introduction. -- This investigation was undertaken to determine the discriminatory power of high school seniors to evaluate commercial advertisements in popular periodicals upon the authenticity of their health value claims. Its completion required: (1) the collection of commercial advertisements for health products, services, or aids from current popular periodicals, and their categorization under topical areas; (2) evaluation and validation of the advertisements by juries of experts; (3) establishment of criteria for the formation of the instrument; (4) construction of the instrument and its trial application; (5) evaluation of the instrument and its final administration; and (6) a statistical analysis of the findings in the light of the objectives of the study.

The collection of health advertisements. -- The health advertisements collected for use in this study were gathered from best-selling popular periodicals between December, 1958 and November, 1959. It was felt this task should encompass all the seasons of the year in that health problems are often seasonal, and advertising campaigns for some health products, services, and aids are geared to this fact, being at their height during peak seasons.

-23-
Copies of the 42 periodicals that made up the top one-third of the World Almanac's 1959 listing of leading U. S. consumer magazines were reviewed. Thirty-eight of these magazines yielded health advertisements that could be used in the study. These popular periodicals, listed in order of highest circulation, are shown in Table 2 on the next page.

The advertisements collected were then carefully screened to avoid duplications. Though some products—as well as manufacturers who produce a line of health products—were represented by more than one advertisement, the decisive factor in selection for jury evaluation was that an advertisement's health claims be unique. This was necessary as it was occasionally found that different advertisements for the same product were made up of their own unique health claims. Thus, specific health values that were attributed to a product in an advertisement determined whether it should be included in the study, or whether it was largely a duplication of another advertisement.

Where a number of copies of an advertisement existed, selection was based on the premise that the largest number of magazines possible should be represented in the study. Consequently, at least one advertisement was used in the jury evaluation and validation from each of the 38 magazines from which they had been collected.

Finally, a total of 152 advertisements were categorized under five topical areas to facilitate their treatment by the juries of experts. The classification of the health advertisements and the
Table 2. Popular Periodicals Yielding Health Advertisements for Jury Evaluation and Validation

<table>
<thead>
<tr>
<th>Magazine</th>
<th>Circulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reader's Digest</td>
<td>11,390,918</td>
</tr>
<tr>
<td>Life</td>
<td>5,961,154</td>
</tr>
<tr>
<td>Ladies' Home Journal</td>
<td>5,614,599</td>
</tr>
<tr>
<td>Saturday Evening Post</td>
<td>5,449,193</td>
</tr>
<tr>
<td>Look</td>
<td>5,378,464</td>
</tr>
<tr>
<td>McCall's Magazine</td>
<td>5,303,239</td>
</tr>
<tr>
<td>Better Homes and Gardens</td>
<td>4,379,237</td>
</tr>
<tr>
<td>Good Housekeeping</td>
<td>4,233,252</td>
</tr>
<tr>
<td>Family Circle Magazine (now Everywoman's Family Circle)</td>
<td>3,942,905</td>
</tr>
<tr>
<td>American Home</td>
<td>3,259,925</td>
</tr>
<tr>
<td>Woman's Day</td>
<td>3,111,942</td>
</tr>
<tr>
<td>Coronet</td>
<td>2,975,434</td>
</tr>
<tr>
<td>American Legion Magazine</td>
<td>2,742,504</td>
</tr>
<tr>
<td>True Story</td>
<td>2,625,967</td>
</tr>
<tr>
<td>Redbook Magazine</td>
<td>2,591,676</td>
</tr>
<tr>
<td>True</td>
<td>2,278,230</td>
</tr>
<tr>
<td>National Geographic Magazine</td>
<td>2,178,040</td>
</tr>
<tr>
<td>Time</td>
<td>2,172,230</td>
</tr>
<tr>
<td>Scholastic Magazine (total Junior and Senior)</td>
<td>2,039,328</td>
</tr>
<tr>
<td>Confidential</td>
<td>1,976,892</td>
</tr>
<tr>
<td>Parents' Magazine</td>
<td>1,747,385</td>
</tr>
<tr>
<td>Boys' Life</td>
<td>1,648,019</td>
</tr>
<tr>
<td>Argosy</td>
<td>1,459,637</td>
</tr>
<tr>
<td>Workbasket</td>
<td>1,379,393</td>
</tr>
<tr>
<td>True Confessions</td>
<td>1,371,924</td>
</tr>
<tr>
<td>Photoplay</td>
<td>1,357,289</td>
</tr>
<tr>
<td>Popular Mechanics Magazine</td>
<td>1,330,738</td>
</tr>
<tr>
<td>Modern Screen</td>
<td>1,219,216</td>
</tr>
<tr>
<td>Elks Magazine</td>
<td>1,209,351</td>
</tr>
<tr>
<td>Popular Science Monthly</td>
<td>1,190,779</td>
</tr>
<tr>
<td>Newsweek</td>
<td>1,154,011</td>
</tr>
<tr>
<td>Modern Romances</td>
<td>1,098,435</td>
</tr>
<tr>
<td>Mechanix Illustrated</td>
<td>1,094,729</td>
</tr>
<tr>
<td>V. F. W. Magazine</td>
<td>1,063,464</td>
</tr>
<tr>
<td>Seventeen</td>
<td>1,048,262</td>
</tr>
<tr>
<td>Presbyterian Life</td>
<td>999,431</td>
</tr>
<tr>
<td>Sports Afield</td>
<td>997,039</td>
</tr>
<tr>
<td>Cosmopolitan</td>
<td>996,613</td>
</tr>
</tbody>
</table>

1/This list comprises 38 of the top 42 "Leading U. S. Consumer Magazines" according to the World Almanac for 1959, p. 487.
number of each type are shown in Table 3.

Table 3. Classification of Health Advertisements

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number of Advertisements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition and Weight Control</td>
<td>31</td>
</tr>
<tr>
<td>Dental and Oral Hygiene</td>
<td>15</td>
</tr>
<tr>
<td>Analgesics; Care of Communicable Diseases</td>
<td>22</td>
</tr>
<tr>
<td>Personal Cleanliness and Beauty Care of Skin, Hair, and Fingernails</td>
<td>58</td>
</tr>
<tr>
<td>Miscellaneous Ailments and Conditions, e.g., Constipation, Indigestion, Sleeplessness</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>152</strong></td>
</tr>
</tbody>
</table>

Evaluation and validation of the advertisements.-- The advertisements of a topical area were evaluated and validated by a jury of four experts in that area. Only those advertisements for which there was at least 75 per cent agreement among the evaluations of a jury's members were considered acceptable for use in making up the instrument.

In seeking the best qualified personnel for evaluation and validation of the advertisements, the following professional people were solicited for membership on the various juries by the investigator after consultation with his advisors:

1. Specialists in the area of nutrition - Nutrition and Weight Control
2. Dentists - Dental and Oral Hygiene
3. Physicians whose positions and/or practice brings them in close association with communicable diseases, analgesics, drugs - Analgesics; Care of Communicable Diseases

4. Dermatologists and researchers in the field of dermatology - Personal Cleanliness and Beauty Care of Skin, Hair, and Fingernails

5. Physicians who are in the practice of general medicine - Miscellaneous Ailments and Conditions.

The cooperation of each juror was requested in a personal meeting with the investigator in which the nature and purpose of the study was explained. Only in one instance was it necessary for the investigator to make a substitution because a desired juror expressed an unwillingness to participate in the study. Nineteen of the 20 jurors\(^1\) were receptive to the idea in their initial meeting with the investigator.

The criteria which served as guideposts in the selection of jurors within any one of the professional areas, or categories of advertisements as it were, follow:

1. That he be a Medical Doctor preferably, or the holder of a doctor’s degree in his field of specialization
2. That he be relatively recently trained
3. That he have a reasonable degree of experience in his field

\(^1\)See Appendix A, p. 69, for identification of jurors by name, training, affiliation, and address.
4. That he have an expressed interest in the educational aspects of health and medicine, as evidenced by academic affiliation, published works, and/or reputation for accepting professional speaking engagements.

5. That he be active in, or at least familiar with, current research.

6. That he be a proven executive in his area of specialization, signifying a broad working acquaintance with his field.

It is apparent that it would be virtually impossible to expect more than the rare man to meet all these criteria, though some of the jurors actually did. However, the attempt was made to approach meeting the criteria through the total membership of each jury, rather than expecting each individual to meet all of them. It is important that these criteria be understood for what they were, guideposts for making up the juries.

For evaluation and validation by jurors, the advertisements were mounted in five scrapbooks according to topical areas. Each juror received the following:

1. A scrapbook containing the advertisements in his area, laid out with photo mounting corners and numbered.

2. Instruction and response sheets for rating the advertisements, consisting of:

1/Appendix A, p. 72.
a. A list of possible harmful effects that might stem from commercial advertising that is not entirely truthful in its representation of health values

b. Instructions to rate every advertisement on the basis of the authenticity of its health value claims by checking one of the following: (1) Completely Sound and Accurate; (2) Largely Factual; (3) Half True; (4) Largely Misleading and Misrepresentative; or (5) Completely Distorted and Deceptive

c. A reminder that the evaluation of each advertisement was to be on the basis of its expressed health claims

d. A definition of the term "health claims," in reference to its usage in this study.

The total number of health advertisements validated through jury evaluation, arranged by topical areas, is shown in Table 4, on the following page.

Personal reactions of jurors, beyond the requested evaluation, that the investigator felt obliged to mention in that they illustrate important individual impressions of advertisements as well as scrutiny of self during the evaluation process include the following: "I find it extremely hard to separate my own bias—or you might even say knowledge—about a product from what is actually claimed for it in the advertisement..." "Knowing the active ingredients in this item [advertisement] would make it a lot easier to judge its health claims. It is impossible to have full knowledge
Table 4.
Health Advertisements Validated
by the Juries of Experts

<table>
<thead>
<tr>
<th>Health Advertisements</th>
<th>Completely Sound and Accurate (1)</th>
<th>Largely Factual (2)</th>
<th>Half True (3)</th>
<th>Largely Misleading and Misrepresentative (4)</th>
<th>Completely Distorted and Deceptive (5)</th>
<th>Total</th>
<th>Per Cent Validated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition and Weight Control</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>10</td>
<td>32.3</td>
</tr>
<tr>
<td>Dental and Oral Hygiene</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>Analgesics; Care Communic. Diseases</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>54.5</td>
</tr>
<tr>
<td>Skin, Hair and Fingernails</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>13</td>
<td>22.4</td>
</tr>
<tr>
<td>Miscellaneous Ailments, Conditions</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>10</td>
<td>38.5</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>10</td>
<td>20</td>
<td>48</td>
<td>31.6</td>
</tr>
</tbody>
</table>
about all the products marketed today. . . ."

- Very often, relatively unimportant points are emphasized in an ad in relation to the product's usefulness, though they may, in fact, be true. . . ."

- Distinguishing between what the advertiser could mean and what he does mean in his health claims is often a real trick. Ambiguous terms saturate many ads, making their judgment a matter of personal interpretation of what you think the advertiser meant. . . ."

- "What the manufacturer did not say in this advertisement is glaringly missing, in my opinion. . . ." Thus were expressed some of the problems involved in the evaluation and validation of the advertisements by jurors. The authenticity of the health claims in the validated advertisements is shown in Appendix A, Table 1A, on page 76.

Criteria for the formation of the instrument.-- Formation of the instrument, for the purpose of collecting data for this study, required the establishment of a group of criteria; this to insure the construction of the best possible "means" for achieving the "ends" of the study. The criteria set forth were:

1. The instrument should be valid and reliable.

2. It should be made up of advertisements that have been collected over a calendar year, in order to include advertisements for health products from the four seasons.

3. It should be made up of advertisements from current issues of popular periodicals of high circulation.

4. It should include each advertisement in its entirety.

5. It should provide for the expression of different degrees of authenticity of the advertisements' health claims.
6. It should be simple to administer.
7. It should be of value to high school seniors.
8. It should include as many advertisements as possible.
9. It should be organized to prevent fatigue and disinterest among the students evaluating the advertisements.

Construction of the instrument and its trial application.-- The validation of 48 advertisements for use in the investigation, and the knowledge that a variability of as much as 15 minutes existed in the length of a class period among different high schools, made it apparent that more than one class period would be required for the administration of the instrument, if the criteria established for its formation were to be met. Thus, it was decided that the instrument should be made up of two parts--approximate halves--which were to be administered during separate class periods that did not directly follow one another.

Accordingly, two booklets of advertisements were organized.¹/ The advertisements in Part 1 were numbered 1-24. Part 2 was comprised of numbers 25-47. One validated advertisement--in the area of nutrition and weight control--was ultimately not included in the instrument, for after careful consideration it was decided that its illustration might prove objectionable to school authorities.

¹/Appendix B, p. 83.
Every student received a copy of one of the booklets for each evaluation session. One response sheet\(^1\) was used for rating both booklets. It included:

1. A section for personal data

2. Instructions to rate the magazine advertisements on the basis of the authenticity of their expressed health claims, in the same manner as did the jurors, by checking one of the following: (1) Completely Sound and Accurate; (2) Largely Factual; (3) Half True; (4) Largely Misleading and Misrepresentative; or (5) Completely Distorted and Deceptive.

The instrument developed was initially administered to 96 seniors in the community high school of a suburb in the greater Boston area during late January and early February of 1960. The purposes of this trial application of the instrument were to evaluate its operational character and to preclude any weak links in the mechanics of its final administration. In its trial application, the instrument was administered by the investigator as well as regular classroom teachers, all of whom were guided in this task by the "Instructions for Administration"\(^2\) that had been formulated. Approximately one-half of the total number of 96 students who participated in the trial application of the instrument evaluated the

\(^1\)Appendix B, p. 81.

\(^2\)Appendix B, p. 79.
advertisements in Part 1 first. The other half rated Part 2 in their first meeting.

Evaluation of the instrument and its final administration.-- In its trial application, the instrument demonstrated that it would function as intended. The range of time required for students to evaluate each booklet of advertisements was from 35 to 45 minutes, which is within the framework of the average class period in high schools.

Several procedural changes in administering the instrument were decided upon, however, following the trial application and the observation of student response sheets. These changes were embodied in a revised set of instructions for administering the instrument. Briefly, the changes were:

1. That students be requested to print their names on their response sheets

2. That it be reiterated to the students that the reference in the personal data section of the response sheet to health or hygiene courses taken previously in secondary schools did not include health instruction received in other subject matter areas, e.g., biology

3. That the booklets and response sheets be taken up collectively after everyone had finished, instead of individually as students completed their evaluations.

1/Appendix B, p. 80.
It was felt these changes would facilitate more efficient administration of the instrument.

The final administration of the instrument followed during the latter part of February and the beginning of March of 1960. A total of 881 high school seniors evaluated all the advertisements that comprised the instrument. Their responses provided the data for this study. Thirty-nine other students, who finished one part of the instrument, were absent during the administration of its other half, and were not included in the statistical analyses.

The entire group of 920 pupils was made up of seniors attending seven high schools in an industrial metropolitan area in Western Pennsylvania. These schools, which were willing to cooperate in the collection of data for this study, included: (1) the city's four public high schools; (2) the largest parochial high school in the city; and (3) two of the three public high schools serving the suburbs.

As with the trial application, the instrument was administered by the investigator and regular classroom teachers. Also, once more, approximately one-half the students rated the advertisements in Part 1 first, the remainder evaluating the advertisements in Part 2 in their initial meeting. The same type of response sheet was used as had been previously utilized in the trial application of the instrument. Table 5, which follows, shows the number of high school seniors participating in the investigation, according to school.
Table 5. Number of High School Seniors Participating in the Investigation, According to School

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>1......</td>
<td>175</td>
</tr>
<tr>
<td>2......</td>
<td>136</td>
</tr>
<tr>
<td>3......</td>
<td>151</td>
</tr>
<tr>
<td>4......</td>
<td>59</td>
</tr>
<tr>
<td>5......</td>
<td>86</td>
</tr>
<tr>
<td>6......</td>
<td>141</td>
</tr>
<tr>
<td>7......</td>
<td>133</td>
</tr>
<tr>
<td>Total</td>
<td>881</td>
</tr>
</tbody>
</table>

Organization and treatment of the data. -- The data collected were organized and treated in the following manner:

1. Student responses to the advertisements were scored on the basis of their proximity to the judgment of the juries of experts, who evaluated and validated the advertisements for use in the instrument.
   a. A score of two for an individual evaluation indicated perfect agreement between a student's rating and the judgment of the experts.
   b. A score of one represented a reply one degree from the jury's judgment on the evaluation scale. It was felt that an answer this close to the jury's judgment, which itself was the result of the process of consensus, was fairly good and deserved recognition.
c. No points were allowed for a response two or more degrees from the jury's judgment on the rating scale. In that the instrument was comprised of 47 advertisements, the highest possible total score that could be achieved by students was 94.

2. A graphic count of the responses of all the students for each advertisement was made in order to determine the percent frequency of student responses for each item. These percent frequencies were also grouped to show the percent of students who were in perfect agreement with the judgment of the experts; one degree from the jury's evaluation; and finally two or more degrees from the judgment of the jurors. In addition, the difference between the mean evaluation by the students for each advertisement and the rating of the experts for each item was denoted.

3. The frequency distribution of student scores was organized for each school and the combined schools. The mean score for each school and the combination of schools was determined.

a. These same procedures were utilized with each sex, and with three groups into which the students were formed according to the degree of formal instruction received in health or hygiene courses in secondary schools.
4. Analysis of variance was used to determine the variation in the ability of students to critically analyze and evaluate the authenticity of health claims in advertisements from popular periodicals; this being done according to school, sex, and groups having varied degrees of formal instruction in health or hygiene courses in secondary schools.

a. Both the 5 per cent and 1 per cent levels of significance were applied to determine whether there were significant differences among the various control groups. The significant differences denoted were described in terms of the highest level of confidence at which they were found.

5. The reliability of the instrument was computed by the odds-evens split-half method, utilizing the Spearman-Brown¹ prophecy formula for estimating reliability from two comparable halves of a test.

The purpose of this study was to determine how well high school seniors could evaluate the authenticity of health claims made in advertisements from current popular periodicals. To achieve this aim it was necessary: (1) to construct and evaluate an instrument for determining the discriminative ability of high school seniors to evaluate the authenticity of health claims for products advertised in current popular periodicals; and (2) to compare the ratings of the students with the judgment of juries of experts, who evaluated and validated the advertisements for use in the study.

The data collected in this investigation were analyzed to indicate:

1. Validity of the instrument
2. Reliability of the instrument
3. Ability of the participating high school seniors in all the schools included in the investigation to critically analyze and evaluate the authenticity of the health claims made in the advertisements
4. Variation in discriminatory power among the students of the different schools in evaluating the authenticity
of the health claims in the advertisements

5. Extent to which student evaluations of the advertisements disagree with the judgment of the juries of experts

6. Variation in discriminatory power between boys and girls in evaluating the advertisements upon the authenticity of their health value claims

7. Variation in discriminatory power among students who have had different degrees of formal instruction in health or hygiene courses in secondary schools

Validity of the instrument. -- The validity of the instrument was established by five juries of experts. The health advertisements collected for use in the study--a total of 152--were classified into five topical areas, for each of which was formed a jury of four experts. The advertisements in each topical category were, thus, evaluated upon the authenticity of their health claims by four experts in that particular area of health.

For validation--and use in the instrument--it was necessary that at least three of the four experts making up a jury agree as to the degree of authenticity of the health claims in each advertisement in its topical area. Each juror evaluated the advertisements alone. Thus, the authenticity of the health claims in the validated advertisements was determined by consensus of agreement among the experts' evaluations. Forty-eight advertisements were validated for use in the investigation, of which 47 were utilized.
Reliability of the instrument.-- The reliability of the instrument was computed by the odds-evens split-half method, utilizing the Spearman-Brown prophecy formula for estimating the reliability coefficient of a test from two comparable halves of the test. In obtaining the reliability coefficient of the half-test, every third response sheet was selected from the total population of 881 high school seniors that participated in the investigation. Thus, 293 cases were considered in determining the reliability coefficient of the half-test. It was found to be .514 by the Product Moment Method.

With the use of the Spearman-Brown prophecy formula, the reliability coefficient of the whole test was estimated to be .678, indicating marked reliability of the instrument.

Ability of the participating high school seniors in all the schools included in the investigation to critically analyze and evaluate the authenticity of the health claims made in the advertisements.-- Table 6, which follows, shows the per cent of high school seniors who evaluated, correctly and incorrectly, each periodical advertisement upon the authenticity of its health claims. The table is organized to illustrate the per cent of student responses that were in perfect agreement with the rating of the experts for each advertisement, one degree from the judgment of the experts on the rating scale, and two or more degrees from the judgment of the experts on the rating scale.


<table>
<thead>
<tr>
<th>Ad Number</th>
<th>Rating of Experts</th>
<th>Percentage Frequency of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Perfect Agreement with Rating of Experts</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>1.0001</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>2.0002</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3.0003</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>4.0004</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>5.0005</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>6.0006</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>7.0007</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>8.0008</td>
<td>1</td>
<td>56</td>
</tr>
<tr>
<td>9.0009</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>10.0010</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>11.0011</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>12.0012</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>13.0013</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>14.0014</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>15.0015</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>16.0016</td>
<td>1</td>
<td>59</td>
</tr>
<tr>
<td>17.0017</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>18.0018</td>
<td>5</td>
<td>63</td>
</tr>
<tr>
<td>19.0019</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20.0020</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

(continued on next page)

1/For the advertisements in their entirety, see Appendix B, p. 84.

2/The rating scale describing the authenticity of the health claims in the advertisements is as follows:
   1 -- Completely Sound and Accurate
   2 -- Largely Factual
   3 -- Half True
   4 -- Largely Misleading and Misrepresentative
   5 -- Completely Distorted and Deceptive

Each one of these ratings, assigned by the experts, reflects agreement among at least three of the four jurors who evaluated every advertisement.
Table 6. (concluded)

<table>
<thead>
<tr>
<th>Ad Number</th>
<th>Rating of Experts</th>
<th>Percentage Frequency of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Perfect Agreement with Rating of Experts</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>22</td>
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<tr>
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<td>47</td>
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</tr>
<tr>
<td>Mean</td>
<td>3.79</td>
<td>24.64</td>
</tr>
</tbody>
</table>
The data in Table 6 indicate that the per cent of high school seniors who were able to evaluate correctly the periodical advertisements upon the authenticity of their health value claims ranged from 1 to 80. A correct response—it should be made clear—is one which reflects perfect agreement with the rating of the experts. Thus, incorrect responses ranged from 20 to 99 per cent among all the advertisements evaluated. Among these incorrect responses, the range of those that were two or more degrees from the judgment of the experts on the rating scale—which must be considered marked errors—was 4 to 91 per cent. Thirty-four per cent or more of the high school seniors evaluated incorrectly, by two or more degrees from the judgment of the experts on the rating scale, 26 of the 47 advertisements.

The mean number of student responses that were in perfect agreement with the ratings of the experts for all the advertisements was 24.64 per cent. The mean per cent of students whose responses were one degree from the judgment of the experts on the rating scale for all the advertisements was 37.57. The mean number of those who were two or more degrees from the judgment of the experts was 37.77 per cent. The mean of the total number of incorrect responses by the students for the advertisements was 75.34 per cent. Thus, substantial numbers of high school seniors demonstrated both relatively low and very low discriminatory power in evaluating the health claims in the advertisements.

A graphic count of the per cent frequency of student responses for each advertisement follows in Table 7.
Table 7. Evaluation of the Authenticity of Health Claims in Popular Periodical Advertisements by High School Seniors

<table>
<thead>
<tr>
<th>Ad Number</th>
<th>Rating of Experts</th>
<th>Authenticity</th>
<th>Percentage Frequency of Responses</th>
</tr>
</thead>
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<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Completely Sound and Accurate</td>
<td>Largely Factual</td>
<td>Half True</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>1........</td>
<td>3</td>
<td>14</td>
<td>48</td>
</tr>
<tr>
<td>2........</td>
<td>4</td>
<td>30</td>
<td>47</td>
</tr>
<tr>
<td>3........</td>
<td>3</td>
<td>23</td>
<td>37</td>
</tr>
<tr>
<td>4........</td>
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<td>30</td>
<td>31</td>
</tr>
<tr>
<td>6........</td>
<td>5</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>7........</td>
<td>5</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>8........</td>
<td>1</td>
<td>56</td>
<td>35</td>
</tr>
<tr>
<td>9........</td>
<td>4</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>10........</td>
<td>5</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>11........</td>
<td>3</td>
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<td>17........</td>
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</tr>
<tr>
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<td>5</td>
<td>1</td>
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</tr>
<tr>
<td>19........</td>
<td>4</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>20........</td>
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<td>46</td>
<td>36</td>
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<tr>
<td>23........</td>
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<td>20</td>
<td>44</td>
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<td>3</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>25........</td>
<td>4</td>
<td>6</td>
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</tr>
</tbody>
</table>

(concluded on next page)

1/For the advertisements in their entirety, see Appendix B, p. 84.
Table 7. (concluded)

<table>
<thead>
<tr>
<th>Ad Number</th>
<th>Rating of Experts</th>
<th>1 (Completely Sound and Accurate)</th>
<th>2 (Largely Factual)</th>
<th>3 (Half True)</th>
<th>4 (Largely Misleading and Misrepresentative)</th>
<th>5 (Completely Distorted and Deceptive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26........</td>
<td>3</td>
<td>9</td>
<td>44</td>
<td>36</td>
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<td>1</td>
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<td>5</td>
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<td>3</td>
<td>11</td>
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<td>5</td>
<td>20</td>
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<td>18</td>
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<td>11</td>
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<td>41........</td>
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<td>1</td>
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<td>20</td>
<td>38</td>
<td>32</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>
Variation in discriminatory power among the students of the different schools in evaluating the authenticity of the health claims in the advertisements. -- Analysis of variance was used to determine whether there were significant differences among the students of the different schools in evaluating the periodical advertisements upon the authenticity of their health value claims.

The significance of differences is shown in Table 8, which follows.

Table 8. Analysis of Variance Among High School Seniors in Evaluating Popular Periodical Advertisements Upon the Authenticity of Their Health Claims, According to School

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Cases</th>
<th>Mean Total Score</th>
<th>Standard Deviation</th>
<th>F</th>
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<tbody>
<tr>
<td></td>
<td>(1)</td>
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<td>(4)</td>
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<td>1......</td>
<td>175</td>
<td>43.10</td>
<td>8.89</td>
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<td>2......</td>
<td>136</td>
<td>40.49</td>
<td>8.63</td>
<td></td>
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<td>3......</td>
<td>151</td>
<td>37.19</td>
<td>9.10</td>
<td></td>
</tr>
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<td>4......</td>
<td>59</td>
<td>39.98</td>
<td>8.29</td>
<td></td>
</tr>
<tr>
<td>5......</td>
<td>86</td>
<td>41.62</td>
<td>9.88</td>
<td></td>
</tr>
<tr>
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<td>141</td>
<td>41.45</td>
<td>8.69</td>
<td></td>
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<td>7......</td>
<td>133</td>
<td>41.86</td>
<td>9.29</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>881</td>
<td>40.88</td>
<td>9.18</td>
<td></td>
</tr>
</tbody>
</table>

The F value of 6.59, indicated in Table 8, is highly significant at the 1 per cent level. This indicates that there were highly significant differences among the students of the different schools in evaluating the authenticity of the health claims in the periodical advertisements. A frequency distribution of total scores according
Extent to which student evaluations of the advertisements disagree with the judgment of the juries of experts. -- Table 9, which follows, shows the variation of the mean rating of the students from the rating of the experts for each advertisement. The advertisements are grouped according to topical area.

1/Appendix B, p. 119.
Table 9. Variation of the Mean Ratings of Students from the Ratings of Juries of Experts in the Evaluation of Advertisements from Popular Periodicals Upon the Authenticity of Their Health Claims

<table>
<thead>
<tr>
<th>Ad Number 1/</th>
<th>Rating of Experts 2/</th>
<th>Mean Rating of Students</th>
<th>Difference Between Columns 2 and 3</th>
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<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Nutrition and Weight Control</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4........</td>
<td>5</td>
<td>3.6</td>
<td>-1.4</td>
</tr>
<tr>
<td>5........</td>
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<td>-1.7</td>
</tr>
<tr>
<td>20........</td>
<td>5</td>
<td>3.4</td>
<td>-1.6</td>
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<td>22........</td>
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<td>27........</td>
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<td>+.4</td>
</tr>
<tr>
<td>32........</td>
<td>5</td>
<td>3.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>35........</td>
<td>5</td>
<td>3.4</td>
<td>-1.6</td>
</tr>
<tr>
<td>42.........</td>
<td>2</td>
<td>1.8</td>
<td>-.2</td>
</tr>
<tr>
<td>46.........</td>
<td>5</td>
<td>3.9</td>
<td>-1.1</td>
</tr>
</tbody>
</table>

Dental and Oral Hygiene

| 9........   | 4                   | 2.7                     | -1.3                              |
| 14......... | 5                   | 3.6                     | -1.4                              |
| 25......... | 4                   | 2.6                     | -1.4                              |

(continued on next page)

1/ For the advertisements in their entirety, see Appendix B, p. 84.

2/ The rating scale describing the authenticity of the health claims in the advertisements is as follows:
   1 -- Completely Sound and Accurate
   2 -- Largely Factual
   3 -- Half True
   4 -- Largely Misleading and Misrepresentative
   5 -- Completely Distorted and Deceptive

Each one of these ratings, assigned by the experts, reflects agreement among at least three of the four jurors who evaluated every advertisement.
Table 9. (continued)

<table>
<thead>
<tr>
<th>Ad Number</th>
<th>Rating of Experts</th>
<th>Mean Rating of Students</th>
<th>Difference Between Columns 2 and 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>3........</td>
<td>3</td>
<td>2.3</td>
<td>- .7</td>
</tr>
<tr>
<td>8........</td>
<td>1</td>
<td>1.6</td>
<td>+ .6</td>
</tr>
<tr>
<td>19.........</td>
<td>4</td>
<td>2.1</td>
<td>-1.9</td>
</tr>
<tr>
<td>23.........</td>
<td>3</td>
<td>2.2</td>
<td>- .8</td>
</tr>
<tr>
<td>26.........</td>
<td>3</td>
<td>2.5</td>
<td>- .5</td>
</tr>
<tr>
<td>29.........</td>
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<td>2.5</td>
<td>-2.5</td>
</tr>
<tr>
<td>33.........</td>
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<td>+1.3</td>
</tr>
<tr>
<td>34.........</td>
<td>5</td>
<td>2.2</td>
<td>-2.8</td>
</tr>
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<tr>
<td>40.........</td>
<td>2</td>
<td>2.2</td>
<td>+ .2</td>
</tr>
<tr>
<td>43.........</td>
<td>4</td>
<td>2.1</td>
<td>-1.9</td>
</tr>
<tr>
<td>47.........</td>
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</tr>
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<td>-2.0</td>
</tr>
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<td>10.........</td>
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<td>- .8</td>
</tr>
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</tr>
<tr>
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<tr>
<td>28.........</td>
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<td>4.3</td>
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</tr>
<tr>
<td>31.........</td>
<td>4</td>
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<td>-1.6</td>
</tr>
<tr>
<td>36.........</td>
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<tr>
<td>39.........</td>
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<td>3.8</td>
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<tr>
<td>41.........</td>
<td>3</td>
<td>1.9</td>
<td>-1.1</td>
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<td>.0*</td>
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<td>5</td>
<td>4.0</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

(concluded on next page)
Table 9. (concluded)

<table>
<thead>
<tr>
<th>Ad Number</th>
<th>Rating of Experts</th>
<th>Mean Rating of Students</th>
<th>Difference Between Columns 2 and 3</th>
</tr>
</thead>
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<tr>
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<td></td>
</tr>
<tr>
<td><strong>Miscellaneous Ailments and Conditions</strong></td>
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<td></td>
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<td>-.7</td>
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<td>3.4</td>
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<td>7..........</td>
<td>5</td>
<td>3.7</td>
<td>-1.3</td>
</tr>
<tr>
<td>11.........</td>
<td>3</td>
<td>2.8</td>
<td>-.2*</td>
</tr>
<tr>
<td>12.........</td>
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<td>3.5</td>
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</tr>
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<td>1.7</td>
<td>+.7</td>
</tr>
<tr>
<td>17.........</td>
<td>5</td>
<td>3.7</td>
<td>-1.3</td>
</tr>
<tr>
<td>18.........</td>
<td>5</td>
<td>4.5</td>
<td>-.5</td>
</tr>
<tr>
<td>30.........</td>
<td>1</td>
<td>1.3</td>
<td>+.3</td>
</tr>
<tr>
<td>38.........</td>
<td>5</td>
<td>3.7</td>
<td>-1.3</td>
</tr>
</tbody>
</table>

*For items 11 and 44, the reader's attention is called to the distribution of student responses for these advertisements as illustrated in Table 7, which may indicate that many students guessed on these particular items, in spite of the apparent closeness of the students' evaluations to the rating of the experts.
The data in Table 9 indicate that the mean student evaluations of the advertisements upon the authenticity of their health claims varied from the ratings of the experts by -2.8 to +1.3 degrees on the rating scale. For 29 of the 47 advertisements, the student mean evaluation varied from the rating of the experts by more than ±1.0 degree on the rating scale. This latter fact signifies a substantial proportion of markedly incorrect responses, which are two or more degrees from the judgment of the experts on the rating scale, for these advertisements.

It is noteworthy, also, that in 40 of the 47 evaluations, the students attached a greater degree of credulity to an advertisement's health claims than did the experts. A negative variation of the mean rating of the students from the rating of the experts indicates greater acceptance of the health claims by the high school seniors. For six advertisements, there was a positive variation, indicating that the experts rated the degree of authenticity of the health claims in these advertisements higher than did the students. In one case, No. 44, there was no variation of the mean rating of the students from the evaluation of the experts.

The mean variation of the students' evaluations from the ratings of the experts for each topical health area is shown in Table 10.
Table 10. Mean Variation of Evaluations by High School Seniors From Ratings of Experts in the Judgment of Periodical Advertisements Upon the Authenticity of Their Health Claims, According to Topical Area

<table>
<thead>
<tr>
<th>Topical Area</th>
<th>Number of Ads</th>
<th>Mean Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition and Weight Control</td>
<td>9</td>
<td>-1.1</td>
</tr>
<tr>
<td>Dental and Oral Hygiene</td>
<td>3</td>
<td>-1.4</td>
</tr>
<tr>
<td>Analgesics; Care of Communicable Diseases</td>
<td>12</td>
<td>-0.9</td>
</tr>
<tr>
<td>Personal Cleanliness and Beauty Care of Skin, Hair, and Fingernails</td>
<td>13</td>
<td>-1.2</td>
</tr>
<tr>
<td>Miscellaneous Ailments and Conditions</td>
<td>10</td>
<td>-0.7</td>
</tr>
<tr>
<td>Total.....</td>
<td>47</td>
<td>-1.1</td>
</tr>
</tbody>
</table>

The data in Table 10 indicate that according to topical area the mean variation of evaluations by high school seniors from the ratings of experts, in the judgment of the authenticity of health claims made in popular periodical advertisements, ranged from -0.7 for advertisements in the area of Miscellaneous Ailments and Conditions to -1.4 in the area of Dental and Oral Hygiene. The mean variation of student evaluations from those of the experts for all the advertisements was -1.1.

This reveals the students not only disagreed with the experts to a notable degree in the evaluation of the advertisements, but also generally felt that the health claims in the advertisements of all the topical areas were more valid than would seem justified upon the basis of the ratings of the experts.
Variation in discriminatory power between boys and girls in evaluating the advertisements upon the authenticity of their health value claims. -- Analysis of variance was used to determine whether there were significant differences between boys and girls in ability to critically analyze and evaluate the authenticity of health claims made in popular periodical advertisements. The significance of differences is shown in Table 11, which follows.

Table 11. Significance of Differences in Discriminatory Power Between Boys and Girls in Evaluating Popular Periodical Advertisements Upon the Authenticity of their Health Value Claims

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number of Cases</th>
<th>Mean Total Score</th>
<th>Standard Deviation</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Boys</td>
<td>566</td>
<td>40.36</td>
<td>9.16</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>315</td>
<td>41.81</td>
<td>9.15</td>
<td>5.01*</td>
</tr>
<tr>
<td>Total</td>
<td>881</td>
<td>40.88</td>
<td>9.18</td>
<td></td>
</tr>
</tbody>
</table>

The F value of 5.01, indicated in Table 11, is significant at the 5 per cent level. This evidence indicates that girls are better able to evaluate popular periodical advertisements upon the authenticity of their health claims to a significant degree. A frequency distribution of total scores according to sex is found in Table 2B.¹/

¹/Appendix B, p. 120.
Variation in discriminatory power among students who have had different degrees of formal instruction in health or hygiene courses in secondary schools. -- Analysis of variance was used to determine whether there were significant differences among students who have had different degrees of formal instruction in health or hygiene courses in secondary schools, in evaluating the periodical advertisements upon the authenticity of their health claims. The significance of differences is shown in Table 12, which follows.

Table 12. Analysis of Variance Among High School Seniors in Evaluating the Authenticity of Health Claims in Advertisements from Popular Periodicals, According to Health or Hygiene Courses Taken in Secondary Schools

<table>
<thead>
<tr>
<th>Health or Hygiene Courses</th>
<th>Number of Cases (1)</th>
<th>Mean Total Score (2)</th>
<th>S. D. (3)</th>
<th>F (5)</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>One course meeting no more than one period a week or no health or hygiene classes taken at all..........</td>
<td>79</td>
<td>41.41</td>
<td>9.19</td>
<td></td>
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<tr>
<td>One or more courses which total between two and four meetings (periods) per week/per semester.........</td>
<td>205</td>
<td>39.79</td>
<td>9.27</td>
<td>1.90</td>
</tr>
<tr>
<td>One or more courses which total five or more meetings (periods) per week/ per semester................</td>
<td>597</td>
<td>41.18</td>
<td>9.12</td>
<td></td>
</tr>
<tr>
<td>Total........</td>
<td>881</td>
<td>40.88</td>
<td>9.18</td>
<td></td>
</tr>
</tbody>
</table>
The $F$ value of 1.90, indicated in Table 12, denotes that there were no significant differences among students who have had different degrees of formal instruction in health or hygiene courses in secondary schools, in their ability to critically analyze and evaluate the authenticity of health claims in advertisements collected from popular periodicals. A frequency distribution of total scores according to the degree of formal instruction received by students in health or hygiene courses in secondary schools is found in Table 3B.\(^1\)

\(^1\)/Appendix B, p. 121.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Statement of the problem.-- The purpose of this study was to determine the discriminatory power of high school seniors in evaluating commercial advertisements from popular periodicals upon the authenticity of their health value claims. The achievement of this aim required: (1) construction and evaluation of an instrument for determining the ability of high school seniors to evaluate the authenticity of health claims for products advertised in current popular periodicals; and (2) analysis of student responses to the advertisements' health claims in the light of the ratings of juries of experts, who evaluated and validated the advertisements for use in the investigation.

Procedures used in the investigation.-- In summary, the procedures used in this investigation are:

1. Over a period of one calendar year--between December, 1958 and November, 1959--152 advertisements for health products, services, and aids were collected from current popular periodicals and categorized under five topical areas to facilitate their evaluation and validation by juries of experts.

-57-
2. Five juries of experts\(^1\)--one for each topical area--evaluated the advertisements upon the authenticity of their health value claims. The advertisements for which there was at least 75 per cent agreement among the jurors' ratings were considered validated for use in the investigation, the authenticity of their health claims having now been determined. Forty-eight of the 152 advertisements, which were submitted for jury evaluation, were validated for use in the study.

3. With 47 of the 48 advertisements validated by the juries of experts, an instrument\(^2\) was developed upon the basis of specific criteria to determine the discriminative ability of high school seniors in evaluating the authenticity of health claims in advertisements from current popular periodicals. This instrument was organized in two parts and administered at separate classroom sessions to the students.

4. The instrument--initially tried with 96 high school seniors in a Boston suburb for the purpose of evaluating its operational character--was ultimately administered to 881 twelfth graders in an industrial metropolitan area in Western Pennsylvania during the latter part of February and the beginning of March of 1960.

\(^1\)Appendix A, p. 69.

\(^2\)Appendix B, pp. 81-118.
5. The data collected were analyzed to indicate:

a. Ability of the participating high school seniors in all the schools included in the investigation to critically analyze and evaluate the authenticity of the health claims made in the advertisements

b. Variation in discriminatory power among the students of the different schools in evaluating the authenticity of the health claims in the advertisements

c. Extent to which student evaluations of the advertisements disagree with the judgment of the juries of experts

d. Variation in discriminatory power between boys and girls in evaluating the advertisements upon the authenticity of their health value claims

e. Variation in discriminatory power among students who have had different degrees of formal instruction in health or hygiene courses in secondary schools

f. Validity and reliability of the instrument

Findings of the investigation.-- The findings of this investigation may be expressed as answers to the following questions:

1. How well are high school seniors able to evaluate commercial advertisements in popular periodicals upon the authenticity of their health value claims?

   In evaluating 47 advertisements, the mean number of incorrect responses by the students was 75.34 per cent. Of this mean of the total number of incorrect responses,
37.77 per cent of the incorrect responses were two or more degrees from the judgment of juries of experts on the five-degree rating scale, indicating marked errors. The mean per cent--37.57--of incorrect responses that diverged from the decisions of the experts by one degree on the rating scale reflects some discernment by students, if not a correctness in evaluations.

Thirty-four per cent or more of the high school seniors evaluated incorrectly, by two or more degrees from the judgment of the experts on the rating scale, 26 of the 47 advertisements.

Incorrect responses that were two or more degrees from the judgment of the experts on the rating scale ranged from 4 to 91 per cent among all the advertisements evaluated. For the total number of incorrect responses by the students, the range was 20 to 99 per cent among the advertisements.

2. Are there significant differences among high school seniors in evaluating advertisements in popular periodicals upon the authenticity of their health value claims, according to school?

Yes, differences exist to a highly significant degree among the high school seniors of the different schools.

3. To what extent do student evaluations of the advertisements disagree with the judgment of the juries of experts?

It was found that the mean student evaluations of the advertisements upon the authenticity of their health claims vary from the ratings of the experts by -2.8 to +1.3 degrees on the rating scale. A negative variation
of the mean rating of the students from the rating of
the experts denotes that the students attached a greater
degree of credulity to an advertisement's health claims
than did the experts. A positive variation demonstrates
that the experts felt an advertisement's health claims were
more valid.

In 40 of the 47 evaluations the high school seniors
accepted, to a greater degree than the experts, the health
claims of the advertisements. In only one instance was
there no variation of the mean rating of the students from
the rating of the experts. For 29 of the 47 advertisements,
the variation was more than ±1.0 degree on the rating scale.

Among the topical areas the variations were all negative,
ranging from - .7 degrees for advertisements in the area
of Miscellaneous Ailments and Conditions to -1.4 degrees
in the area of Dental and Oral Hygiene. The mean variation
of student evaluations from the ratings of experts for all
the advertisements was -1.1.

This indicates high school seniors attached a greater
degree of credulity to the health claims of the advertise-
ments in all the topical areas than did the experts. The
differences between the students and experts in their
evaluations of the advertisements' health claims were
notable as well.
4. Are there significant differences between boys and girls, who are high school seniors, in evaluating advertisements in popular periodicals upon the authenticity of their health value claims?

Yes, to a significant degree, the girls are better able to evaluate the authenticity of health claims in advertisements from popular periodicals.

5. Are there significant differences in discriminatory power among high school seniors who have had different degrees of formal instruction in health or hygiene courses in secondary schools?

No, the differences in discriminatory power among students with varied degrees of exposure to health or hygiene courses in junior and senior high school are not significant.

6. Is the instrument valid?

Yes, the validity of the instrument was established by five juries of experts. A jury of four experts in each of the topical areas into which the collected advertisements had been categorized evaluated the advertisements in their field upon the authenticity of their health claims.

To be considered for use in the instrument, it was necessary that there be at least 75 per cent agreement among the evaluations of a jury for an advertisement,
with regard to the degree of authenticity of its health claims. This minimum consensus of agreement among the evaluations of a jury's members was reached for every advertisement used in the instrument.

7. Has the instrument substantial reliability?

Yes, with the use of the Spearman-Brown prophecy formula, the reliability coefficient of the instrument was determined to be .678. This indicates marked--if limited--reliability of the instrument.

8. Did the instrument function as intended?

Yes, the instrument met all of the criteria that were established for its construction and operation and functioned as intended.

Conclusions.-- Analysis of the data obtained in this investigation led to the following conclusions:

1. Substantial numbers of high school seniors demonstrate low discriminatory power in evaluating the authenticity of health claims in advertisements from popular periodicals.

2. Among high school seniors, the girls are better able to evaluate periodical advertisements upon the authenticity of their health claims than the boys, to a significant degree.

3. Formal instruction received in health or hygiene courses in secondary schools by high school seniors has no

1/Garrett, op. cit.
significant bearing on their ability to evaluate advertisements from popular periodicals upon the authenticity of their health claims.

4. High school seniors generally attach a greater degree of credulity to the health claims made in advertisements in popular periodicals than seems justified, according to the judgment of juries of experts.

5. Medical and health experts agree in their evaluations of health claims in advertisements from popular periodicals that many of these claims are considerably—if not grossly—inaaccurate and not fully substantiated by present day knowledge.

6. There is much disagreement among these experts as well, in evaluating the authenticity of health claims made in advertisements from best-selling magazines. One-hundred and four of the 152 advertisements that the jurors evaluated were not validated for use in this study, due to disagreements among the experts' evaluations.

Recommendations.-- The following recommendations are an outcome of this investigation and its results:

1. In curriculum planning, educators—and this is not restricted exclusively to health educators—should take cognizance of the fact that high school seniors accept, to large degree, health claims in periodical advertisements that are not fully substantiated, according to authoritative resource persons. This is a condition with many educational
implications, which deserves serious consideration in planning instructional programs.

2. Advertisements for health products from current popular periodicals—as well as from other mass media perhaps—should be used as instructional materials in health education classes in secondary schools and colleges. A study of health claims in actual advertisements could provide direct experience in developing "discriminatory power," a quality that seems to be deficient among considerable numbers of high school seniors now.

3. The actions and decisions of the Federal Trade Commission in regard to deceptive advertising for health products, services, and aids should be publicized more extensively among the general public. This could be done through the mass media, which reach the greatest number of consumers, with space or time being purchased by the Commission. As a public service for the citizenry of the country, tax payers would not only benefit materially from the health standpoint, but could possibly even save money that is annually spent for worthless or dangerous "health products." The results of this study indicate that the discriminatory power of substantial numbers of high school seniors is low in evaluating the health claims in periodical advertisements, notwithstanding the publication of the Federal Trade Commission's News Summary, as well as the reports of various consumers' organizations.
4. The ingredients in manufactured products, which are generally available to the public and purporting to be beneficial to health, should be required to be shown in periodical advertisements, as they are on labels. This would enable experts and lay persons alike to evaluate the health claims of these advertisers more "objectively." Also, an incidental result of this action may be that advertisers will tend to be more accurate in the health claims which they make for their products.

5. Further studies dealing with health advertising in the various mass media should be pursued by educators to determine more precisely its effects and influence upon students, as well as their reactions to it.

Limitations. -- It should be understood that the results of this study stem from--and only apply to--the high school seniors who participated in the investigation. The countless variables that might arise in a similar pursuit prohibit the drawing of inferences on a broader scale.

As for the evaluations of the advertisements, these were done both by the juries of experts and students exclusively upon the authenticity of expressed health value claims. This precluded consideration of the role and relative importance of "omitted" statements which might--perhaps even should--have been made in the advertisements. Thus, the advertisements' health claims were analyzed only from the viewpoint of being, to a degree--if at all--"sins of commission." "Sins of omission" were not considered in the evaluation of the health claims in the advertisements.
It should be pointed out, also, that the directions which guided the jurors in their evaluations of the advertisements were not identical to those established for the students. It was felt that the more inclusive directions for the jurors were needed in order to establish a common understanding among these men--experts in their own fields--as to exactly what it was they were to do. This was necessary, in fact, because of the precise thinking of these learned gentlemen.

No attempt was made in the study to determine the effect of differences in I.Q., age, or socio-economic status among the students, in their ability to evaluate the health claims in the advertisements. Determining whether these factors influence the discriminatory power of students in evaluating health claims in periodical advertisements may well form the nucleus of a study similar to this one.

It was not considered feasible in this investigation either to pursue the possible influence of health instruction--which was received in other subject matter areas within the curriculum through integration or correlation--upon the discriminatory power of students in evaluating health advertisements from popular periodicals. This is another approach which might be taken in related research in the future.

Lastly, no claim is made by the investigator that the instrument developed and used in this investigation is a general test for evaluating the ability of students to interpret all kinds of propaganda. The instrument utilized in this study was constructed solely to achieve the objectives of the investigation.
MEMBERS OF THE JURIES OF EXPERTS WHO EVALUATED AND VALIDATED THE HEALTH ADVERTISEMENTS

**Nutrition and Weight Control**

Charles S. Davidson, M.D., C.M., Associate Professor of Medicine, Harvard Medical School
Thorndike Memorial Laboratory, Boston City Hospital
Boston, Massachusetts

Robert S. Harris, Ph.D., Professor of Biochemistry of Nutrition, Department of Food Technology, Massachusetts Institute of Technology
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Fredrick J. Stare, Ph.D., M.D., Professor of Nutrition and Head of the Department, Harvard School of Public Health
One Shattuck Street
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**Dental and Oral Hygiene**

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Boston, Massachusetts

L. Walter Brown, Jr., D.M.D., Professor of Prosthetic Dentistry and Chairman of the Department, Tufts School of Dental Medicine
136 Harrison Avenue
Boston, Massachusetts

Henry D. Epstein, D.M.D., Clinical Associate in Dental Medicine, Harvard School of Dental Medicine
464 Commonwealth Avenue
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Myron J. Van Leeuwen, D.D.S., Assistant Clinical Professor of Operative Dentistry and Director of the Clinic, Harvard School of Dental Medicine
188 Longwood Avenue
Boston, Massachusetts
Analgesics; Care of Communicable Diseases

William D. Barone, M.D.
School Physician, Winchester School Department
51 Church Street
Winchester, Massachusetts

Dale G. Friend, M.D., Chief, Clinical Pharmacology Unit and
Senior Associate of Medicine
Peter Bent Brigham Hospital
Boston, Massachusetts

William S. Garcelon, M.D.
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Winchester, Massachusetts

Samuel E. Leard, M.D., Director of Student Health Service,
Boston University
326 Bay State Road
Boston, Massachusetts

Personal Cleanliness and Beauty Care of Skin, Hair, and Fingernails

Irvin H. Blank, Ph.D., Associate Biochemist,
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Massachusetts General Hospital
Boston, Massachusetts

Ruth K. Freinkel, M.D., Research Fellow in Dermatology,
Department of Dermatology
Massachusetts General Hospital
Boston, Massachusetts

Robert D. Griesemer, M.D., Assistant Dermatologist,
Department of Dermatology
Massachusetts General Hospital
Boston, Massachusetts

Herbert Mescon, M.D., Chief of Service, Dermatology
Boston University - Massachusetts Memorial Hospitals
Medical Center,
Boston, Massachusetts
Miscellaneous Ailments and Conditions

Willard Dalrymple, M.D.
Physician, Harvard University Health Services
Harvard Business School
Allston, Massachusetts

Dana L. Farnsworth, M.D., Director, University Health Services,
Harvard University and Radcliffe College
15 Holyoke Street
Cambridge, Massachusetts

James M. Faulkner, M.D., Sc.D., Medical Director
Romberg Memorial Infirmary
Massachusetts Institute of Technology
Cambridge, Massachusetts

Gertrude E. Murray, M.D.
Health Office
Simmons College
300 The Fenway
Boston, Massachusetts
INSTRUCTIONS FOR RATING ADVERTISEMENTS

Commercial advertisements in periodicals for health products, services, or aids exhibit different degrees of authenticity in their health claims. These claims range from the presentation of authoritatively recognized facts to the fanciful fabrications of advertisers whose health value claims are baseless and unfounded by present day knowledge. Before evaluating the advertisements, please consider carefully the following possible harmful effects of commercial advertising that is not entirely truthful in its representation of health values.

1. Encourages indiscriminate self-medication
2. wastes time and money
3. Promotes the propagation of misinformation
4. Deters the development of desirable health practices
5. Responsible for consumption or use of products which may prove injurious to the individual
6. Builds up a reliance upon patent medicines and drugs
7. Stimulates a false sense of security and well-being
8. Inhibits social progress and advancement
9. Encourages the distribution of nostrums by quacks
10. Promotes faddism

Rate every advertisement on the basis of the authenticity of its health value claims by the following scale:

1. Completely sound and accurate
2. Largely factual
3. Half true
4. Largely misleading and misrepresentative
5. Completely distorted and deceptive

(Recognized as being entirely factual in the light of present day knowledge)
(Recognized as complete perversion of truths, which delude to an excessive degree)
(Containing approximately equal proportions of both true and false statements, or claims which in themselves are explicitly half true)
(To a high degree, incorrect -- e.g., exaggerated, fallacious, etc. -- leading to erroneous judgments)
(True to a high degree, but not completely)

Cross out (x) the number which you feel best describes the advertisement.
Remember that you are to evaluate each advertisement only upon the basis of its expressed health claims, and not according to whether you feel other pertinent information - not included in the advertisement - should be known by the reader, or whether you use or prefer the product yourself.

For the purpose of this study, health claims refer to the health values attributed to a product, service, or aid in commercial advertisements found in popular periodicals.

Please be sure that all the advertisements have been evaluated.

<table>
<thead>
<tr>
<th>Advertisement Number:</th>
<th>1</th>
<th>2</th>
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Table 1A. Authenticity of Health Claims in the Validated Advertisements Utilized in the Investigation

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(concluded on next page)

1/For the advertisements in their entirety, as they appeared in the instrument, see Appendix B.

2/Authenticity as represented describes health claims that are:
  1 -- Completely Sound and Accurate
  2 -- Largely Factual
  3 -- Half True
  4 -- Largely Misleading and Misrepresentative
  5 -- Completely Distorted and Deceptive
Table 1A. (concluded)

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<th>Advertisements</th>
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APPENDIX B
INSTRUCTIONS FOR ADMINISTRATION

This is a study of health claims made in magazine advertisements, which will help determine the usefulness of advertisements in health instruction.

Each student will rate two booklets of advertisements that are marked Part 1 and Part 2 respectively at separate sessions. The advertisements in Part 1 are numbered 1-24; those in Part 2 from 25-47. One response sheet will be used for rating both booklets.

Be sure the student responses for each part--booklet--are marked in the correct place. Emphasize that each advertisement in the booklets is numbered, and that corresponding numbers are found on the response sheet.

1. Ask the students to use pencils if they have them, marking responses clearly and erasing fully if they wish to change a response. If a pen is used, be sure to have pupils indicate clearly their choice in the case of changing a response by covering over completely the mark which they wish to scratch out.

2. Have the students fill in the information required at the beginning of the response sheet, including name, sex, school, and health or hygiene courses taken in senior and junior high school.

3. Read the instructions on the response sheet out loud to the students, having them follow along with you.

4. Remind the students that there should be one--and only one--response for each advertisement.

5. Request that the booklets of advertisements not be marked. Ratings should be on the response sheet only.

6. This is not a timed exercise. It is important students have the time to rate the advertisements fairly.

7. Students should be asked to raise hands when they finish rating a booklet of advertisements, so their materials may be picked up. This will cause minimum classroom disruption for those still working.

8. The enclosed pencils are for the use of students who may be without a pencil or pen.
INSTRUCTIONS FOR ADMINISTRATION
(Revised)

This is a study of health claims made in magazine advertise-
ments, which will help determine the usefulness of advertisements
in health instruction.

Each student will rate two booklets of advertisements that
are marked Part 1 and Part 2 respectively at separate sessions.
The advertisements in Part 1 are numbered 1-24; those in Part 2
from 25-47. One response sheet will be used for rating both
booklets.

Be sure the student responses for each part--booklet--are
marked in the correct place. Emphasize that each advertisement
in the booklets is numbered, and that corresponding numbers are
found on the response sheet.

1. Ask the students to use pencils if they have them,
marking responses clearly and erasing fully if they
wish to change a response. If a pen is used, be sure
to have pupils indicate clearly their choice in the
case of changing a response by covering over completely
the mark which they wish to scratch out.

2. Have the students print and check the information required
at the beginning of the response sheet, including name,
sex, school, and health or hygiene courses taken in
senior and junior high school. In checking the health or
hygiene courses taken, students should not include any
health instruction received in biology, science, home
economics classes etc. It is only health or hygiene
courses per se, taken in secondary schools, which we are
considering.

3. Read the instructions on the response sheet out loud to
the students, having them follow along with you.

4. Remind the students that there should be one--and only
one--response for each advertisement.

5. Request that the booklets of advertisements not be marked.
Ratings should be on the response sheet only.

6. This is not a timed exercise. It is important students
have the time to rate the advertisements fairly.

7. The booklets should be collected together after everyone
has finished rating the advertisements.

8. The enclosed pencils are for the use of students who may
be without a pencil or pen.
RESPONSE SHEET

Sex: Male  Female

back to indicate the health or hygiene courses you have taken in senior and junior high school:

- one course meeting no more than one period a week or no health or hygiene classes taken at all
- one or more courses which total between two and four meetings (periods) per week per semester
- one or more courses which total five or more meetings (periods) per week per semester

Directions:

A. You are being asked to rate a group of magazine advertisements on the is of the authenticity of their health claims by the following scale:

1. completely sound and accurate

2. largely factual

3. half true

4. largely misleading and misrepresentative

5. completely distorted and deceptive

For each advertisement, cross out (X) the number which you feel best describes degree of accuracy of its health claims. To illustrate, if you believe an advertisement's health claims are best described as being largely factual, you should cross out number (2) as shown below.

Advertisement Number .............1 X 3 4 5
B. Remember that you are to rate each advertisement only upon the accuracy of the health claims that are expressly made in it, and not according to whether you feel or prefer the product yourself.

C. Two booklets of advertisements will be rated at separate sessions. After finishing each booklet, check to see that you have rated every advertisement on the response sheet.

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PART 1
Feeling "HALF-THERE" due to Upset Stomach?

Settle Your Stomach in Seconds with Milk of Magnesia!

Scientific tests show that Phillips’ Milk of Magnesia actually settles your stomach in seconds! That’s because Phillips’ is one of the fastest, most effective stomach acid neutralizers ever discovered!

So whenever upset stomach, gas, heartburn or other symptoms of acid indigestion have you feeling only “half-there”, take Phillips’ Milk of Magnesia right away. In almost no time at all you’ll be back to normal—feeling bright and chipper again. Get Phillips’, either regular or in new, mint-flavored form that tastes delightfully clean and refreshing.

PHILLIPS’ Milk of Magnesia
NOW IN UNGUENTINE®

Two Times the pain-relieving medication for Faster Pain Relief from burns, cuts and scrapes

- Stops pain faster—without stinging!
- Protects "skinjuries" from infection as no cream or liquid can.
- Starts the healing while it stops the hurting.
- Keeps gauze from sticking to tender injuries.

NEW • IMPROVED • STAINLESS
THE FAMILY FIRST-AID ANTISEPTIC FOR CUTS, SCRAPES, AND BURNS
New from Norwich Research

FREE FIRST-AID KIT
with SPECIAL-OFFER UNGUENTINE carton!
For medicine chest, auto glove compartment, vacation needs. Accidents happen! Keep this First-Aid Kit handy! Contains:

3 1½" x 2" sterile Telfa® Pads
6 large-size Curad® Plastic Bandages
4 small-size Curad® Plastic Bandages
36" roll of Curfty® Wet-Pruf® Adhesive Tape
Famous Norwich 32 page Illustrated book: "The ABC's of First Aid"

Send no money! Get "SPECIAL-OFFER" 1-oz. Unguentine carton now on display. Follow easy mailing Instructions for your FREE kit!

*T.M. of The Kendall Company
When you’re suffering from the fever and pain of 'IRUS COLDS or FLU...

The fastest, most gentle-to-the-stomach relief you can get!

BAYER®

Bayer Aspirin brings the fastest relief... the fastest, most gentle-to-the-stomach relief you can get.

at the first sign of a cold or flu cannot be over-emphasized. Both diseases, if neglected, can cause you serious trouble... flu especially... for it not only spreads with insidious speed, but can lead to pneumonia.

Bayer Aspirin makes you feel better fast because it relieves aches and pains with astonishing speed and quickly reduces fever as well.

Public health officials—men who know medicine—have stated that the one thing to take for the relief of painful discomforts of colds or flu is aspirin.

1. Get in touch with your doctor
2. Get as much bed rest as possible
3. Drink lots of fruit juice
4. Take Bayer Aspirin to reduce the fever and relieve the pain

The importance of taking Bayer Aspirin...
4.

"I lost 25 pounds in 30 days without special eating."

says ELOISE McELHONE, TV Personality

"I took REGIMEN TABLETS, and never felt better."

"My doctor recommended that I lose weight—but I couldn't stick to a diet. Nothing helped—not expanding pills, reducing candies, not even expensive salon treatments."

"Then I discovered REGIMEN TABLETS. Without special eating or super will power I lost 26 lbs. in 30 days—my weight came tumbling down!"

ELOISE McELHONE

New York City

NOW—A COMPLETELY NEW DRUG COMBINATION AVAILABLE WITHOUT DOCTOR'S PRESCRIPTION!

Regimen Tablets for Reducing without Special Eating

The only drug combination for your body to lose weight this fastest-acting way!

Lose up to 6 lbs. in 3 days—up to 9 lbs. the first week—and be completely satisfied with your weight-loss or your money back!

No food restrictions, no special eating, no giving up the kinds of foods you like. New drug acts directly to help reduce your overweight!

It's true! If you're normally healthy, you can now lose as much as 70 lbs. without cruel diets, without giving up all your favorite foods! Doctors know that the one sure way to lose weight is to reduce caloric intake...to eat less. They often prescribe drugs for this purpose...and now, at last, there is a NEW REDUCING DRUG COMBINATION FOR FAT PEOPLE, called REGIMEN TABLETS, safe enough to be used without prescription! Thanks to REGIMEN TABLETS, you must be satisfied with your weight-loss—as much as 6 lbs. in 3 days, 9 lbs. the first week—or your money back! If dissatisfied, simply return unused contents to Drug Research Corporation. REGIMEN TABLETS are guaranteed safe for normally healthy people when taken as directed on label.

3-WAY ACTION MAKES IT EASIER AND FASTER TO LOSE WEIGHT!

REGIMEN TABLETS are aspirin-size, easy to take, and work 3 amazing ways for fast, effective weight-loss:

1. They suppress your appetite; you eat the foods you like, without overeating.
2. They force you to lose weight immediately by removing excess "fluid weight".
3. They start traveling quickly thru your blood stream...and you lose the tremendous urge to eat! No super will power. You feel completely satisfied on far less than your normal intake—

YET YOU LOSE WEIGHT FASTER AND EASIER THAN YOU THOUGHT POSSIBLE!

GUARANTEED

So start reducing the REGIMEN TABLETS way today. You may not lose as much weight as Miss McElhone but you must be delighted with your weight-loss—as much as 6 lbs. in 3 days, 9 lbs. the first week—or your money back. If dissatisfied, simply return unused contents to Drug Research Corporation. REGIMEN TABLETS are guaranteed safe for normally healthy people when taken as directed on label.

Clinical Test Proves REGIMEN TABLETS Work

A leading medical specialist put one group of people on a restricted diet, while another group ate without restrictions. Both groups took REGIMEN TABLETS daily. In just 6 weeks, the unrestricted group had actually lost more weight than the severely 1000-calories diet group. This is documented clinical evidence that with REGIMEN TABLETS you can eat the foods you like and still lose weight!

Regimen-Tablets

Available at all drug stores

10-day supply, only $3.00

20-day supply, only $5.00

(You save $1.00)
ADD UP TO 25 POUNDS OF SOLID MUSCLES WITHOUT EXERCISE!

85 lb. Body Mail course included FREE with Dr. Lorie Barwick's "Body Mail" course! Just send 1 cent for free course offer and you'll be sent the 28-day Health-Building Program that can add 25 pounds of solid, sculptured muscles from the inside out. You can be FREE from TRUSS SLAVERY. Surely you want to THROW AWAY TRUSSES FOREVER, be rid of Hernia Worries. Then Why put up with wearing a gripping, chafing and unsanitary truss. For there is now a new modern Non-Surgical treatment that is designed to permanently correct hernia. These Non-Surgical treatments are so certain, that a Lifetime Certificate of Assurance is given.

Write today for our New FREE Book that gives facts that may save you painful, expensive surgery. Tells how non-surgically you may again work, live, play, and enjoy life in the manner you desire. There is no obligation. Excelsior Medical Clinic, Dept. H-565 Excelsior Springs, Mo.

Sunkist Fresh Lemons

Keep regular naturally...
Squeeze one fresh lemon in a glass of water.
Drink upon arising.
Give it a 10-day trial.
Millions keep regular this natural way. Lemon and water can help you. And you'll like it as a health tonic, too.

IF YOU HAVE HERNIA
You can be FREE from TRUSS SLAVERY
Surely you want to THROW AWAY TRUSSES FOREVER, be rid of Hernia Worries. Then Why put up with wearing a gripping, chafing and unsanitary truss. For there is now a new modern Non-Surgical treatment that is designed to permanently correct hernia. These Non-Surgical treatments are so certain, that a Lifetime Certificate of Assurance is given.

Write today for our New FREE Book that gives facts that may save you painful, expensive surgery. Tells how non-surgically you may again work, live, play, and enjoy life in the manner you desire. There is no obligation. Excelsior Medical Clinic, Dept. H-565 Excelsior Springs, Mo.
NEW JOHNSON & JOHNSON AIDS

made especially for relief of children’s colds

SAFE...FAST-ACTING...EASIER-TO-USE

...for stuffed-up noses

NOSE DROPS & SPRAY for Children: Nonsting, milder dosage strength preferred by doctors. Rapidly opens stuffed-up noses—helps your child feel better, sleep better. Exclusive 2-way plastic bottle gives you choice of either drops or spray.

...for local congestion

CHEST RUB for Children: Easier-to-use stick rub. Will not burn or sting. Soothing action helps relieve chest and back discomfort due to colds. Medicated vapors clear head cold stuffiness, help loosen phlegm; eases night coughs.

...for fever and pain

LIQUIPRIN* for Children: Safer than aspirin, does not upset the stomach. Children take tasty LIQUIPRIN as is or mixed with juice, milk or formula. Convenient liquid form and plastic measured dropper assure accurate dosage. Comes in exclusive safety bottle.

*T. M. for salicylamide suspension

Johnson & Johnson
9.

STOP BAD BREATH WITH COLGATE WHILE YOU
Fight Tooth Decay All Day!

Brushing with Colgate helps give the surest protection all day long!
Because of all leading toothpastes, only Colgate contains Gardol!

FIGHTS BOTH BAD BREATH AND TOOTH DECAY ALL DAY!

Colgate with Gardol is backed by published results of 2-year clinical research on the reduction of tooth decay. And of all leading toothpastes, only Colgate contains Gardol to form an invisible, protective shield around your teeth that fights decay all day. Colgate stops mouth odor all day for most people, too. Ask your dentist how often to brush your teeth. And remember! Nothing takes the place of brushing—and nothing brushes better than Colgate!

I love that COLGATE flavor!

CLEANS YOUR BREATH WHILE IT CLEANS YOUR TEETH

SODIUM LAUROYL SARCOSINATE, OLEANS

WORLD'S LARGEST SELLING TOOTHPASTE
10. CLEAR SKIN IN JUST FIVE DAYS

EXCITING LOVES CAN BE YOURS. No need to be self-conscious, sad and lonely. Why stay at home while others are having fun? BeautifUl women, girls depend on WHITEX Cream to retard the formation of ugly acne, pimples. WHITEX is NOT a cover up cream. It's quickly absorbed by your skin, uneven skin coloration, etc. You can feel Whitex working as it works— as if by a miracle!

Even if other preparations have failed you, we'll guarantee Whitex. Mail the 10-day, NO RISK coupon for a LOVELY, SMOOTH, CLEAR SKIN, NOW!

HERE'S PROOF

"After using one jar of Whitex Cream, my face is clear."  
L. T. Thompson, Texas

"After spending money on dermatologists and creams I almost didn't try Whitex. But...I did and • • • for the first time...I have a clear skin."  
Mrs. M. Gutierrez, California

"Best I ever used for liver spots."  
Lulu A. Purcell, Illinois

FREE Skin Care booklet reveals what steps to take for a more beautiful you. It's crowded with valuable information that's worth more than the price we ask for Whitex Cream. It's packed with true facts that will benefit you a lifetime—such as what foods and liquids are sometimes harmful to your complexion...how to combat dry or oily skin, etc. And it's all yours without extra charge.

SEND NO MONEY

Whitex Specialty Co., Dept. 101-D  
10-day trial

11. NOW...a special laxative for WOMEN

Gives gentle relief more naturally than any ordinary laxative

At any age, a woman welcomes a laxative made for her system! For instance, Mrs. Dill writes: "I'm 65 years old—and never in all my life have I found a laxative to equal Correctol for sure, gentle relief."

Correctol® has been specially developed for a woman's delicate system. It is completely different from harsh, all-purpose laxatives. Its secret is a non-laxative miracle regulator that simply softens waste. Along with this, Correctol contains just enough mild laxative to give regularity a start.

Working together, these two gentle ingredients make Correctol bring relief more naturally than any ordinary laxative can. Even in pregnancy and following childbirth. During menstrual periods—and after middle age, too!


12. BACKACHE & NERVE TENSION

SECONDARY TO KIDNEY IRRITATION

NEW YORK—Special: Thanks to new, scientific laboratory formulation, thousands of men and women now escape feeling old, tired, irritable and depressed from losing sleep and worrying about "Bladder Weakness"—too frequent, burning and irritating urination, Bed Wetting, Getting Up Nights— or Strong Cloudy Urine, due to common Kidney or Bladder Irritations, which often result in secondary Backache, Headache and Nervousness. In such cases New Improved OYSTEX usually gives quick, calming relief by combating irritating germs in acid urine; and by relaxing, analgetic pain relief. Safe for young or old. Get OYSTEX at druggist. Feel better fast or money back.
Beautiful Hair is Healthy Hair

BRECK BANISH
DANDRUFF TREATMENT SHAMPOO*

This new clear golden liquid shampoo has a unique two-way action: it gives your hair a lovely, soft new luster—and with regular use assures you of freedom from dandruff. It contains an exclusive new dandruff-control compound, 22T4, which leaves its influence on the scalp even after you rinse. Breck Banish not only loosens and removes itchy dandruff, it continues to work between shampoos to prevent the formation of new dandruff. Ideal for all the family, Breck Banish is pleasantly scented, non-drying, never harsh or irritating. Use it regularly and your hair will shine with new cleanliness and luster. Beautiful hair is healthy hair.

COSTS NO MORE—DOES TWICE AS MUCH... Breck Banish gives you both freedom from dandruff and new beauty for your hair. 8 oz. $1.50 4 oz. .80

*Patent Applied For

Available at beauty shops and wherever cosmetics are sold

© 1958 by John H. Breck Inc.
MAKES TEETH WHITE

Are you smile shy? New luster and beauty in 8 minutes! Are your teeth discolored, dull, unattractive? Then try this marvelous new "dental-cosmetic" for the thrill of your life! You apply KOPAL on your teeth, just like the enamel on your nails. Takes only 8 minutes—and presto! Instantly, your teeth are coated with a sparkling white finish that appears so pearl-like and natural—just like a movie-star smile! No wonder beauty editors, thousands of smart women and theatrical people praise KOPAL for covering up stains, blemishes, even gold fillings—almost like magic! KOPAL is a dentist’s formula, completely safe and harmless for natural as well as false teeth. Guaranteed radiant results or money back! Economical in use—amazing value. Send only $8.80 tax inc. for 8 or 4 months’ supply. We pay postage. Or you pay postage and charges if C.O.D. PROSYE WINTERS 18 E. 83rd St., Dept. C-9, New York 2, N.Y.

left field is “loaded” with poison ivy
but all he can catch is the ball

AQUA IVY TABLETS
have given him season-long immunity
to poison ivy and poison oak

Imagine—now you can prevent poison ivy, not just treat it!
Imagine—an easy-to-take tablet which can give you immunity all summer long!
The name—AQUA IVY TABLETS.
Start the family taking AQUA IVY TABLETS now...before the outdoor season.
Clinically tested, safe for children, AQUA IVY AP® TABLETS really work.
Available at your drug store without prescription...In Canada too.

Send for free booklet—"Facts You Should Know About Poison Ivy and Poison Oak"

SYNTEX CHEMICAL COMPANY, INC., Dept. M4, Box 1306, New York 17, N.Y.
Wonderful progress has been made in protecting the lives of mothers and babies—thanks to excellent prenatal care and improved obstetrical techniques.

Equally important, some 95 percent of today's babies are born in our hospitals—where most birth emergencies can be handled promptly and effectively.

Information for expectant mothers: If your general health is good—if you have no family history of diabetes, kidney, heart or other serious diseases—the chances are excellent that no major complications will occur before your baby's arrival.

For your own and your baby's welfare, however, your physician may suggest these safeguards:

1. Eat a variety of foods. Your baby will be no stronger or sturdier than the building materials your diet provides. For you and your baby, a varied diet is best.

   It should include a quart of milk daily to meet the baby's needs for calcium. Meat, fish, fruits, vegetables, at least one egg a day, bread, cereals and a moderate amount of butter are recommended.

2. Watch your weight. Too much weight strains the heart and other organs. Normal increase is around 16 to 20 pounds. Your doctor will decide and instruct you as to how much you should gain.

3. Get needed rest and exercise. Walking is one of the best exercises and it's usually all right to play golf and dance in the middle months of pregnancy.

   Get plenty of sleep and at least an hour of relaxation every afternoon.

4. Keep in touch with your doctor. No serious problem develops during pregnancy without a warning signal. Your doctor can foresee and act to avoid difficulties—if he's consulted early and as often as necessary.

5. Take care of your teeth. Have your dentist clean your teeth and do whatever repair work is necessary.

6. Make your hospital reservation early. The maternity wards of most hospitals are crowded nowadays. The sooner you make your reservation, the better.

   Take a calm, happy, confident attitude toward pregnancy. It is, after all, a natural event and a proper frame of mind helps to encourage an easy delivery.

   Never before has there been a year like 1959—when birth is so free of risk, so likely to turn out happily.

If you are a victim of the above symptoms, the trouble may be due to Glandular Inflammation. A constitutional Disease for which it is futile for sufferers to try to treat themselves at home.

To men of middle age or past this type of inflammation occurs frequently. It is accompanied by loss of physical vigor, graying of hair, forgetfulness and often increase in weight. Neglect of such Inflammation causes men to grow old before their time—premature senility and possible incurable conditions.

Most men, if treatment is taken in time, can be successfully NON-SURGICALLY treated for Glandular Inflammation. If the condition is aggravated by lack of treatment, surgery may be the only chance.

NON-SURGICAL TREATMENTS

The NON-SURGICAL New Type treatments used at the Excelsior Medical Clinic are the result of discoveries in recent years of new techniques and drugs plus over 20 years research by scientific technologists and Doctors.

Men from all walks of life and from over 1,000 communities have been successfully treated here at Excelsior Springs. They found soothing and comforting relief and new health in life.

EXAMINATION AT LOW COST

When you arrive here our Doctors who are experienced specialists make a complete examination. Your condition is frankly explained and then you decide if you will take the treatments needed. Treatments are so mild hospitalization is not needed—a considerable saving in expense.

Write Today For Our FREE BOOK

The Excelsior Medical Clinic has published a New FREE Book that deals with diseases peculiar to men. It could prove of utmost importance to your future life. Write today. No obligation.

EXCELSIOR MEDICAL CLINIC
Dept. B1151
Excelsior Springs, Mo.

Gentlemen: Kindly send me at once your New FREE Book. I am interested in full information (Please Check Box)

☐ Hernia ☐ Rectal-Colon ☐ Glandular Inflammation

NAME ____________________________
ADDRESS ____________________________
TOWN ____________________________
STATE ____________________________

New! Deep-Penetrating Stick Chest Rub Brings Speedy Relief From Chest Colds!

Coldene Chest Rub goes on, goes in—fast! Powerful ingredients bring soothing warmth to tight chest...loosen bronchial congestion...help restore restful breathing...relieve muscular aches and pains. Vapors penetrate deep into chest, throat, nose and sinus passages. Stuffy nose goes! In handy stick form! You don't smear it on with your fingers. No messy grease to discolor fabrics. Keep Coldene Stick Chest Rub handy...always!


20.

IF YOU, TOO, ARE TIRED, WORN OUT WITH FATIGUE—Turn to the Amazing BLOOD-GROWING Stimulant EDANOL—now giving new hope and help to thousands!

Within hours you can often start to increase the number of RED BLOOD CELLS—restore their rich, red color and within days, release wonderful new energy through your whole, tired, run-down system!*

Make This Test At Our Expense

FREE 24-DAY SUPPLY OF EDANOL

We make this sensational FREE offer so that you may see what EDANOL may do for you—If, as you use these easy-to-take capsules with your meals, you may be able to get of the constant wearying weakness which now plagues you—You can then see for yourself what a mighty old this potent supplement may be in regaining some of your lost strength and energy. Then, if you wish to buy anything—no monthly purchase plan—you may have, FREE OF CHARGE, not just a sample, but a full, PRE-PACKED 24-day supply of amazing EDANOL with the newer form of iron, liver, 25 mgs. of red vitamin B12 and other stimulants for the building of Rich, Red Blood

We are happy to pay the expense of this sensational offer, because we're sure that once you've experienced the terrific "HIFI" EDANOL gives you, you'll never want to be without these splendid little capsules. You'll order them from them at Vitamin-Quota's famous money-saving, direct-to-home prices. Get your free supply now...and find this new way which may give you new strength and energy and a new joy of living.

VITAMIN-QUOTA One of the World's Largest Retailers of Vitamin-A, Est. 1923.

Serving over 2,000,000 families coast-to-coast.

Dept. T-694, 880 Broadway, New York 3, N. Y.

Dept. T-694, 1125 Crenshaw Blvd., Los Angeles 19, Calif.

Please send me absolutely FREE a full, fresh 24-day supply of EDANOL.

I enclose 25c to cover cost of packing and mailing.

I understand that I am under no obligation whatsoever and that no agents will call on me.

Name ____________________________

Address ____________________________

City ____________________________ Zone. State...
New way to wash face

Clears pimples, softens, brightens . . . improves your complexion amazingly!

Just lather-massage your face a full minute morning and night with Cuticura Soap. Very soon you'll discover the special magic that has made this uniquely superemollient, mildly medicated soap the complexion secret of lovely women all over the world. Years have proved, as Cuticura helps clear up your skin, it softens, freshens, brightens—helps keep it young!

Get the Full Treatment

To help clear up pimples and blackheads in record time, often in just a few days, get the full treatment. Use all three.

1 Cuticura Soap is vitally important to cleanse and condition blemished skin, and to control excess oiliness.

2 Cuticura Ointment used at night relieves pimples, blackheads, dryness.

New! Fast Acting!

3 Cuticura Medicated Liquid for daytime use cools and refreshes your skin as it helps keep it antiseptically clean, removes excess oiliness, checks bacteria, dries up pimples fast, speeds healing.

At all drug stores, Canada also. For a trial kit containing all 3, send 25¢ (no stamps) to Cuticura, Dept. LHA-91, Malden 48, Mass.
The "meat" of a fresh orange is the main source of many of its health values. In fact...

...fresh **Sunkist** Oranges give your family much more of the important **bio-flavonoids** and **protopectins** than frozen orange juice.

...and you get all of the vitamin C plus more than 50 other health factors.

*Eat whole fresh oranges... drink whole fresh orange juice*

*The Sunkist trade-mark stamped on the fruit is your guarantee of the finest from California-Arizona. Accept nothing less.*
New Vicks "Cough Silencer" stops nagging coughs

Without NARCOTIC CODEINE... LETS YOU SLEEP ALL NIGHT

Doctors' Reports of 11,000 Clinical Cases show: New "Cough Silencer" works to suppress the nagging coughs of colds ordinary cough syrups just "relieve"... and lets it without habit-forming narcotic codeine!

Medical Science with its discovery of a new wonder drug called Silentium—finally solved a problem that has long frustrated doctors. Until Silentium was discovered, only codeine and certain other narcotics could stop deep-down, nagging coughs of colds. But many people, perhaps those in your family, suffer unpleasant side reactions to narcotics—such as stomach upset, dizziness, nausea, constipation. And narcotics can be habit forming!

Your doctor can tell you the ingredients in Vicks stop nagging coughs of colds and help to keep them stopped. Vicks also works against their returning. Vicks with new medically proved Silentium can be your answer to stop nagging coughs all night long... day after day!

Silentium is available in two formulations—Improved Vicks Cough Syrup... a delicious wild-cherry medication that children love; and New Vicks Formula 44... with Silentium in extra strength. Get a bottle of each today—so your family is free from nagging coughs tonight!
"I was afraid she'd call on me..."

elt dry and I wanted to crawl under my
ass, please... let her pass me up today," my.
pimples on my face... I just can't get up
one looking like this, I thought. Then—
d I was saved!

cought my eye and motioned for me to
t. The room was empty now, but I felt

if I was worried about my complexion,
nodded my head, 'Yes.' She smiled and
sen-age girls and boys have pimples, and
about them. Then she asked me what
its of things,' I answered, 'but they
lip.' And that's when she told me about
ow doctors developed Clearasil especially
how it gives you the medications that
Skin Specialists recommend for pimples.
"Well, I took Miss Martin's advice and tried Clearasil.
And you know... it really works. My pimples started to
disappear so fast I could hardly believe my eyes.
"I knew that it must have made a big difference in my
looks, because boys, who never even noticed me before,
started talking to me, and even asking me for dates.
"The other day after class, Miss Martin told me how nice
my complexion looks. I just smiled and said, 'Thank
you.' She knew what I meant."

How Clearasil Works Fast
(1) Clearasil's 'keratolytic' action gently dissolves and
opens affected skin tissue so medication can penetrate.
Encourages the quick growth of healthy new skin.
(2) Clearasil's antiseptic action stops the growth of
bacteria that cause and spread pimples. (3) Clearasil's
famous dry-up action 'starves' pimples, helps remove the
excess oil that 'feeds' pimples.

And Clearasil is skin-colored... hides pimples while it
works!

Also, the penetrating medical action of Clearasil
'solves' blackheads so they 'float' out with washing. And
Clearasil works at the source of the blackhead problem
by drying up excess skin oil which may clog pores. It's
greaseless, stainless... pleasant to use day and night for
uninterrupted medication.

Proved by Skin Specialists! In tests on over 300 patients,
9 out of every 10 cases of pimples were completely cleared
up or definitely improved while using Clearasil (either
lotion or tube). Guaranteed to work for you or money
back. In Tube, 69¢ and 98¢. Long-lasting Lotion squeeze-
bottle, only $1.25 (no fed. tax). At all drug counters.

Ask for Clearasil, largest-selling pimple medication
because it really works.

SPECIAL OFFER: For 2 weeks' supply of Clearasil, send
name, address and 15¢ to Box 9 PM (for tube) or Box 5 PO
(for lotion), Easton, Inc., White Plains, N. Y. Offer expires
PART 2
Does she brush every day... and still get decay?

... or does she need new Ipana®—now with germ-killing hexachlorophene
-twice as effective against decay germs!

...or does she need new Ipana®—now with germ-killing hexachlorophene
-twice as effective against decay germs!

New Ipana with penetrating hexachlorophene destroys decay germs. It's twice as effective as ordinary tooth pastes! Prevents bad breath all day, too. Even more effective than the leading mouthwash. So everyone in your family should use it regularly.

If you brush every day and still get decay, change to new Ipana—now with penetrating hexachlorophene.

Refer to the table to compare germ-destroying effectiveness:

**ORDINARY TOOTH PASTES**
don't have germ-killing hexachlorophene. Laboratory tests prove they can't destroy decay germs as new Ipana can.

**NEW IPANA** with germ-killing hexachlorophene was proved twice as effective—even against decay germs taken from between the teeth!

Also in handy Touch-n-Brush pressure can!
"I was sniffling, sneezing ••• all stuffed up.

"I ached all over and felt tired, dragged-out ...

"Then I took these new Vicks cold tablets—and I never felt better so fast in my life!"

"Would you believe it . . . I have a cold!"

New Vicks Double-Buffered Cold Tablets act to

ive colds, sinus pain 53% faster

than other leading antihistamine cold tablets

1. DOUBLE-BUFFERED cold-and-sinus pain relievers proved 53% faster at university. Tests at a famous university found that while other leading antihistamine cold tablets are only partially at work . . . Vicks Double-Buffered Cold Tablets have already rushed cold-and-sinus pain relievers into the body 53% faster.

2. RELIEVE COLDS CONGESTION and blocked sinuses . . . promote sinus drainage. Vicks Double-Buffered Cold Tablets do more than relieve sore throat, chest congestion, aches and pains . . . they relieve congested sinus passages, promote sinus drainage . . . and relieve sniffles, sneezes, cold-stuffed nose—relief that aspirin does not give.

3. PICK YOU UP with stimulating medications. New Vicks Double-Buffered Cold Tablets relieve that tired, dragged-out feeling of a cold with two stimulating medications. Pick you up fast, help you feel more alert.

For your family's health trust VICKS . . . makers of world's leading colds medications
A Revolution in Bread and Your Health

By Frederick D. Schmalz
Cereal Chemist

A revolution is taking place in bread, a part of the scientific revolution that is changing the world.

When you eat a slice of bread today, you can consume a good source of complete protein—if you eat the right bread. Complete protein is protein equal in quality to the protein in eggs, meat, and milk.

Protein is the building stuff of life. Over 70 per cent of the solid part of your body, excluding fat, is protein, and you must eat new protein constantly to rebuild and renew it. If you do not, you become tired, rundown, even sick.

A remarkable discovery now gives us a new bread that a responsible group of research scientists call: "A complete and good-tasting protein source."

This discovery was developed by the Wisconsin Alumni Research Foundation in Madison, Wisconsin—the scientific organization which put "sunshine" vitamin D in milk.

The discovery is V-10 Protein, a completely new protein made from natural grain sources. Scientists of the Foundation have found this new protein equivalent in nutritional value to animal protein—meat and dairy foods.

There are "good" proteins and "poor" or incomplete proteins. Protein, chemically, is composed of building blocks called amino acids, and a good protein food must contain a vital 10 of them. Wheat does not have all these in proper amount and balance. This new grain mixture does.

Nutritionists in many big companies had spent years trying to develop a palatable grain source of complete protein with these vital 10 amino acids. Now we have it.

This new protein was named V-10 for vital 10. It was added to high protein flour to produce V-10 Protein Bread. Bread was chosen for its first wide use because bread is the one food eaten by most people at most meals.

Nutrition scientists do not consider V-10 a "diet" or "fad" bread, but consider it a substantial nutritional improvement in bread.

They are concerned about the protein deficiency of thousands of Americans—dieters and non-dieters. For example, if breakfast is slighted, it creates a hunger that makes it difficult to control the intake of food the rest of the day. Everyone must have complete protein. Six slices of V-10 Protein Bread will supply approximately 25 per cent of your daily protein requirement.

V-10 Protein Bread is near-white or gold-white—its flavor is particularly enhanced when toasted. For further information, write the V-10 Division, F. H. Peavey & Company, 760 Grain Exchange Building, Minneapolis 15, Minnesota.
28.

Want to Banish Wrinkles?

"Bye-Line Skin serum can help you do it—also crepy throat! Yes, it's really true. 'Bye-Line must make you look 2 to 10 years younger in 10 days, or your money back. Not a peel, mask or temporary cover-up, but a genuine youth restorer. This is no false promise. 'Bye-Line is absolutely safe, even for super-sensitive skin. Simpoe, speedy, pleasant, and non-greasy oil treatment. Not sold in stores. No C.O.D.'s. Send exactly $1.15 for trial size, air mail in plain wrapper to Age-Less Cosmetics, Inc., Dept. Z, 1 Worth St., San Francisco 14, California.

29.

Colds "hang on" all winter?

Your family needs Scott's Emulsion...

...the cod liver oil tonic

Helps get rid of the colds they have—builds them up against new ones

Now, you and your children can get those same cod liver oil benefits your mother put such faith in, without the old cod liver oil taste.

New Scott's Emulsion is rich in cod liver oil, one of the finest sources of natural A and D vitamins. You need these vitamins and the other ingredients in Scott's Emulsion to fight off the cold you have now—and to help protect you from catching new ones. And Scott's Emulsion is homogenized, so its full benefits start to work right away.

Winterize your body against colds. Get Scott's Emulsion, with calcium, at your drug counter today.

Now in two forms: Better tasting liquid or New tasteless capsules

Scott's Emulsion...

the tonic you know for the glow of health

Arch Lightbody is one of 800,000 Americans cured of cancer because they went to their doctors in time. They learned that many cancers are curable if detected early and treated promptly. That's why an annual health checkup is your best cancer insurance.

American Cancer Society
Blemishes Go Away—Stay Away with New Noxzema Skin Lotion!

Actually helps you grow clear, smooth “new-born” skin

Exclusive antiseptic formula medicates as it penetrates—clears up ugly blemishes as no mere “cover-up” can!

Unlike messy, drying “cover-ups,” new Noxzema Lotion is invisible on your skin, never dries or cakes, never causes ugly peeling. Instead it vanishes into your skin—medicates as it penetrates.

Here’s how it works for you: Noxzema Lotion “uncorks” clogged pores and blackheads. Then it sends gentle antiseptic below the skin’s surface to kill blemish-causing bacteria by the millions—actually helps prevent re-infection as it works!

In clinical tests 8 out of 10 cases of externally-caused blemishes cleared up or remarkably improved—and didn’t come back with regular Noxzema Lotion care!

Get new, greaseless, stainless Noxzema Skin Lotion today. See how it actually helps you grow clear, smooth “new-born” skin! Only 89¢ plus tax.

*PROVED IN CLINICAL TESTS!
In rigidly controlled clinical tests, blemish sufferers washed morning and night with new Noxzema Lotion instead of soap. After washing, they applied more lotion as an invisible protective barrier. A team of 4 leading dermatologists reported these amazing results:

Dry Skin ........ 100.0% cleared
Scaling ........ 90.9% cleared or remarkably improved
Blackheads ..... 88.3% cleared or remarkably improved
Pustules (pus-forming blemishes)
   a. Moderate ... 85.7% cleared or remarkably improved
   b. Extreme ... 66.7% cleared or remarkably improved

What’s more, in every case, cleared-up blemishes did not return with regular Noxzema Skin Lotion care.
Relax-A-cizer Free!...it's the new "No Diet" way to Reduce ZE of hips, waist, abdomen...no weight-loss.

n mothers know that a "wed-

...an attentive husband...a proud

...and a more contented

Relax-A-cizer, unlike

-relax way.

eople...completely different!

-cizer way.

cizor, unlike "Plans," "Sys-

Methods" and vibrating devices

depend upon diet or weight-

cizor tightens your

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Though no one likes to admit it—the most sparkling, most modern-looking bathroom can be a danger-zone of germs.

A close look at the growing problem of BATHROOM GERMS

“My little four-year-old had diarrhea—and we all came down with it ...”

“How could my husband’s boil be connected with the baby being sick? ...

“But my nice, clean ‘bathroom—it couldn’t be the cause of our getting ill ...”

Today we hear these phrases time and again. And it isn’t easy for a housewife to believe that the cleanest-looking bathroom can be dangerously “dirty.”

The fact is, there is dirt you see and dirt you can’t see. What you can’t see isn’t dirty—dirt but germs—countless, invisible, disease-bearing germs that infest bathroom tiles, tubs, bowls, seats.

New types of disease germs

But these aren’t ordinary germs—the kind you live with and forget about.

An alarming number of medical reports are warning us of new types of disease germs which are invading whole communities across the country—spreading disease from one member of the family to the next.

These germs are called “staph” (pronounced “staff.”) They attack babies and adults alike, and cause a wide variety of diseases from boils to diarrheas, from pneumonias to heart diseases—and even death.

Bathroom... a danger-zone

The dreadful part of it is that these “staph” germs can be tracked into any home, the cleanest of homes... by almost anyone, sick or well. You don’t even need to have a skin scratch to pick up “staph.” You can get it just by touching any surface the germ is on—for example, bathroom bowls, basins, and tiles. In fact, the bathroom can be a real danger-zone for deadly infections.

That is why it is so important for housewives to realize that their bathroom cleanser should have the power to kill “staph” as well as the other disease germs that may lurk in the bathroom.

Sanitizers are not germicides

Published laboratory tests show that neither suds nor pine oils have the power to kill “staph”—and that so-called “sanitizers” are not true germicides... that is, they may not kill all the disease germs they touch.

One household product has proved to be a true germicide. Lysol Brand Disinfectant kills disease germs on contact—including “staph” and many deadly viruses. What’s more, in laboratory tests, its anti-germ action was found to last 7 full days.

Lysol disinfects the bathroom from one cleaning to the next—as nothing else can. For those who like pine-scented cleansers, there is now a pine-scented form of Lysol. Regular or pine, as little as 29¢.

Basic steps for weekly bathroom cleaning:

1. Add Lysol to regular cleaning solution, as directed.
2. Wash down floors, walls, fixtures with this solution.
3. When laundering bath mats and lid covers, soak in Lysol solution before adding cleanser.

Note: If anyone in the family has a boil (a typical “staph” infection which is highly catching)—disinfect the bathtub, basin, bowl, seat with Lysol after every use.
The Most Crowded Classroom can find space for germs!

Children should gargle Listerine at least twice daily—it kills germs on contact, by millions!

The common cold is much too common among school children. Here's something mothers can do to help youngsters fight infection. Before and after school, have them gargle Listerine full-strength. Listerine kills germs on contact, by the millions.

Tests over 12 years proved that those who gargled Listerine twice every day had fewer and milder colds than those who did not. Look at the figures on the chart at right and start your whole family gargling Listerine Antiseptic today!

Each for Listerine ... your No.1 protection against infection
Medical research at a famous Chicago university reveals an easy inexpensive way to reduce.

There are probably more reducing products available to the overweight public than there are calories in a cream puff. Trouble is, some are much less effective than others. And trying to discover which one works best is what's so confusing to the 35 million adults who want a safe, easy way to reduce.

Recently, at a Chicago university, medical researchers made a series of tests to find out as much as possible about the safety and effectiveness of today's reducing substances. The findings will probably be the most important news ever read by people who have tried without success to lose weight.

For the test, 7 reducing products (wafers, tablets, pills, low calorie candy and drugs) were selected. Chosen as "human guinea pigs" was a group of men and women, all physically sound but for one thing: they needed to lose weight.

The test subjects were assigned their particular reducing products by a system of random selection. According to the doctor in charge, no attempt was made to control the diet tempting to evaluate these preparations under normal conditions of use," he said.

At the end of the eight-week program, those on dextro-amphetamine had lost an average of only 3.8 lbs. Those on the second best product lost 4.6 lbs. Patients on one widely sold tablet lost at first, then ended up by gaining weight. But those eating the candy (Ayds, made by Campana, Batavia, Ill.) lost 11.5 lbs., the highest average weight loss of all. Some taking Ayds even lost up to 21 lbs.

One enigma remained as far as the participants were concerned. How did the low-calorie candy work?

Directions in the box state that taken as directed, it curbs the appetite so you automatically eat less and lose weight.

The age-old truism: "Eat a sweet before a meal—spoil the appetite" was not unfamiliar to the participants. But what puzzled them, as one man put it, was this: "You say Ayds candy contains no reducing drugs. Then why won't ordinary candy work?"

"When you eat—say a chocolate cream," said the director, "you're adding 125 calories to your intake. But with Ayds, you're taking a candy of only 25 calories. What's more, it's enriched with vitamins and minerals to maintain your health while eating less."

The director then explained that the action of Ayds is based on the theory of blood sugar levels. When a person's blood sugar is low, his craving for food is high. When the blood next to nil.

In a separate study made to determine the effects of the reducing products on blood sugar levels, it was found that the candy caused the greatest elevation. This curbed "hunger waves" among test subjects an average of 33% longer than the next best product.

For all who are encouraged by this report to try, once again, to lose weight, the following should be kept in mind. There is no magic way to reduce! Layers of fat are not built up in a day. They cannot be shed overnight.

Underscoring this fact are innumerable cases where government agencies have taken action against firms that claimed their products would produce a specific weight loss in a few days. Or that their products were safe when they contained drugs that could be dangerous. Many such products have been barred from the mails.

However, the reliability of the Ayds Plan has been confirmed in a U. S. Circuit Court of Appeals. Here, 3 judges held, with respect to Ayds, that "one eating the candy will, according to well recognized medical principles, have less desire for food, therefore, eat less."

As one participant told the doctor: "I can hardly believe it—this candy tastes so good. That was the easiest ten pounds I ever lost."

Ayds Reducing Plan Vitamin and Mineral Candy, in the regular vanilla caramel or the new chocolate fudge-type, may be purchased at drug and department stores everywhere.
Watch a drooping rose revive after a summer rain? Watch the same sort of thing happen in your hair, thanks to fabulous new Suave. Just a touch moisturizes hair problems away—new greaseless way. Dryness, drabness go. Lights sparkle. Suddenly your hair obeys perfectly, takes any hairstyle easily.

Moisturizing miracle by

Suave

HELEN CURTIS

Now in a new package.
STOP PAIN INSTANTLY
COMBAT INFECTION-PROMOTE HEALING
WITH ANTISEPTIC
Campho-Phenique
(PRONOUNCED CAN-FO-FINE-EK)
WHEN USED ON MINOR BURNS, CUTS,
SCRATCHES, ABRASIONS

Quick! Apply Campho-Phenique at once to minor burns from hot cooking utensils, hot water or steam... stops pain instantly, promotes rapid healing. The same thing happens when you use it on minor cuts, scratches and abrasions. Campho-Phenique is highly antiseptic. Wonderful for fever blisters, cold sores, gum boils; to relieve itching and to guard against infecting insect bites. Used on pimples, Campho-Phenique helps prevent their spread and re-infection.

No Nagging Backache Means a Good Night’s Sleep

Nagging backache, headache, or muscular aches and pains may come on with over-exertion, emotional upsets or day to day stress and strain. And folks who eat and drink unwise sometimes suffer mild bladder irritation... with that restless, uncomfortable feeling.

If you are miserable and worn out because of these discomforts, Doan’s Pills often help by their pain relieving action, by their soothing effect to ease bladder irritation, and by their mild diuretic action through the kidneys—tending to increase the output of the 15 miles of kidney tubes.

So if nagging backache makes you feel dragged-out, miserable, with restless, sleepless nights, don’t wait, try Doan’s Pills, get the same happy relief millions have enjoyed for over 60 years. Ask for new, large economy size and save money. Get Doan’s Pills today!

for younger-looking skin
HORMONEX Beauty Serum
OFFERS 10-DAY SAMPLE
HORMONEX gets wrinkle-smoothing female hormones beneath the surface of the skin where they work most effectively, because the base is pure Sesame Oil, for best penetration. Hormonex is the product of a trustworthy 28-year-old Laboratory. It is sold in over 500 leading department stores and recommended by thousands of pharmacists at $3.50 for a 10-day supply. NOW a special 10-DAY SAMPLE will be sent to you postpaid, without obligation so that you can see the astonishing results it brings. To get your 10-DAY TRIAL SAMPLE write to the address below. Please send 25¢ in coin or stamps to cover packing and handling charges.

MITCHUM CO. - Dept.1-KS, Paris, Tennessee
Every home with children needs this “FAMILY ASPIRIN PAIR”

Maureen O' Sullivan
(MRS. JOHN FARROW), wife of author-director of the motion picture "John Paul Jones."

"I've found from experience that St. Joseph Aspirin For Children is the best way to give aspirin to a child. And for adult needs, I buy regular St. Joseph Aspirin. This 'family aspirin pair' is a must in our home." Like thousands of mothers, she knows it pays to look for the "St. Joseph" name on adult as well as children's aspirin.

For children's fever and pain—approved by more doctors than any other

For the best, safest, fastest relief from headaches, pains and aches of colds and flu, millions of people have found they don't need expensive buffering or costly combination drugs. All they need is pure, safe St. Joseph Aspirin—finest money can buy.

St. Joseph Aspirin goes into action almost immediately yet isn't "loaded" with disintegrating filler. Acts without stomach upset. Saves you money, too. Only 49¢ for 100 tablets. 200 tablets, 79¢. Why pay more?

MORE AND MORE DOCTORS ARE ENDORSING THIS “FAMILY ASPIRIN PAIR”
DON'T JUST SOOTHE DETERGENT HANDS—HEAL THEM!

NEW MIRACLE HEALING CREAM

It work instantly! Detergent dryness can break skin into a network of tiny cuts, too small to see.

See results overnight! New miracle antiseptic helps heal more effectively than any ordinary hand lotion or cream.

Women are discovering First Aid Cream offers more than the soothing action of ordinary hand lotions.

Here's why. Detergent dryness can break the skin into tiny cuts and cracks. Like all cuts, they need real first aid. And Johnson & Johnson First Aid Cream gives you:

1. Antiseptic action—helps hands heal faster.
2. Anesthetic action—relieves the burn and itch.

Try famous Johnson & Johnson First Aid Cream for detergent hands and get all three soothing, healing benefits. Use it after washing dishes or clothes.
Going places with Grapefruit Juice

Have you noticed? In the best restaurants, on planes and trains—wherever you see people who are going places and doing things—you see grapefruit juice. It's a gold mine of Vitality Vitamin C.

Vitamin C is one vitamin your body cannot store up. Each of us needs a fresh supply of natural Vitamin C every single day. In delicious, refreshing canned grapefruit juice you get Vitamin C the natural way, combined with other vitamins and food benefits.

And, canned grapefruit juice is the thrifty way to get your Vitamin C. It costs only pennies a glass. So convenient, too. Comes full strength—ready to pour. Enjoy canned grapefruit juice from Florida often.

gold mine of Vitality Vitamin C

Canned GRAPEFRUIT JUICE from Florida

©Florida Citrus Commission, Lakeland, Florida 33801.
Ever go to bed with a cold without Vicks VapoRub

Only the VapoRub way gives 10-hour "up-thru" relief in nose, throat, chest...works than twice as long as aspirin or cold tablets

wake up coughing and congested in the middle of night when you have a cold? Make sure you get all-relief—not just the 4-hour action of tablets.

your chest, throat and neck with soothing Vicks Rub. Instantly, its comforting warmth eases your sore muscles as no tablet can. Rub it over painfully stuffed sinuses, too...dab it in the nose to breathe right away.

full hours, penetrating vapor medications relieve congested head passages, sore throat, deep inside sted bronchial areas. All night, VapoRub works to mucus, calm coughs, break up congestion. Helps sep undisturbed and wake up feeling so much better. very cold, for every member of the family... iber ... never go to bed with a cold without...

Medicates cold-congested nose, throat, chest all at once... all night long. VapoRub's deep penetrating vapor medications start relieving in 7 seconds, keep on relieving for 10 hours. Nothing to over-stimulate you or upset your stomach.

Vicks VapoRub® World's most widely used colds medication:... use as a rub, in steam, in the nose.
44.

**Stops Bad Foot Odor!**

Offensive foot odor is caused by a disorder of the sweat glands, called Bromidrosis. No amount of washing will stop it. But Dr. Scholl's Bromidrosis Powder will! It contains highly effective mercurial that quickly kills bad foot odor, helps reduce excessive perspiration, control the disorder and stop foot odor in shoes. Get this relief today!

![Dr. Scholl's Bromidrosis Powder](image)

### Amazing New Skin Cream Quickly

**Fades Brown Age Spots**

**FACE! HANDS! BODY!**

$1.00 PLUS TAX

**HOME TRAIL**

At last! We've discovered a delightful new creamy white skin cream that quickly fades away those horrid looking brown weathered age spots and freckles on face, hands, shoulders and body...while at the same time it clears and makes skin younger looking and smoother. It's P.A.Y.D., the new delightful creamy white skin formula fortified with P.A. 17 and it's making skin clearing history! Simple to use. Just smooth on...in a few days...often over night...results are amazing. Let this home trial convince you...send only $1 plus tax ($1.10) cash or stamps for convincing demonstration of reg. 30 day jar. If C.O.D., charges added. No matter what you've tried before, if horrid age spots still pester you, make this convincing test. Full satisfaction or money back.

*Cosmetic Mfg. Co.*

Dept. 29-L  Box 264  Atlanta 1, Ga.

46.

**REDUCE AS YOU WALK**

**"REDUCE-EZE" WONDER GIRDLE**

**TAKES 4 INCHES OFF!**

Slicms Your Waist Two Sizes Instantly! Get set for a thrill the moment you put on your new "Reduce-Eze", the lightweight, comfortable wonder girdle that slims inches from your waist instantly—molds tummy, hips and thighs in a smooth unbroken line! Gives you that "tiny-silhouette" appearance without effort or diet on your part.

Inches Vanish Magically As It Holds and Molds! No steel, no bones, no buckles, no laces, no adjustments. Uniquely designed "Reduce-Eze" helps you reduce as you walk by gentle diagonal control and balanced pressure against fatty bulges. Hidden sheet rubber is covered with soft cotton flannel to absorb excess perspiration as you reduce. Washes beautifully, drip-dries fast. Over 1 million sold!

$8.98 VALUE—NOW ONLY $5.98

IN 8 SIZES—Regular or Panty Girdle Style


Satisfaction guaranteed, or money back.

*Spencer Gifts* 487 Spencer Bldg., Atlantic City, N. J.

Please send "Reduce-Eze" wonder girdle at once. My present waist size is: ______

☐ Regular  ☐ Panty Girdle with full length thigh control.
□ I enclose $5.98. You pay postage.
□ I enclose $3. Send C.O.D. I'll pay balance plus any postal charges.
□ I must be delighted with my "Reduce-Eze" or I may return it within 5 days for a refund.

Name: ____________________________

Address: __________________________

City. ____________________________  Zone. ______  State. __________

Copyright 1959 Spencer Gifts, Atlantic City, N. J.
For new blissful relief of colds, miseries and sinus congestion... try DRISTAN Decongestant Tablets.

In DRISTAN, you get the scientific Decongestant most prescribed by doctors... to help shrink painfully swollen nasal-sinus membranes. You also get a highly effective combination of Pain-Relievers for relief of body aches and pains due to colds... plus an exclusive antihistamine to block allergic reactions often associated with colds. And, to help build body resistance to colds and infection, DRISTAN contains Vitamin C...

actually five times your daily minimum requirement (in one day's dose).

No ordinary cold medicine... whether in liquid, tablet or any other form... can benefit you in the same way as DRISTAN Decongestant Tablets.

Millions of people have already found new blissful relief from colds, miseries and sinus congestion with DRISTAN. You can, too! Get DRISTAN Decongestant Tablets. Available without prescription. And... important... accept no substitutes.

There's Nothing Like DRISTAN® Decongestant Tablets!
Table 1B. Frequency Distribution of Total Scores of High School Seniors Evaluating Advertisements from Popular Periodicals Upon the Authenticity of Their Health Claims and the Mean Scores, According to School

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Table 2B. Frequency Distribution of Total Scores of High School Seniors Evaluating Advertisements from Popular Periodicals Upon the Authenticity of Their Health Claims and the Mean Scores, According to Sex

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Table 3B. Frequency Distribution of Total Scores of High School Seniors Evaluating Advertisements from Popular Periodicals Upon the Authenticity of Their Health Claims and the Mean Scores, According to Health or Hygiene Courses taken in Secondary Schools

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<td>Mean Score</td>
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1/ The health or hygiene courses taken in secondary schools are described as follows:

1 -- one course meeting no more than one period a week or no health or hygiene classes taken at all
2 -- one or more courses which total between two and four meetings (periods) per week/per semester
3 -- one or more courses which total five or more meetings (periods) per week/per semester
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